HIMEDIA®
For Life is Precious

HiMedia Laboratories Pvt. Ltd.

Date: 07th March 2024.

TO WHOMSOEVER IT MAY CONCERN

We hereby certify that,

Sanmedico SRL
Str. Corobceanu 7A, Apt.9,
MD-2012, CITY CHISINAU
Republic of Moldova,
Tel:-00-373-231 31515 / 00-373-222 60595
Fax:-00-373-22 62 30 32
E-mail: sanmedico.office@gmail.com

have been appointed by us as our **Authorized Distributor** for selling our Products in **MOLDOVA**

This certificate is valid upto 06th March 2026.

This Authorization Letter shall stand effective from the date of signing and can be terminated by either party with two months advance notice.

For HIMEDIA LABORATORIES PVT. LTD.,

HiMedia Laboratories Pvt. Limited Thane 400604

V.M.WARKE.
DIRECTOR – SALES & MARKETING

Digitally signed by Dolgopol Iulian
Date: 2024.05.07 15:04:38 EEST
Reason: MoldSign Signature
Location: Moldova

THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

Quality Austria
has issued an IQNet recognized certificate that the organization:

HiMedia Laboratories Pvt. Ltd.
Plot NO. C40, ROAD - 21Y, WAGLE INDUSTRIAL ESTATE, THANE (WEST) - 400604 MAHARASHTRA, INDIA

for the following scope:

Design, Development & Testing of Microbiology, Animal Cell Culture, Plant Tissue Culture & Molecular Biology products

EAC: 34

has implemented and maintains a

QUALITY MANAGEMENT SYSTEM

which fulfils the requirements of the following standard

ISO 9001:2015

This attestation is directly linked to the IQNet Partner's original certificate and shall not be used as a stand-alone document

Issued on:	2022-02-28
Validity date:	2025-02-27
Quality Austria certified since:	2022-02-28

Registration Number: AT-27302/0

PARTNER OF IQNet

Alex Stoichitoiu
President of IQNet

Mag. Friedrich Khuen-Belasi
Authorised Representative of Quality Austria

qualityaustria
Succeed with Quality

IQNet Partners*:
AENOR *Spain* AFNOR Certification *France* APCER *Portugal* CCC *Cyprus* CISQ *Italy*
CQC *China* CQM *China* CQS *Czech Republic* Cro Cert *Croatia* DQS Holding GmbH *Germany* EAGLE Certification Group *USA*
FCAV *Brazil* FONDONORMA *Venezuela* ICONTEC *Colombia* Inspecta Sertifiointi Oy *Finland* INTECO *Costa Rica*
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NYCE-SIGE *México* PCBC *Poland* Quality Austria *Austria* RR *Russia* SII *Israel* SIQ *Slovenia*
SIRIM QAS International *Malaysia* SQS *Switzerland* SRAC *Romania* TEST St Petersburg *Russia* TSE *Turkey* YUQS *Serbia*

* The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.iqnet-certification.com

qualityaustria
Succeed with Quality

CERTIFICATE

Quality Austria - Trainings, Zertifizierungs und Begutachtungs GmbH awards this **quality**austria certificate to the following organisation:

This **quality**austria certificate confirms the application and further development of an effective

HiMedia Laboratories Pvt. Ltd.
Plot NO. C40, Road - 21Y, Wagle Industrial Estate,
Thane (West) - 400604 Maharashtra, INDIA

QUALITY MANAGEMENT SYSTEM
complying with the requirements of standard
ISO 9001:2015

Design, Development & Testing of Microbiology, Animal Cell Culture, Plant Tissue Culture & Molecular Biology products

Registration No.: 27302/0
Date of initial issue: 28 February 2022
Valid until: 27 February 2025

The validity of the **quality**austria certificate will be maintained by annual surveillance audits and one renewal audit after three years.

Vienna, 28 February 2022

Quality Austria - Trainings, Zertifizierungs und Begutachtungs GmbH,
AT-1010 Vienna, Zelinkagasse 10/3

Mag. Christoph Mondl
General Manager

Mag. Dr. Werner Paar
General Manager

Mag. Dr. Anni Koubek
Specialist representative

Dok. Nr. FO_24_028

1702280c-6c19-4683-8f36-3ea2e4167c18

The current validity of the certificate is documented exclusively on the Internet under
http://www.qualityaustria.com/en/cert EAC: 34

THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

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has issued an IQNet recognized certificate that the organization:

HiMedia Laboratories Pvt. Ltd.
Plot NO. C40, ROAD - 21Y, WAGLE INDUSTRIAL ESTATE, THANE (WEST) - 400604 MAHARASHTRA, INDIA

for the following scope:

Design, Development & Testing of Biosciences Products for application in Microbiology, Animal Cell Culture & Molecular Biology products

EAC: 34

has implemented and maintains a

QUALITY MANAGEMENT SYSTEM

which fulfils the requirements of the following standard

ISO 13485:2016

This attestation is directly linked to the IQNet Partner's original certificate and shall not be used as a stand-alone document

Issued on:	2022-02-28
Validity date:	2025-02-27
Quality Austria certified since:	2022-02-28

Registration Number: AT-00391/0

PARTNER OF IQNet

Alex Stoichitoiu
President of IQNet

Mag. Friedrich Khuen-Belasi
Authorised Representative of Quality Austria

qualityaustria
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IQNet Partners*:
AENOR *Spain* AFNOR Certification *France* APCER *Portugal* CCC *Cyprus* CISQ *Italy*
CQC *China* CQM *China* CQS *Czech Republic* Cro Cert *Croatia* DQS Holding GmbH *Germany* EAGLE Certification Group *USA*
FCAV *Brazil* FONDONORMA *Venezuela* ICONTEC *Colombia* Inspecta Sertifiointi Oy *Finland* INTECO *Costa Rica*
IRAM *Argentina* JQA *Japan* KFQ *Korea* MIRTEC *Greece* MSZT *Hungary* Nemko AS *Norway* NSAI *Ireland*
NYCE-SIGE *México* PCBC *Poland* Quality Austria *Austria* RR *Russia* SII *Israel* SIQ *Slovenia*
SIRIM QAS International *Malaysia* SQS *Switzerland* SRAC *Romania* TEST St Petersburg *Russia* TSE *Turkey* YUQS *Serbia*

* The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.iqnet-certification.com

qualityaustria
Succeed with Quality

CERTIFICATE

Quality Austria - Trainings, Zertifizierungs und Begutachtungs GmbH awards this **quality**austria certificate to the following organisation:

This **quality**austria certificate confirms the application and further development of an effective

QUALITY MANAGEMENT SYSTEM
complying with the requirements of standard
ISO 13485:2016
Medical devices - Quality management systems - Requirements for regulatory purposes

HIMEDIA

HiMedia Laboratories Pvt. Ltd.

Plot NO. C40, Road - 21Y, Wagle Industrial Estate,
Thane (West) - 400604 Maharashtra, INDIA

Design, Development & Testing of Biosciences Products for application in Microbiology, Animal Cell Culture & Molecular Biology products

Registration No.: 00391/0

Date of initial issue: 28 February 2022

Valid until: 27 February 2025

The validity of the **quality**austria certificate will be maintained by annual surveillance audits and one renewal audit after three years.

Vienna, 28 February 2022

Quality Austria - Trainings, Zertifizierungs und Begutachtungs GmbH,
AT-1010 Vienna, Zelinkagasse 10/3

Mag. Christoph Mondl	Mag. Dr. Werner Paar	Mag. Dr. Anni Koubek
General Manager	General Manager	Specialist representative

Dok. Nr. FO_24_028

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The current validity of the certificate is documented exclusively on the Internet under
http://www.qualityaustria.com/en/cert EAC: 34

DECLARATION OF CONFORMITY
MICROBIOLOGY PRODUCTS

1) Manufacturer *(Name, department)*: **HiMedia Laboratories Pvt. Ltd.**

Address: Plot No. C-40, Road No. 21/Y, MIDC, Wagle Industrial Area, Thane(West)-400604, Maharashtra, India

and

2) European authorized representative: **CEpartner4U BV,**

Address: **ESDOORNLAAN 13, 3951DB MAARN, THE NETHERLANDS**;
(on product labels printed as:
CEpartner4U , ESDOORNLAAN 13, 3951DB MAARN, THE NETHERLANDS. www.cepartner4u.eu)

3) Product(s) *(groupnames /.)*:

Group	Group name	NL registration no.	No.
DCM&S	Dehydrated Culture Media & Supplements	NL-CA002-2013-26442	1
RPM	Ready Prepared Media Subgroups: Ready Prepared Plates, Ready Prepared Liquid & Solid Medium, Ready Prepared Slants,Ready Prepared Dual Media, HiDip Slides, HiSafe Blood Culturing System, Transport Medium w/ swabs, Viral Transport Medium w/ swabs, L.J.Medium Slants & Kits, Biochemical Kits for Mycobacteria, UTI Diagnostic Kits, Biochemical Identification Kits	NL-CA002-2013-26448	2
ESK	Epidemiological Screening Kit: Subgroups: Hi Aureus Confirmation Kits	NL-CA002-2012-24117	3
ASS	Antimicrobial Susceptibility Systems Subgroups: Sensitivity Discs-Single & Multi Discs MIC Strips: HiComb Strips, HiComb™ MIC Strip, Modified & Ezy MIC Strips, HiMIC™ Plate Kit	NL-CA002-2013-26444	4
BDA	Bacteriological Differentiation Aids Subgroups: Readymade Stains, Indicators & Reagents in liquid, Differentiation Discs & Strips, HiDtect Rapid Identification Discs	NL-CA002-2013-26445	5

type and model numbers: see appendix

4) The product(s) described above is in conformity with:

Title	Document No.
In vitro Diagnostic Medical Devices Directive	98/79/EC

5) Additional information *(Conformity procedure, Notified Body, CE certificate, Registration nr., etc.)*:
Conformity assessment procedure for CE marking: *In vitro* Diagnostic Medical Device Directive, Annex III

Mumbai, India; 2022-03-01

(Place & date of issue (yyyy-mm-dd))

Dr. G.M.Warke, Managing Director

(name; function and signature of manufacturer)

Appendix

Date: 2022-03-01

List of devices:

Product group	Type/ Model / Ref number	Device Name	Risk Class	Date of CE compliance
Dehydrated Culture Media				
DCM	M1739	A7 Agar Base (Shepard's Differential Agar Base)	Low risk	20/12/2012
DCM	MCD884	Aeromonas Isolation HiCynth™ Medium Base	Low risk	12/08/2015
DCM	MV884	Aeromonas Isolation HiVeg™ Medium Base	Low risk	20/12/2012
DCM	M884	Aeromonas Isolation Medium Base	Low risk	20/12/2012
DCM	M1284	Aeromonas Starch DNA Agar Base	Low risk	20/12/2012
DCM	M016B	Agar Medium L (Brilliant Green, Phenol Red, Lactose Monohydrate, Sucrose Agar)	Low risk	20/12/2012
DCM	ME016	Agar Medium L (Brilliant Green, Phenol Red, Lactose Monohydrate, Sucrose Agar)	Low risk	20/12/2012
DCM	MCD618	Alkaline HiCynth™ Peptone Water	Low risk	12/08/2015
DCM	MV618	Alkaline HiVeg™ Peptone Water	Low risk	20/12/2012
DCM	M618	Alkaline Peptone Water	Low risk	20/12/2012
DCM	M1887	Alkaline Saline Peptone Water (ASPW)	Low risk	10/11/2020
DCM	M651	Amies Transport Medium w/ Charcoal	Low risk	20/12/2012
DCM	M684A	Amies Transport Medium, Liquid w/o charcoal	Low risk	25/08/2016
DCM	M228	Anaerobic Agar	Low risk	20/12/2012
DCM	M491	Anaerobic Agar (Brewer)	Low risk	20/12/2012
DCM	M230	Anaerobic Agar w/o Dextrose	Low risk	20/12/2012
DCM	M229	Anaerobic Agar w/o Dextrose and Eh Indicator	Low risk	20/12/2012
DCM	M1635	Anaerobic Basal Agar	Low risk	20/12/2012
DCM	M1636	Anaerobic Basal Broth	Low risk	20/12/2012
DCM	M1345	Anaerobic Blood Agar Base	Low risk	20/12/2012
DCM	M975A	Anaerobic Blood Agar Base	Low risk	20/12/2012
DCM	M1034	Anaerobic CNA Agar Base	Low risk	20/12/2012
DCM	MV228	Anaerobic HiVeg™ Agar	Low risk	20/12/2012
DCM	MV491	Anaerobic HiVeg™ Agar (Brewer)	Low risk	20/12/2012
DCM	MV230	Anaerobic HiVeg™ Agar w/o Dextrose	Low risk	20/12/2012
DCM	MV229	Anaerobic HiVeg™ Agar w/o Dextrose and Eh Indicator	Low risk	20/12/2012
DCM	MV909	Andrade Peptone Water w/ HiVeg™ Extract No. 1	Low risk	20/12/2012
DCM	M909	Andrade Peptone Water w/ HM Extract	Low risk	20/12/2012
DCM	M1485	Antibiotic Sulphonamide Sensitivity Test Agar (ASS Agar)	Low risk	20/12/2012
DCM	M1576	Arabinose Agar Base	Low risk	30/10/2018
DCM	M1637	Arcobacter Broth Base	Low risk	10/11/2020
DCM	M1894	Arcobacter Selective Broth Base	Low risk	10/11/2020

DCM	M672	Asparagine Broth (Coccidioidin and Histoplasmin Broth)	Low risk	20/12/2012
DCM	M158	Azide Blood Agar Base	Low risk	20/12/2012
DCM	MV158	Azide Blood Agar Base, HiVeg™	Low risk	20/12/2012
DCM	M1271	Azide Dextrose Broth w/ BCP	Low risk	10/11/2020
DCM	M220	B.A.G.G. Broth Base (Buffered Azide Glucose Glycerol Broth Base)	Low risk	20/12/2012
DCM	MV220	B.A.G.G. HiVeg™ Broth Base (Buffered Azide Glucose Glycerol HiVeg™ Broth Base)	Low risk	20/12/2012
DCM	M106	B.C.G. - Dextrose Agar (Snyder Test Agar)	Low risk	20/12/2012
DCM	MV106	B.C.G. - Dextrose HiVeg™ Agar (Snyder Test HiVeg™ Agar)	Low risk	20/12/2012
DCM	MCD462	B.Q.Vaccine HiCynth™ Medium (Thioglycollate HiCynth™ Broth)	Low risk	28/04/2017
DCM	MV462	B.Q.Vaccine HiVeg™Medium (Thioglycollate Broth w/ HiVeg™ Extract No. 2)	Low risk	20/12/2012
DCM	M462	B.Q.Vaccine Medium (Thioglycollate Broth w/ HL Extract)	Low risk	20/12/2012
DCM	M861	B.T.B. Lactose Agar	Low risk	20/12/2012
DCM	MCD861	B.T.B. Lactose HiCynth™ Agar	Low risk	28/04/2017
DCM	MCD1081	B.T.B. Lactose HiCynth™ Agar, Modified	Low risk	28/04/2017
DCM	MV861	B.T.B. Lactose HiVeg™ Agar	Low risk	20/12/2012
DCM	MV833	Bacillus Cereus HiVeg™ Agar Base	Low risk	22/04/2019
DCM	M833	Bacillus Cereus Agar Base	Low risk	22/04/2019
DCM	M805	Bacteroides Bile Esculin Agar Base (BBE)	Low risk	20/12/2012
DCM	MV805	Bacteroides HiVeg™ Agar Base (BBE)	Low risk	20/12/2012
DCM	M043	Baird Parker Agar Base	Low risk	20/12/2012
DCM	M2093	Baird Parker Agar Base w/o Egg Yolk Emulsion	Low risk	22/04/2019
DCM	MCD043	Baird Parker HiCynth™ Agar Base	Low risk	12/08/2015
DCM	MV043	Baird Parker HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M1091	Baird Staphylococcus Enrichment Broth Base	Low risk	10/11/2020
DCM	M694	Bennet's Agar	Low risk	20/12/2012
DCM	M1683	Bennet's Broth	Low risk	20/12/2012
DCM	MV694	Bennet's HiVeg™ Agar	Low risk	20/12/2012
DCM	M1888	BETA-SSA Agar (Group A Streptococci Selective Agar)	Low risk	20/12/2012
DCM	M211	BHI Agar (Special Infusion Agar)	Low risk	20/12/2012
DCM	M211A	BHI Agar w/ 1% Agar	Low risk	20/12/2012
DCM	MV211A	BHI Agar w/ 1% Agar, HiVeg™	Low risk	20/12/2012
DCM	M1069	BHI Agar w/ 3.0% Agar	Low risk	20/12/2012
DCM	MV211	BHI Agar, HiVeg™ (Special Infusion Agar, HiVeg™)	Low risk	20/12/2012
DCM	M1611	BHI Agar, Modified	Low risk	20/12/2012
DCM	M210	BHI Broth	Low risk	20/12/2012
DCM	M210I	BHI Broth	Low risk	20/12/2012
DCM	M209	BHI CC Agar	Low risk	20/12/2012
DCM	MV209	BHI CC Agar, HiVeg™	Low risk	20/12/2012
DCM	MCD211	BHI HiCynth™ Agar (Special Insusion HiCynth™ Agar)	Low risk	12/08/2015

DCM	MCD210	BHI HiCynth™ Broth	Low risk	12/08/2015
DCM	M1036	BHI w/ 0.1% Agar	Low risk	20/12/2012
DCM	M1037	BHI w/ 6.5% NaCl	Low risk	20/12/2012
DCM	MV1037	BHI w/ 6.5% NaCl, HiVeg™	Low risk	20/12/2012
DCM	M212	BHI w/ PABA	Low risk	20/12/2012
DCM	M213	BHI w/ PABA and Agar	Low risk	20/12/2012
DCM	MV213	BHI w/ PABA and Agar, HiVeg™	Low risk	20/12/2012
DCM	MV212	BHI w/ PABA, HiVeg™	Low risk	20/12/2012
DCM	MV1036	BHI with 0.1% Agar, HiVeg™	Low risk	20/12/2012
DCM	MV210	BHI, HiVeg™	Low risk	20/12/2012
DCM	M217	Bi.G.G.Y. Agar (Nickerson Medium)	Low risk	20/12/2012
DCM	MCD217	Bi.G.G.Y. HiCynth™ Agar (Nickerson HiCynth™ Agar)	Low risk	25/08/2016
DCM	M1396	Bifidobacterium Agar	Low risk	10/11/2020
DCM	M1960R	Bifidobacterium Agar (HiCrome™)	Low risk	25/08/2016
DCM	M1396R	Bifidobacterium Agar (Modified, Selective Medium, Kit)	Low risk	04/07/2018
DCM	M1858	Bifidobacterium Agar, Modified	Low risk	20/12/2012
DCM	M1395	Bifidobacterium Broth	Low risk	10/11/2020
DCM	M071	Bile Broth Base	Low risk	20/12/2012
DCM	MV071	Bile Broth Base, HiVeg™	Low risk	20/12/2012
DCM	M972A	Bile Esculin Agar,Modified	Low risk	22/04/2019
DCM	M493	Bile Esculin Azide Agar	Low risk	10/11/2020
DCM	MV493	Bile Esculin Azide HiVeg™ Agar	Low risk	10/11/2020
DCM	MCD493	Bile Esculin Azide HiCynth™ Agar	Low risk	10/11/2020
DCM	M481	Bile Peptone Transport Medium	Low risk	20/12/2012
DCM	M739	Bile Salt Agar	Low risk	20/12/2012
DCM	MCD027	Bismuth Sulphite HiCynth™ Agar	Low risk	12/08/2015
DCM	M027	Bismuth Sulphite Agar	Low risk	20/12/2012
DCM	M027L	Bismuth Sulphite Agar	Low risk	04/07/2018
DCM	MU027	Bismuth Sulphite Agar Medium	Low risk	20/12/2012
DCM	M1004	Bismuth Sulphite Agar, Modified	Low risk	20/12/2012
DCM	MV027	Bismuth Sulphite HiVeg™ Agar	Low risk	20/12/2012
DCM	MV1004	Bismuth Sulphite HiVeg™ Agar, Modified	Low risk	20/12/2012
DCM	M073	Blood Agar Base (Infusion Agar)	Low risk	20/12/2012
DCM	M834	Blood Agar Base No. 2	Low risk	20/12/2012
DCM	M834A	Blood Agar Base No. 2 w/ 1.2% Agar	Low risk	20/12/2012
DCM	MV834A	Blood Agar Base No. 2 w/ 1.2% Agar, HiVeg™	Low risk	20/12/2012
DCM	MV834	Blood Agar Base No. 2, HiVeg™	Low risk	20/12/2012
DCM	M834Z	Blood Agar Base No.2	Low risk	28/04/2017
DCM	M089	Blood Agar Base w/ Low pH	Low risk	20/12/2012
DCM	MV089	Blood Agar Base w/ Low pH, HiVeg™	Low risk	20/12/2012

DCM	M1904	Blood Agar Base w/ Nalidixic Acid	Low risk	20/12/2012
DCM	MV073	Blood Agar Base, HiVeg™ (Infusion Agar, HiVeg™)	Low risk	20/12/2012
DCM	M1989	Blood Agar Base, Modified	Low risk	20/12/2012
DCM	M1318	Blood Free Campylobacter Broth Base	Low risk	20/12/2012
DCM	MCD073	Blood HiCynth™ Agar Base (Infusion HiCynth™ Agar Base)	Low risk	25/08/2016
DCM	MCD834	Blood HiCynth™ Agar Base No.2	Low risk	25/08/2016
DCM	MCD089	Blood HiCynth™ Agar Base w/ Low pH	Low risk	25/08/2016
DCM	M175	Bordet Gengou Agar Base	Low risk	20/12/2012
DCM	M175A	Bordet Gengou Agar Base w/ 1.6% Agar	Low risk	20/12/2012
DCM	M175SB	Bordet Gengou Agar Base, Modified	Low risk	16/12/2017
DCM	M2012	Bordet Gengou Broth	Low risk	25/08/2016
DCM	MV175	Bordet Gengou HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV175A	Bordet Gengou HiVeg™ Agar Base w/ 1.6% Agar	Low risk	20/12/2012
DCM	M1020	BPL Agar	Low risk	20/12/2012
DCM	MV1020	BPL HiVeg™ Agar	Low risk	20/12/2012
DCM	M016A	Brilliant Green Agar Base w/ 1.2% Agar	Low risk	20/12/2012
DCM	M971	Brilliant Green Agar Base w/ Phosphates	Low risk	20/12/2012
DCM	M016	Brilliant Green Agar Base, Modified	Low risk	20/12/2012
DCM	MCD016	Brilliant Green Agar HiCynth™ Base, Modified	Low risk	12/08/2015
DCM	MU016	Brilliant Green Agar Medium	Low risk	20/12/2012
DCM	MM016	Brilliant Green Agar Medium 16	Low risk	20/12/2012
DCM	MV016A	Brilliant Green HiVeg™ Agar Base w/ 1.2% Agar	Low risk	20/12/2012
DCM	MV971	Brilliant Green HiVeg™ Agar Base w/ Phosphates	Low risk	20/12/2012
DCM	MV016	Brilliant Green HiVeg™ Agar Base, Modified	Low risk	20/12/2012
DCM	M016B	Brilliant Green, Phenol Red, Lactose Monohydrate, Sucrose Agar (Agar Medium L)	Low risk	20/12/2012
DCM	ME016	Brilliant Green, Phenol Red, Lactose Monohydrate, Sucrose Agar (Agar Medium L)	Low risk	20/12/2012
DCM	M1822	Bromo Thymol Lactose Blue Agar	Low risk	16/12/2017
DCM	M074	Brucella Agar Base	Low risk	20/12/2012
DCM	M1638	Brucella Agar Base w/ 1.0% Dextrose	Low risk	20/12/2012
DCM	M1039	Brucella Agar Base w/ Hemin and Vitamin K	Low risk	20/12/2012
DCM	M074A	Brucella Agar Base, Modified	Low risk	20/12/2012
DCM	M5392	Brucella Broth Base	Low risk	30/10/2018
DCM	M348	Brucella Broth Base	Low risk	20/12/2012
DCM	MV074	Brucella HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV074A	Brucella HiVeg™ Agar Base, Modified	Low risk	20/12/2012
DCM	MV348	Brucella HiVeg™ Broth Base	Low risk	20/12/2012
DCM	M822	Brucella Selective Medium Base	Low risk	20/12/2012
DCM	M1890	BSIBG Agar (Aeromonas Selective Agar)	Low risk	10/11/2020
DCM	M1668	BSK - H Medium Base	Low risk	20/12/2012

DCM	M1668B	BSK - H Medium Base w/o BSA	Low risk	28/04/2017
DCM	M813	Buffered Charcoal Yeast Extract Agar Base	Low risk	20/12/2012
DCM	M813I	Buffered Charcoal Yeast Extract Agar Medium (BCYE Medium)	Low risk	20/12/2012
DCM	MCD813	Buffered Charcoal Yeast Extract HiCynth™ Medium	Low risk	25/08/2016
DCM	M204	Buffered Glycerol Saline Base	Low risk	20/12/2012
DCM	MCD1275	Buffered HiCynth™ Peptone Water w/ NaCl	Low risk	12/08/2015
DCM	MV614	Buffered HiVeg™ Peptone Water	Low risk	22/04/2019
DCM	MV1275	Buffered HiVeg™ Peptone Water w/NaCL	Low risk	20/12/2012
DCM	M614	Buffered Peptone Water	Low risk	22/04/2019
DCM	M1275	Buffered Peptone Water w/ NaCl	Low risk	20/12/2012
DCM	M1851	Buffered Peptone Water w/ Pyruvate	Low risk	20/12/2012
DCM	MH1275	Buffered Sodium Chloride-Peptone Solution pH 7.0	Low risk	22/04/2019
DCM	M1640	Burkholderia Cepacia Agar Base	Low risk	20/12/2012
DCM	MCD1640	Burkholderia cepacia HiCynth™ Agar Base	Low risk	25/08/2016
DCM	M2089	Burkholderia Cepacia Selectie Agar	Low risk	10/11/2020
DCM	MU2089	Burkholderia Cepacia Selective Agar (BCSA)	Low risk	10/11/2020
DCM	M470	BYE Agar	Low risk	20/12/2012
DCM	MV470	BYE HiVeg™ Agar	Low risk	20/12/2012
DCM	M911	C. botulinum Isolation Agar Base	Low risk	20/12/2012
DCM	MV911	C. botulinum Isolation HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M1146	C.L.E.D. Agar Base w/o Indicator	Low risk	20/12/2012
DCM	M792	C.L.E.D. Agar w/ Bromo Thymol Blue	Low risk	20/12/2012
DCM	MCD792	C.L.E.D. HiCynth™ Agar w/BTB	Low risk	12/08/2015
DCM	MCD352	C.L.E.D. HiCynth™ Agar w/Andrade Indicator	Low risk	12/08/2015
DCM	MV1146	C.L.E.D. HiVeg™ Agar Base w/o Indicator	Low risk	20/12/2012
DCM	MV352	C.L.E.D. HiVeg™ Agar w/ Andrade Indicator	Low risk	20/12/2012
DCM	MV792	C.L.E.D. HiVeg™ Agar w/ Bromo Thymol Blue	Low risk	20/12/2012
DCM	M352	C.L.E.D.Agar w/ Andrade Indicator	Low risk	20/12/2012
DCM	M352M	C.L.E.D.Agar w/ Andrades Indicator	Low risk	22/04/2019
DCM	M352A	C.L.E.D.Agar w/o Lactose & w/ Andrades Indicator	Low risk	22/04/2019
DCM	M563	Caffeic Acid Ferric Citrate Test Agar (CAFC Medium)	Low risk	20/12/2012
DCM	M893	CAL Agar (Cellobiose Arginine Lysine Agar)	Low risk	20/12/2012
DCM	M894	CAL Broth (Cellobiose Arginine Lysine Broth)	Low risk	20/12/2012
DCM	MV893	CAL HiVeg™ Agar (Cellobiose Arginine Lysine HiVeg™ Agar)	Low risk	20/12/2012
DCM	MV894	CAL HiVeg™ Broth (Cellobiose Arginine Lysine HiVeg™ Broth)	Low risk	20/12/2012
DCM	MV908	Campylo Thioglycollate HiVeg™ Medium Base	Low risk	20/12/2012
DCM	M908	Campylo Thioglycollate Medium Base	Low risk	20/12/2012
DCM	M994	Campylobacter Agar Base	Low risk	20/12/2012
DCM	M1267	Campylobacter Cefex Agar Base	Low risk	20/12/2012
DCM	M899	Campylobacter Enrichment Broth Base (Preston Enrichment Broth Base)	Low risk	20/12/2012

DCM	MV899	Campylobacter Enrichment HiVeg™ Broth Base (Preston Enrichment HiVeg™ Broth Base)	Low risk	20/12/2012
DCM	MV994	Campylobacter HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M1240	Campylobacter Nitrate Broth	Low risk	20/12/2012
DCM	MV1240	Campylobacter Nitrate HiVeg™ Broth	Low risk	20/12/2012
DCM	M1602	Candida Agar	Low risk	20/12/2012
DCM	M355	Candida BCG Agar Base	Low risk	20/12/2012
DCM	MV355	Candida BCG HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV104	Candida HiVeg™ Medium	Low risk	20/12/2012
DCM	M104	Candida Medium	Low risk	20/12/2012
DCM	M202	Cary - Blair Medium Base (Transport Medium w/o Charcoal)	Low risk	20/12/2012
DCM	M202A	Cary Blair Medium, Liquid w/o charcoal	Low risk	25/08/2016
DCM	M794	Casitose Agar w/ 2.5% Agar	Low risk	20/12/2012
DCM	M200	Casitose Broth	Low risk	20/12/2012
DCM	M910	Casitose Yeast Extract Broth (CAYE)	Low risk	20/12/2012
DCM	MV910	Casitose Yeast Extract HiVeg™ Broth (CAYE)	Low risk	20/12/2012
DCM	M201	Casman Agar Base	Low risk	20/12/2012
DCM	M766	Casman Broth Base	Low risk	20/12/2012
DCM	MV201	Casman HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV766	Casman HiVeg™ Broth Base	Low risk	20/12/2012
DCM	MH024	Cetrimide Agar	Low risk	22/04/2019
DCM	M024	Cetrimide Agar Base	Low risk	20/12/2012
DCM	M1742	Cetrimide Agar Base (w 1.3% Agar)	Low risk	20/12/2012
DCM	M862	Cetrimide Broth	Low risk	20/12/2012
DCM	MCD024	Cetrimide HiCynth™ Agar Base	Low risk	12/08/2015
DCM	MV024	Cetrimide HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV862	Cetrimide HiVeg™ Broth	Low risk	20/12/2012
DCM	M344	Charcoal Agar Base	Low risk	10/11/2020
DCM	MV344	Charcoal Agar Base, HiVeg™	Low risk	10/11/2020
DCM	M1053	Charcoal Agar Base with Niacin	Low risk	16/12/2017
DCM	M646	Charcoal Blood Agar Base	Low risk	10/11/2020
DCM	MV646	Charcoal Blood Agar Base, HiVeg™	Low risk	10/11/2020
DCM	M103	Chocolate Agar Base	Low risk	20/12/2012
DCM	MV103	Chocolate HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M1548	Chocolate No. 2 Agar Base	Low risk	20/12/2012
DCM	MV1548	Chocolate No. 2 HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV558	Cholera HiVeg™ Medium Base	Low risk	20/12/2012
DCM	M558	Cholera Medium Base	Low risk	20/12/2012
DCM	M143	Christensen Citrate Agar	Low risk	20/12/2012
DCM	M1820	Chrysoidin Agar with MUG	Low risk	16/12/2017

DCM	M497	Clostridial Agar	Low risk	20/12/2012
DCM	MV497	Clostridial HiVeg™ Agar	Low risk	20/12/2012
DCM	M836	Clostridium Difficile Agar Base	Low risk	20/12/2012
DCM	MV836	Clostridium Difficile HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M1976	Clostridium difficile Mannitol Taurocholate Broth base (CCMB -TAL Broth)	Low risk	20/12/2012
DCM	M272	Coagulase Mannitol Agar Base	Low risk	20/12/2012
DCM	M277	Coagulase Mannitol Broth Base	Low risk	20/12/2012
DCM	MV272	Coagulase Mannitol HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV277	Coagulase Mannitol HiVeg™ Broth Base	Low risk	20/12/2012
DCM	M1826	Coliform Broth w/SLS	Low risk	22/04/2019
DCM	MV1826	Coliform HiVeg Broth w/ SLS	Low risk	22/04/2019
DCM	MH144	Columbia Agar	Low risk	22/04/2019
DCM	M144M	Columbia Agar	Low risk	22/04/2019
DCM	M144PM	Columbia Blood Agar Base	Low risk	22/04/2019
DCM	M144R	Columbia Blood Agar Base	Low risk	25/08/2016
DCM	M144	Columbia Blood Agar Base	Low risk	20/12/2012
DCM	M144A	Columbia Blood Agar Base w/ 1% Agar	Low risk	20/12/2012
DCM	MV144A	Columbia Blood Agar Base w/ 1% Agar, HiVeg™	Low risk	20/12/2012
DCM	M1133	Columbia Blood Agar Base w/ Hemin	Low risk	20/12/2012
DCM	MV144	Columbia Blood Agar Base, HiVeg™	Low risk	20/12/2012
DCM	MCD144	Columbia Blood HiCynth™ Agar Base	Low risk	12/08/2015
DCM	MCD144A	Columbia Blood HiCynth™ Agar Base w/1% Agar	Low risk	12/08/2015
DCM	M145	Columbia Broth Base	Low risk	20/12/2012
DCM	MV145	Columbia Broth Base, HiVeg™	Low risk	20/12/2012
DCM	M560	Columbia C.N.A. Agar Base	Low risk	20/12/2012
DCM	M560A	Columbia C.N.A. Agar Base w/ 1% Agar	Low risk	20/12/2012
DCM	MV560	Columbia C.N.A. HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV560A	Columbia C.N.A. HiVeg™ Agar Base w/ 1% Agar	Low risk	20/12/2012
DCM	MCD145	Columbia HiCynth™ Broth	Low risk	12/08/2015
DCM	M2103	Congo Red Magnesium Oxalate (CR-MOX) Agar	Low risk	22/04/2019
DCM	M730	Conn's Agar	Low risk	20/12/2012
DCM	M149	Cooked M Medium (R.C .Medium)	Low risk	16/12/2017
DCM	M1040	Cooked M Medium w/ Glucose, Hemin & Vitamin K	Low risk	16/12/2017
DCM	MV731	Corn Meal HiVeg™ Peptone Yeast Agar	Low risk	20/12/2012
DCM	M731	Corn Meal Peptone Yeast Agar	Low risk	20/12/2012
DCM	M897	Crystal Violet Lactose Agar	Low risk	10/11/2020
DCM	MV897	Crystal Violet Lactose HiVeg™ Agar	Low risk	10/11/2020
DCM	M1892	CTAS Agar Base (Carnobacterium Selective Agar Base)	Low risk	20/12/2012
DCM	M172	Cystine H Agar Base	Low risk	20/12/2012

DCM	MV172	Cystine HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M881	Cystine Tellurite Agar Base	Low risk	20/12/2012
DCM	M160	D.C.L.S. Agar	Low risk	20/12/2012
DCM	M178	D.C.L.S. Agar, Hajna	Low risk	20/12/2012
DCM	MV160	D.C.L.S. HiVeg™ Agar	Low risk	20/12/2012
DCM	MV178	D.C.L.S. HiVeg™ Agar	Low risk	20/12/2012
DCM	M188	D.T.M. Agar Base (Dermatophyte Test Agar Base)	Low risk	20/12/2012
DCM	M501	Decarboxylase Agar Base	Low risk	20/12/2012
DCM	M393	Decarboxylase Broth Base, Moeller (Moeller Decarboxylase Broth Base)	Low risk	20/12/2012
DCM	MV501	Decarboxylase HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV393	Decarboxylase HiVeg™ Broth Base, Moeller (Moeller Decarboxylase HiVeg™ Broth Base)	Low risk	20/12/2012
DCM	M030	Deoxycholate Agar	Low risk	20/12/2012
DCM	MV030	Deoxycholate Agar, HiVeg™	Low risk	20/12/2012
DCM	M065	Deoxycholate Citrate Agar	Low risk	20/12/2012
DCM	M1639	Deoxycholate Citrate Agar w/1.5% Agar	Low risk	20/12/2012
DCM	M222	Deoxycholate Citrate Agar w/o Sucrose	Low risk	20/12/2012
DCM	MV065	Deoxycholate Citrate Agar, HiVeg™	Low risk	20/12/2012
DCM	MCD065	Deoxycholate Citrate HiCynth™ Agar	Low risk	12/08/2015
DCM	M084	Dextrose Agar	Low risk	20/12/2012
DCM	M286	Dextrose Agar Base, Emmons (Sabouraud Dextrose Agar Base, Modified)	Low risk	20/12/2012
DCM	MV084	Dextrose HiVeg™ Agar	Low risk	20/12/2012
DCM	MV286	Dextrose HiVeg™ Agar Base, Emmons (Sabouraud Dextrose HiVeg™ AgarBase, Modified)	Low risk	20/12/2012
DCM	M734	Dextrose Proteose Peptone Agar Base	Low risk	20/12/2012
DCM	MV734	Dextrose Proteose Peptone HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M502	Diagnostic Sensitivity Test Agar (D.S.T. Agar)	Low risk	20/12/2012
DCM	M111	Diagnostic Stuart's Urea Broth Base (Urea Broth Base)	Low risk	20/12/2012
DCM	MV191	Diagnostic Thioglycollate HiVeg™ Medium (Thioglycollate HiVeg™ Medium w/o Indicator)	Low risk	20/12/2012
DCM	M191	Diagnostic Thioglycollate Medium (Thioglycollate Medium w/o Indicator)	Low risk	20/12/2012
DCM	M1129	Dichloran Glycerol Medium Base	Low risk	22/04/2019
DCM	M1049	Differential Agar for Group D Streptococci	Low risk	10/11/2020
DCM	M814	Differential Buffered Charcoal Yeast Extract Agar Base	Low risk	20/12/2012
DCM	M1603	Differential Reinforced Clostridial Agar	Low risk	10/11/2020
DCM	M915	Dihydrolase Broth Base	Low risk	20/12/2012
DCM	MV915	Dihydrolase HiVeg™ Broth Base	Low risk	20/12/2012
DCM	MM1276	Dilute Sautans Medium (Twin Pack)	Low risk	20/12/2012
DCM	M882	Diphtheria Virulence Agar Base	Low risk	25/08/2016
DCM	M882R	Diphtheria Virulence Agar Base Modified	Low risk	25/08/2016

DCM	MV882	Diphtheria Virulence HiVeg™ Agar Base	Low risk	25/08/2016
DCM	M1984	Dixon's Agar	Low risk	20/12/2012
DCM	M1419	DNase Test Agar w/ Methyl Green	Low risk	10/11/2020
DCM	M057	Double Sugar Agar, Russell (Russell Double Sugar Agar)	Low risk	20/12/2012
DCM	MV057	Double Sugar HiVeg™ Agar (Russell Double Sugar HiVeg™ Agar)	Low risk	20/12/2012
DCM	M916	Doyle's Enrichment Broth Base	Low risk	20/12/2012
DCM	MV916	Doyle's Enrichment HiVeg™ Broth Base	Low risk	20/12/2012
DCM	M1378	Drigalski Lactose Agar, Modified	Low risk	20/12/2012
DCM	M1761	Drigalski Lactose Selective Agar	Low risk	20/12/2012
DCM	M659	Drigalski Litmus Lactose Agar	Low risk	20/12/2012
DCM	MV659	Drigalski Litmus Lactose HiVeg™ Agar	Low risk	20/12/2012
DCM	M5349	DTP Medium	Low risk	30/10/2018
DCM	M067	Dubos Broth Base	Low risk	20/12/2012
DCM	MV067	Dubos HiVeg™ Broth Base	Low risk	20/12/2012
DCM	M179	Dubos Oleic Agar Base	Low risk	20/12/2012
DCM	M839	Dubos Oleic Broth Base	Low risk	20/12/2012
DCM	MV179	Dubos Oleic HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV839	Dubos Oleic HiVeg™ Broth Base	Low risk	20/12/2012
DCM	M1536	Dulcitol Selenite Broth (Selenite-F Broth w/ Dulcitol) (Twin Pack)	Low risk	20/12/2012
DCM	M854	E.T. Medium	Low risk	20/12/2012
DCM	M1768	EC Blue Broth	Low risk	20/12/2012
DCM	MV1768	EC Blue HiVeg™ Broth	Low risk	20/12/2012
DCM	M127	EC Broth	Low risk	20/12/2012
DCM	M127I	EC Broth	Low risk	20/12/2012
DCM	MV127	EC HiVeg™ Broth	Low risk	20/12/2012
DCM	M748	Edward's Medium Base, Modified	Low risk	20/12/2012
DCM	MV748	Edward's Medium HiVeg™ Base, Modified	Low risk	20/12/2012
DCM	M294	Edwards and Bruner Semisolid Medium	Low risk	20/12/2012
DCM	M808	Egg Yolk Agar Base	Low risk	20/12/2012
DCM	MV808	Egg Yolk Agar Base, HiVeg™	Low risk	20/12/2012
DCM	M1043	Egg Yolk Agar Base, Modified	Low risk	20/12/2012
DCM	M086	Eijkman Lactose Broth	Low risk	20/12/2012
DCM	MV086	Eijkman Lactose HiVeg™ Broth	Low risk	20/12/2012
DCM	M368	Elliker Broth (Lactobacilli Broth)	Low risk	10/11/2020
DCM	MV368	Elliker HiVeg™ Broth (Lactobacilli HiVeg™ Broth)	Low risk	10/11/2020
DCM	M317	EMB Agar	Low risk	20/12/2012
DCM	M301	EMB Agar Base	Low risk	20/12/2012
DCM	M022	EMB Agar, Levine	Low risk	20/12/2012
DCM	M022S	EMB Agar, Levine	Low risk	20/12/2012
DCM	M503	EMB Broth	Low risk	20/12/2012

DCM	MV317	EMB HiVeg™ Agar	Low risk	20/12/2012
DCM	MV022	EMB HiVeg™ Agar, Levine	Low risk	20/12/2012
DCM	MV503	EMB HiVeg™ Broth	Low risk	20/12/2012
DCM	M325	Emerson Agar	Low risk	20/12/2012
DCM	MV325	Emerson HiVeg™ Agar	Low risk	20/12/2012
DCM	M773	Emerson YSS Agar	Low risk	20/12/2012
DCM	M029	Endo Agar	Low risk	20/12/2012
DCM	M1077	Endo Agar Base	Low risk	20/12/2012
DCM	M1258	Endo Agar w/ NaCl	Low risk	20/12/2012
DCM	M1075	Endo Agar, Modified	Low risk	20/12/2012
DCM	M029R	Endo Agar, Special	Low risk	25/08/2016
DCM	MCD029	Endo HiCynth™ Agar	Low risk	12/08/2015
DCM	MV029	Endo HiVeg™ Agar	Low risk	20/12/2012
DCM	MV1077	Endo HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV1258	Endo HiVeg™ Agar w/ NaCl	Low risk	20/12/2012
DCM	MV1075	Endo HiVeg™ Agar, Modified	Low risk	20/12/2012
DCM	M738	Enriched Thioglycollate Broth	Low risk	20/12/2012
DCM	MV738	Enriched Thioglycollate HiVeg™ Broth	Low risk	20/12/2012
DCM	MV077	Entamoeba HiVeg™ Medium	Low risk	20/12/2012
DCM	M077	Entamoeba Medium	Low risk	20/12/2012
DCM	M1662	Enteric Fermentation Base	Low risk	20/12/2012
DCM	MH287	Enterobacteria Enrichment Broth, Mossel	Low risk	22/04/2019
DCM	M426	Ethyl Violet Azide Broth (E.V.A. Broth)	Low risk	20/12/2012
DCM	M426S	Ethyl Violet Azide Broth (E.V.A. Broth)	Low risk	20/12/2012
DCM	M1397	Ethyl Violet Azide Dextrose Agar	Low risk	20/12/2012
DCM	MV426	Ethyl Violet Azide HiVeg™ Broth (E.V.A. HiVeg™ Broth)	Low risk	20/12/2012
DCM	M428	Eugonic Agar	Low risk	20/12/2012
DCM	M429	Eugonic Broth	Low risk	20/12/2012
DCM	MV428	Eugonic HiVeg™ Agar	Low risk	20/12/2012
DCM	MV429	Eugonic HiVeg™ Broth	Low risk	20/12/2012
DCM	M1517	Eugonic LT 100 Broth Base w/o Tween 80	Low risk	20/12/2012
DCM	M1517Z	Eugonic LT 100 Broth Base w/o Tween 80	Low risk	17/06/2021
DCM	M811	Feeley Gorman Agar (F.G. Agar)	Low risk	20/12/2012
DCM	M812	Feeley Gorman Broth (F.G. Broth)	Low risk	20/12/2012
DCM	MV811	Feeley Gorman HiVeg™ Agar (F.G. HiVeg™ Agar)	Low risk	20/12/2012
DCM	MV812	Feeley Gorman HiVeg™ Broth (F.G. HiVeg™ Broth)	Low risk	20/12/2012
DCM	M827	Fermentation Medium for Staphylococcus and Micrococcus	Low risk	20/12/2012
DCM	MV919	Fermentation HiVeg™ Medium Base for C. perfringens	Low risk	20/12/2012
DCM	MV825	Fermentation HiVeg™ Medium for Neisseriae	Low risk	20/12/2012
DCM	MV827	Fermentation HiVeg™ Medium for Staphylococcus and Micrococcus	Low risk	20/12/2012

DCM	M919	Fermentation Medium Base for C. perfringens	Low risk	20/12/2012
DCM	M825	Fermentation Medium for Neisseriae	Low risk	20/12/2012
DCM	M1028	Field's Tryptic Digest Broth (Tryptic Digest Broth)	Low risk	20/12/2012
DCM	MV1028	Field's Tryptic digest Broth, HiVeg™ (Tryptic Digest Broth, HiVeg™)	Low risk	20/12/2012
DCM	MV239	Fletcher Leptospira HiVeg™ Medium Base (Leptospira HiVeg™ MediumBase, Fletcher)	Low risk	20/12/2012
DCM	M239	Fletcher Leptospira Medium Base (Leptospira Medium Base, Fletcher)	Low risk	20/12/2012
DCM	M1209	Fluconazole Testing Medium (Twin Pack)	Low risk	20/12/2012
DCM	MV013	Fluid Sabouraud HiVeg™ Medium (Sabouraud Medium, Fluid, HiVeg™)	Low risk	20/12/2012
DCM	M013	Fluid Sabouraud Medium (Sabouraud Medium, Fluid)	Low risk	20/12/2012
DCM	M1533I	Fluid Selenite Cystine Broth (Twin Pack)	Low risk	20/12/2012
DCM	MV025	Fluid Selenite Cystine HiVeg™ Medium (Selenite Cystine HiVeg™ Broth) (Twin Pack)	Low risk	20/12/2012
DCM	M025	Fluid Selenite Cystine Medium (Selenite Cystine Broth) (Twin Pack)	Low risk	20/12/2012
DCM	MM025	Fluid Selenite Cystine Medium (Twin Pack)	Low risk	20/12/2012
DCM	MU025	Fluid Selenite Cystine Medium (Twin Pack)	Low risk	20/12/2012
DCM	MCD032	Fluid Tetrathionate HiCynth™ Medium w/o Iodine and BG	Low risk	25/08/2016
DCM	MV032	Fluid Tetrathionate HiVeg™ Medium w/o Iodine and BG (Tetrathionate HiVeg™ Broth Base w/o Iodine & BG)	Low risk	20/12/2012
DCM	M032	Fluid Tetrathionate Medium w/o Iodine and BG (Tetrathionate Broth Base w/o Iodine and BG)	Low risk	20/12/2012
DCM	MV009	Fluid Thioglycollate HiVeg™ Medium	Low risk	22/04/2019
DCM	M009	Fluid Thioglycollate medium (Thioglycollate medium Fluid)	Low risk	22/04/2019
DCM	M543	Folic Acid Casei Medium	Low risk	20/12/2012
DCM	M2014	Folic Acid Casei Medium, Modified	Low risk	25/08/2016
DCM	M1050	Frey Mycoplasma Broth Base	Low risk	20/12/2012
DCM	M475	Fungobiotic Agar (Mycobio Agar)	Low risk	10/11/2020
DCM	M476	Garrod Actinomyces Medium	Low risk	10/11/2020
DCM	M1073	GBS Medium Base	Low risk	28/04/2017
DCM	M434	GC Agar Base	Low risk	25/08/2016
DCM	MV434	GC HiVeg™ Agar Base	Low risk	04/07/2018
DCM	M5397	Gifu Anaerobic Broth w/o starch & dextrose	Low risk	22/04/2019
DCM	M2079	Gifu Anaerobic Broth, Modified (GAM)	Low risk	04/07/2018
DCM	M1746	Glucose Agar	Low risk	10/11/2020
DCM	M435	Glucose Citrate Broth Base	Low risk	20/12/2012
DCM	M433	Glucose Cysteine Agar Base w/ Thiamine	Low risk	20/12/2012
DCM	MV433	Glucose Cysteine HiVeg™ Agar Base w/ Thiamine	Low risk	20/12/2012
DCM	M070	Glucose Phosphate Broth (Buffered Glucose Broth)	Low risk	20/12/2012
DCM	MV070	Glucose Phosphate HiVeg™ Broth (Buffered Glucose HiVeg™ Broth)	Low risk	20/12/2012
DCM	M621	Glucose Salt Teepol Broth (Twin Pack)	Low risk	20/12/2012

DCM	MV621	Glucose Salt Teepol HiVeg™ Broth (Twin Pack)	Low risk	20/12/2012
DCM	M1935	Glycerol Mannitol Acetamide Cetrimide Agar	Low risk	20/12/2012
DCM	M242	GN Broth, Hajna	Low risk	20/12/2012
DCM	MV242	GN HiVeg™ Broth	Low risk	20/12/2012
DCM	M1888	Group A Streptococci Selective Agar (BETA-SSA Agar)	Low risk	20/12/2012
DCM	M1607	Gum Listeria Medium	Low risk	20/12/2012
DCM	M243	H Broth	Low risk	20/12/2012
DCM	MV116	H.S. Vaccine HiVeg™ Medium (Standard Nutrient HiVeg™ Broth)	Low risk	20/12/2012
DCM	M116	H.S. Vaccine Medium (Standard Nutrient Broth)	Low risk	20/12/2012
DCM	M1259	Haemophilus Test Agar Base	Low risk	20/12/2012
DCM	M551	Hartley's Digest Broth	Low risk	20/12/2012
DCM	MV551	Hartley's Digest HiVeg™ Broth	Low risk	20/12/2012
DCM	M467	Hektoen Enteric Agar	Low risk	20/12/2012
DCM	MU467	Hektoen Enteric Agar Medium	Low risk	20/12/2012
DCM	MCD467	Hektoen Enteric HiCynth™ Agar	Low risk	12/08/2015
DCM	MV467	Hektoen Enteric HiVeg™ Agar	Low risk	20/12/2012
DCM	M5390	Helicobacter Pylori Selective Agar	Low risk	30/10/2018
DCM	M1158	Hemorrhagic Coli (HC) Agar	Low risk	20/12/2012
DCM	M169	HI Agar	Low risk	20/12/2012
DCM	MV169	HI Agar, HiVeg™	Low risk	20/12/2012
DCM	M170	HI Broth	Low risk	20/12/2012
DCM	MV170	HI Broth, HiVeg™	Low risk	20/12/2012
DCM	M1938	HiCrome™ Acinetobacter Agar Base	Low risk	20/12/2012
DCM	M1651	HiCrome™ Bacillus Agar	Low risk	25/08/2016
DCM	MCD1651	HiCrome™ Bacillus HiCynth™ Agar	Low risk	25/08/2016
DCM	M1960	HiCrome™ Bifidobacterium Agar	Low risk	20/12/2012
DCM	M1456AR	HiCrome™ Candida Differential Agar,Modified	Low risk	25/08/2016
DCM	MCD1297A	HiCrome™ Candida Differential HiCynth™ Agar	Low risk	12/08/2015
DCM	M1832	HiCrome Coliform Agar Modified	Low risk	22/04/2019
DCM	MV1300	HiCrome Coliform HiVeg Agar w/ SLS	Low risk	22/04/2019
DCM	MV1295	HiCrome E. coli HiVegTM Agar	Low risk	22/04/2019
DCM	MV1293	HiCrome ECC HiVeg™ Agar	Low risk	22/04/2019
DCM	MV1294	HiCrome ECC Selective HiVeg Agar Base	Low risk	22/04/2019
DCM	M1598	HiCrome Enrichment Broth Base for EC O157:H7	Low risk	22/04/2019
DCM	M1577	HiCrome™ Enterobacter sakazakii Agar	Low risk	22/04/2019
DCM	M1641	HiCrome Enterobacter sakazakii Agar, Modified	Low risk	22/04/2019
DCM	MV1577	HiCrome Enterobacter sakazakii HiVeg™ Agar	Low risk	22/04/2019
DCM	MV1641	HiCrome Enterobacter sakazakii HiVeg™ Agar, Modified	Low risk	22/04/2019
DCM	M1580	HiCrome™ Enterococcus faecium Agar Base	Low risk	25/08/2016
DCM	MCD1466	HiCrome™ Improved Salmonella HiCynth™ Agar	Low risk	12/08/2015

DCM	M1569	HiCrome M-Lauryl Sulphate Agar	Low risk	22/04/2019
DCM	M1862	HiCrome M-Modified ECO157:H7 Selective Agar Base	Low risk	22/04/2019
DCM	M1571	HiCrome M-TEC Agar	Low risk	22/04/2019
DCM	M1713	HiCrome M-TEC Broth	Low risk	22/04/2019
DCM	M1985	HiCrome™ Malassezia Agar	Low risk	20/12/2012
DCM	M1953R	HiCrome™ MeReSa Agar Base (Modified)	Low risk	25/08/2016
DCM	M1953	HiCrome™ MeReSa Agar Base (Modified)	Low risk	25/08/2016
DCM	M2010	HiCrome™ Mueller Hinton Agar	Low risk	25/08/2016
DCM	M1974	HiCrome™ Rapid MRSA Agar Base	Low risk	20/12/2012
DCM	M1842	HiCrome Selective Salmonella Agar Base	Low risk	22/04/2019
DCM	M1353R	HiCrome™ UTI Agar	Low risk	25/08/2016
DCM	MCD1353	HiCrome™ UTI HiCynth™™ Agar	Low risk	12/08/2015
DCM	MV1353R	HiCrome™ UTI HiVeg™ Agar	Low risk	25/08/2016
DCM	MV1682	HiCrome Vibrio HiVeg™ Agar	Low risk	22/04/2019
DCM	M2114	HiCrome™ C.auris (MDR) Selective Agar Base	Low risk	10/11/2020
DCM	M2020	HiCrome™ Campylobacter Agar Base	Low risk	16/12/2017
DCM	M1297A	HiCrome™ Candida Differential Agar	Low risk	20/12/2012
DCM	M1297AR	HiCrome™ Candida Differential Agar Base	Low risk	20/12/2012
DCM	M1456A	HiCrome™ Candida Differential Agar Base, Modified	Low risk	20/12/2012
DCM	MV1297A	HiCrome™ Candida Differential HiVeg™ Agar	Low risk	20/12/2012
DCM	MV1456A	HiCrome™ Candida Differential HiVeg™ Agar Base, Modified	Low risk	20/12/2012
DCM	M2099	HiCrome™ CarbaResist Agar Base	Low risk	22/04/2019
DCM	M1991I	HiCrome™ Chromogenic Coliform Agar (CCA)	Low risk	22/04/2019
DCM	M2026	HiCrome™ Clostridial Agar Base	Low risk	25/08/2016
DCM	M1300	HiCrome™ Coliform Agar w/ SLS	Low risk	22/04/2019
DCM	MCD1300	HiCrome™ Coliform HiCynth™ Agar w/ SLS	Low risk	10/11/2020
DCM	M2094	HiCrome™ Colistin Resistant Agar Base	Low risk	30/10/2018
DCM	M2062I	HiCrome™ Cronobacter Isolation Agar (CCI Agar)	Low risk	10/11/2020
DCM	M1295	HiCrome™ E. coli Agar	Low risk	22/04/2019
DCM	M1295I	HiCrome™ E. coli Agar	Low risk	22/04/2019
DCM	MCD1295	HiCrome™ E.coli HiCynth™ Agar	Low risk	22/04/2019
DCM	MCD1580	HiCrome™ E.faecium HiCynth™Agar Base	Low risk	25/08/2016
DCM	M1575A	HiCrome™ EC O157 : H7 Selective Agar Base, Modified	Low risk	10/11/2020
DCM	MV1575A	HiCrome™ EC O157 : H7 Selective HiVeg™ Agar Base, Modified	Low risk	10/11/2020
DCM	MCD1575A	HiCrome™ EC O157:H7 HiCynth™ Agar Base, Modified	Low risk	10/11/2020
DCM	M1574A	HiCrome™ EC O157:H7 Agar,Modified	Low risk	22/04/2019
DCM	M1293	HiCrome™ ECC Agar	Low risk	22/04/2019
DCM	M1294	HiCrome™ ECC Selective Agar Base	Low risk	22/04/2019
DCM	M2056	HiCrome™ ECC Selective Agar Base, Modified	Low risk	22/04/2019
DCM	M1488	HiCrome™ ECD Agar w/ MUG	Low risk	10/11/2020

DCM	MV1488	HiCrome™ ECD HiVeg™ Agar w/ MUG	Low risk	10/11/2020
DCM	MCD1598	HiCrome™ Enrichment HiCynth™ Broth Base for ECO157:H7	Low risk	10/11/2020
DCM	MCD1641	HiCrome™ Enterobacter sakazakii HiCynth™ Agar, Modified (HiCrome™ Cronobacter sakazakii HiCynth™ Agar, Modified)	Low risk	10/11/2020
DCM	M1376	HiCrome™ Enterococci Broth	Low risk	10/11/2020
DCM	MCD1376	HiCrome™ Enterococci HiCynth™ Broth	Low risk	10/11/2020
DCM	MV1376	HiCrome™ Enterococci HiVeg™ Broth	Low risk	10/11/2020
DCM	MV1580	HiCrome™ Enterococcus faecium HiVeg™ Agar Base	Low risk	10/11/2020
DCM	M1829	HiCrome™ ESBL Agar Base	Low risk	20/12/2012
DCM	M2128	HiCrome™ Haemophilus Agar Base	Low risk	17/06/2021
DCM	M1466	HiCrome™ Improved Salmonella Agar	Low risk	20/12/2012
DCM	MV1466	HiCrome™ Improved Salmonella HiVeg™ Agar	Low risk	20/12/2012
DCM	M1573	HiCrome™ Klebsiella Selective Agar Base	Low risk	10/11/2020
DCM	MV1573	HiCrome™ Klebsiella Selective HiVeg™ Agar Base	Low risk	10/11/2020
DCM	M1831	HiCrome™ KPC Agar Base	Low risk	20/12/2012
DCM	M2009	HiCrome™ L mono differential Agar Base	Low risk	10/11/2020
DCM	M1924	HiCrome™ L.mono Rapid Differential Agar Base	Low risk	10/11/2020
DCM	M2065	HiCrome™ Lactobacillus Selective Agar Base	Low risk	10/11/2020
DCM	M1417F	HiCrome™ Listeria Agar Base	Low risk	10/11/2020
DCM	M1417	HiCrome™ Listeria Agar Base, Modified	Low risk	10/11/2020
DCM	MCD1417	HiCrome™ Listeria HiCynth™ Agar Base, Modified	Low risk	10/11/2020
DCM	M1340	HiCrome™ MacConkey Sorbitol Agar Base	Low risk	20/12/2012
DCM	MCD1340	HiCrome™ MacConkey Sorbitol HiCynth™ Agar	Low risk	25/08/2016
DCM	M2058	HiCrome™ M-Coliconfirm Agar Base	Low risk	10/11/2020
DCM	M2064	HiCrome™ M-Coliconfirm Broth Base	Low risk	22/04/2019
DCM	M1674	HiCrome™ MeReSa Agar Base	Low risk	20/12/2012
DCM	MCD1674	HiCrome™ MeReSa HiCynth™ Agar Base	Low risk	25/08/2016
DCM	MV1674	HiCrome™ MeReSa HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M1393	HiCrome™ MM Agar	Low risk	20/12/2012
DCM	M1816	HiCrome™ MM Agar , Modified	Low risk	04/07/2018
DCM	M1816R	HiCrome™ MM Agar , Modified	Low risk	04/07/2018
DCM	MCD1816	HiCrome™ MM HiCynth™ Agar, Modified (Hicrome™ Miller and Mallinson HiCynth™ Agar)	Low risk	10/11/2020
DCM	MV1393	HiCrome™ MM HiVeg™ Agar	Low risk	20/12/2012
DCM	MCD1571	HiCrome™ M-TEC HiCynth™ Agar	Low risk	10/11/2020
DCM	MCD1713	HiCrome™ M-TEC HiCynth™ Broth	Low risk	10/11/2020
DCM	M2067	HiCrome™ Mueller Hinton Agar (for antifungal)	Low risk	16/12/2017
DCM	M1712	HiCrome™ Nickels and Leesment Medium	Low risk	10/11/2020
DCM	MV1712	HiCrome™ Nickels & Leesment HiVeg™ Agar Base	Low risk	10/11/2020
DCM	MCD1633	HiCrome™ RajHans HiCynth™ Medium (Salmonella HiCynth™ Agar)	Low risk	25/08/2016

DCM	M1633	HiCrome™ RajHans Medium (Salmonella Agar)	Low risk	20/12/2012
DCM	M1634	HiCrome™ RajHans Medium, Modified (Salmonella Agar, Modified)	Low risk	20/12/2012
DCM	M2011	HiCrome™ Rapid ECC Broth	Low risk	22/04/2019
DCM	MCD1974	HiCrome™ Rapid MRSA HiCynth™ Agar Base	Low risk	25/08/2016
DCM	M2116	HiCrome™ Salmoconfirm Selective Agar	Low risk	10/11/2020
DCM	M1296	HiCrome™ Salmonella Agar	Low risk	20/12/2012
DCM	MV1296	HiCrome™ Salmonella HiVeg™ Agar	Low risk	20/12/2012
DCM	MCD1842	HiCrome™ Selective Salmonella HiCynth™ Agar Base	Low risk	10/11/2020
DCM	M1837	HiCrome™ Staph Agar Base, Modified	Low risk	20/12/2012
DCM	M1931	HiCrome™ Staph Selective Agar	Low risk	10/11/2020
DCM	M2092	HiCrome™ STEC Agar Base	Low risk	30/10/2018
DCM	M1840	HiCrome™ Strep B Selective Agar Base	Low risk	04/07/2018
DCM	M1966	HiCrome™ Strep B Selective Agar Base, Modified	Low risk	20/12/2012
DCM	MCD1840	HiCrome™ Strep B Selective HiCynth™Agar Base	Low risk	04/07/2018
DCM	M1600	HiCrome™ Universal Differential Medium	Low risk	20/12/2012
DCM	MCD1418	HiCrome™ UTI HiCynth™ Agar, Modified	Low risk	25/08/2016
DCM	M1353	HiCrome™ UTI Agar	Low risk	20/12/2012
DCM	M1418	HiCrome™ UTI Agar, Modified	Low risk	20/12/2012
DCM	MV1353	HiCrome™ UTI HiVeg™ Agar	Low risk	20/12/2012
DCM	MV1418	HiCrome™ UTI HiVeg™ Agar, Modified	Low risk	20/12/2012
DCM	M1505	HiCrome™ UTI Selective Agar	Low risk	20/12/2012
DCM	MV1505	HiCrome™ UTI Selective HiVeg™ Agar	Low risk	20/12/2012
DCM	M1682	HiCrome™ Vibrio Agar	Low risk	22/04/2019
DCM	MCD1682	HiCrome™ Vibrio HiCynth™ Agar	Low risk	10/11/2020
DCM	M1830	HiCrome™ VRE Agar Base	Low risk	20/12/2012
DCM	M1925	HiCrome™ VRE Agar Base, Modified	Low risk	20/12/2012
DCM	M2025	HiCrome™ Yersinia Agar Base	Low risk	25/08/2016
DCM	M1951	HiCrome™M-Coliform Differential Agar Base	Low risk	22/04/2019
DCM	M2048	HiFast™ Listeria Enrichment Broth Base	Low risk	10/11/2020
DCM	M1469	HiFluoro Pseudomonas Agar Base	Low risk	20/12/2012
DCM	MV1469	HiFluoro Pseudomonas HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M2126	HiMRSA™ Confirmation Agar Base	Low risk	18/06/2021
DCM	M1218	High Salt Nutrient Agar	Low risk	20/12/2012
DCM	M1219	High Salt Peptone Yeast Extract Agar	Low risk	20/12/2012
DCM	M1054	Hippurate Hydrolysis Broth	Low risk	20/12/2012
DCM	M485	Hi-Sensitivity Test Agar	Low risk	20/12/2012
DCM	M486	Hi-Sensitivity Test Broth	Low risk	20/12/2012
DCM	MV485	Hi-Sensitivity Test HiVeg™ Agar	Low risk	20/12/2012
DCM	MV486	Hi-Sensitivity Test HiVeg™ Broth	Low risk	20/12/2012

DCM	M485A	HiSitest Agar	Low risk	20/12/2012
DCM	MV806	HiVeg™ Extract Agar	Low risk	20/12/2012
DCM	MV807	HiVeg™ Extract Broth	Low risk	20/12/2012
DCM	MV028	HiVeg™ Peptone Water	Low risk	20/12/2012
DCM	M806	HM Peptone B Agar	Low risk	20/12/2012
DCM	M807	HM Peptone B Broth	Low risk	20/12/2012
DCM	M924	Horie Arabinose Ethyl Violet Broth	Low risk	20/12/2012
DCM	M5385	Horse Blood agar	Low risk	30/10/2018
DCM	M1425	Hottinger Broth	Low risk	20/12/2012
DCM	MV015	Hoyle HiVeg™ Medium Base	Low risk	20/12/2012
DCM	M015	Hoyle Medium Base	Low risk	20/12/2012
DCM	MV871	Hugh Leifson Glucose HiVeg™ Medium	Low risk	20/12/2012
DCM	M871	Hugh Leifson Glucose Medium	Low risk	20/12/2012
DCM	MV826	Hugh Leifson HiVeg™ Medium	Low risk	20/12/2012
DCM	M826	Hugh Leifson Medium	Low risk	20/12/2012
DCM	M826S	Hugh Leifson Medium	Low risk	20/12/2012
DCM	MV364	Indole Nitrate HiVeg™ Medium (Tryptone Nitrate HiVeg™ Medium)	Low risk	20/12/2012
DCM	M364	Indole Nitrate Medium (Tryptone Nitrate Medium)	Low risk	20/12/2012
DCM	M574	Inositol Brilliant Green Bile Agar (Plesiomonas Differential Agar)	Low risk	20/12/2012
DCM	MV574	Inositol Brilliant Green HiVeg™ Agar (Plesiomonas Differential HiVeg™ Agar)	Low risk	20/12/2012
DCM	M1222	Karmali Campylobacter Agar Base	Low risk	10/11/2020
DCM	M248	KF Streptococcal Agar Base	Low risk	22/04/2019
DCM	M249	KF Streptococcal Broth Base	Low risk	20/12/2012
DCM	MV248	KF Streptococcal HiVeg Agar Base	Low risk	22/04/2019
DCM	MV249	KF Streptococcal HiVeg™ Broth Base	Low risk	20/12/2012
DCM	M1007	KF Streptococcus Agar Base w/ BCP	Low risk	20/12/2012
DCM	M1021	KF Streptococcus Broth Base w/ BCP	Low risk	20/12/2012
DCM	MV1021	KF Streptococcus HiVeg™ Broth Base w/ BCP	Low risk	20/12/2012
DCM	M1232	Kimmig Fungi Agar Base	Low risk	20/12/2012
DCM	MV1232	Kimmig Fungi HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M1543	King's Medium A Base	Low risk	20/12/2012
DCM	M1235	King's OF Medium Base	Low risk	20/12/2012
DCM	MV1235	Kings OF Medium Base, HiVeg™	Low risk	20/12/2012
DCM	M2040	Kirchner Medium Base	Low risk	28/04/2017
DCM	M161	Kirchner Medium Base, Modified	Low risk	20/12/2012
DCM	M078	Kligler Iron Agar	Low risk	20/12/2012
DCM	M078I	Kligler Iron Agar	Low risk	20/12/2012
DCM	M078A	Kligler Iron Agar, Modified	Low risk	20/12/2012
DCM	MCD078	Kligler Iron HiCynth™ Agar	Low risk	12/08/2015

DCM	MV078	Kligler Iron HiVeg™ Agar	Low risk	20/12/2012
DCM	MV142	Kohn Two Tube HiVeg™ Medium No.1 Base	Low risk	20/12/2012
DCM	MV802	Kohn Two Tube HiVeg™ Medium No.2	Low risk	20/12/2012
DCM	M142	Kohn Two Tube Medium No.1 Base	Low risk	20/12/2012
DCM	M802	Kohn Two Tube Medium No.2	Low risk	20/12/2012
DCM	M069	Koser Citrate Medium	Low risk	20/12/2012
DCM	MV171	Kracke Blood Culture HiVeg™ Medium	Low risk	20/12/2012
DCM	M171	Kracke Blood Culture Medium	Low risk	20/12/2012
DCM	M305	Kupferberg Trichomonas Broth Base (Trichomonas Broth Base, Kupferberg)	Low risk	20/12/2012
DCM	MV305	Kupferberg Trichomonas HiVeg™ Broth Base (Trichomonas HiVeg™ Broth Base, Kupferberg)	Low risk	20/12/2012
DCM	M928	L Broth	Low risk	20/12/2012
DCM	M1312	L Broth, Modified	Low risk	20/12/2012
DCM	M162R	L J Medium Base, Modified (Lowenstein Jensen Medium Base, Modified)	Low risk	25/08/2016
DCM	M1552	L. mono Confirmatory Agar Base	Low risk	20/12/2012
DCM	MV1552	L. mono Confirmatory HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M742	L.D. Agar	Low risk	20/12/2012
DCM	M744	L.D. Egg Yolk Agar Base	Low risk	20/12/2012
DCM	M743	L.D. Esculin Agar	Low risk	20/12/2012
DCM	MV743	L.D. Esculin HiVeg™ Agar	Low risk	20/12/2012
DCM	MV742	L.D. HiVeg™ Agar	Low risk	20/12/2012
DCM	M1540	L.mono Differential Agar Base	Low risk	22/04/2019
DCM	M1540I	HiCrome™ Listeria Ottaviani-Agosti Agar Base	Low risk	10/11/2020
DCM	M1540IR	L.mono Differential Agar Base	Low risk	10/11/2020
DCM	MCD1540	L.mono Differential HiCynth™ Agar Base	Low risk	22/04/2019
DCM	MV1540	L.mono Differential HiVeg™ Agar Base	Low risk	22/04/2019
DCM	M926	Lactic Streak Agar (Reddy's Differential Agar, Modified)	Low risk	20/12/2012
DCM	MV926	Lactic Streak HiVeg™ Agar	Low risk	20/12/2012
DCM	MV368	Lactobacilli HiVeg™Broth (Elliker HiVeg™ Broth)	Low risk	20/12/2012
DCM	M927	Lactobacillus Bulgaricus Agar Base	Low risk	20/12/2012
DCM	MV927	Lactobacillus Bulgaricus HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M641	Lactobacillus MRS Agar (MRS Agar)	Low risk	20/12/2012
DCM	M641I	Lactobacillus MRS Agar (MRS Agar)	Low risk	20/12/2012
DCM	M369	Lactobacillus MRS Broth (MRS Broth)	Low risk	20/12/2012
DCM	MV641	Lactobacillus MRS HiVeg™ Agar (MRS HiVeg™ Agar)	Low risk	20/12/2012
DCM	MV369	Lactobacillus MRS HiVeg™ Broth (MRS HiVeg™ Broth)	Low risk	20/12/2012
DCM	M1165	Lactobacillus Selection Bile Agar Base (LBS Bile Agar)	Low risk	20/12/2012
DCM	M1081	Lactose Blue Agar (B.T.B. Lactose Agar, Modified)	Low risk	20/12/2012
DCM	MV1081	Lactose Blue HiVeg™ Agar (B.T.B. Lactose HiVeg™ Agar, Modified)	Low risk	20/12/2012

DCM	M1003	Lactose Broth	Low risk	22/04/2019
DCM	MV1003	Lactose HiVeg™ Broth	Low risk	22/04/2019
DCM	M1047	Lactose Lecithin Agar	Low risk	04/07/2018
DCM	M080	Lauryl Sulphate Broth (Lauryl Tryptose Broth)	Low risk	22/04/2019
DCM	MV080	Lauryl SulphateHiVeg™ Broth (Lauryl Tryptose HiVeg™ Broth)	Low risk	22/04/2019
DCM	M180	Lead Acetate Agar	Low risk	10/11/2020
DCM	M1839	Leeds Acinetobacter Agar Base	Low risk	20/12/2012
DCM	M1938R	Leeds Acinetobacter Agar Base (HiCrome™ Acinetobacter Agar Base)	Low risk	25/08/2016
DCM	M1845	Legionella Agar Base w/o Charcoal	Low risk	10/11/2020
DCM	M1380	Leifson Agar	Low risk	20/12/2012
DCM	MV1380	Leifson HiVeg™ Agar	Low risk	20/12/2012
DCM	M1138	Leifson's Deoxycholate Agar, Modified	Low risk	20/12/2012
DCM	MV1138	Leifson's Deoxycholate HiVeg™ Agar, Modified	Low risk	20/12/2012
DCM	MV239	Leptospira HiVeg™ Medium Base, Fletcher (Fletcher Leptospira HiVeg™ Medium Base)	Low risk	20/12/2012
DCM	MV457	Leptospira HiVeg™ Medium Base, Korthof, Modified	Low risk	20/12/2012
DCM	M1009	Leptospira Medium Base	Low risk	20/12/2012
DCM	M239	Leptospira Medium Base, Fletcher (Fletcher Leptospira Medium Base)	Low risk	20/12/2012
DCM	M457	Leptospira Medium Base, Korthof, Modified	Low risk	20/12/2012
DCM	MV472	Levinthal's HiVeg™ Medium Base	Low risk	20/12/2012
DCM	M472	Levinthal's Medium Base	Low risk	20/12/2012
DCM	M374	LI Agar	Low risk	20/12/2012
DCM	MV374	LI Agar, HiVeg™	Low risk	20/12/2012
DCM	M153	LI Broth	Low risk	20/12/2012
DCM	MV153	LI Broth, HiVeg™	Low risk	20/12/2012
DCM	M627	Lipovitellin Salt Mannitol Agar Base	Low risk	20/12/2012
DCM	M817	Liquoid Broth	Low risk	20/12/2012
DCM	MV817	Liquoid HiVeg™ Broth	Low risk	20/12/2012
DCM	M569	Listeria Enrichment Broth (Twin Pack)	Low risk	20/12/2012
DCM	MV569	Listeria Enrichment HiVeg™ Broth (Twin Pack)	Low risk	20/12/2012
DCM	MV890A	Listeria Enrichment HiVeg™ Medium Base (UVM)	Low risk	20/12/2012
DCM	M890A	Listeria Enrichment Medium Base (UVM)	Low risk	20/12/2012
DCM	M1064	Listeria Identification Agar Base (PALCAM)	Low risk	22/04/2019
DCM	M1090	Listeria Identification Broth Base (PALCAM)	Low risk	22/04/2019
DCM	MV1064	Listeria Identification HiVeg Agar Base (PALCAM)	Low risk	22/04/2019
DCM	MV1090	Listeria Identification HiVeg Broth Base (PALCAM)	Low risk	22/04/2019
DCM	MCD1145	Listeria Oxford HiCynth™ Medium Base	Low risk	25/08/2016
DCM	MV1145	Listeria Oxford HiVeg™ Medium Base	Low risk	20/12/2012
DCM	M1145R	Listeria Oxford Medium Base	Low risk	25/08/2016

DCM	M1145	Listeria Oxford Medium Base	Low risk	20/12/2012
DCM	M1781	Listeria Oxford Medium Base, Modified	Low risk	20/12/2012
DCM	M567	Listeria Selective Agar (Twin Pack)	Low risk	20/12/2012
DCM	M1474	Listeria Selective Agar Base	Low risk	20/12/2012
DCM	M889	Listeria Selective Broth Base	Low risk	20/12/2012
DCM	M1865	Listeria Selective Enrichment Broth	Low risk	22/04/2019
DCM	MV567	Listeria Selective HiVeg™ Agar (Twin Pack)	Low risk	20/12/2012
DCM	MV889	Listeria Selective HiVeg™ Broth Base	Low risk	20/12/2012
DCM	M507	Litmus Lactose Bile Salt Agar (LLBSA)	Low risk	10/11/2020
DCM	MV507	Litmus Lactose HiVeg™ Agar	Low risk	10/11/2020
DCM	M373	Littman Bile Agar Base	Low risk	20/12/2012
DCM	M663	Littman Bile Broth Base	Low risk	20/12/2012
DCM	MV373	Littman HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV663	Littman HiVeg™ Broth Base	Low risk	20/12/2012
DCM	M1001	LM Agar	Low risk	20/12/2012
DCM	M1934	LM Agar, Modified	Low risk	20/12/2012
DCM	MV537	Loeffler HiVeg™ Medium Base	Low risk	20/12/2012
DCM	M537	Loeffler Medium Base	Low risk	20/12/2012
DCM	M1189	Loeffler Serum Medium Base	Low risk	20/12/2012
DCM	MM162	Lowenstein - Jensen Medium (L.J. Medium) (Twin Pack)	Low risk	20/12/2012
DCM	M162R	Lowenstein Jensen Medium Base, Modified (L J Medium Base, Modified)	Low risk	25/08/2016
DCM	M162	Lowenstein Jensen Medium Base (L.J. Medium)	Low risk	20/12/2012
DCM	M1542	Lowenstein Jensen Medium Base w/o Starch	Low risk	20/12/2012
DCM	M2032	Lowenstein Jensen Medium Base, Modified	Low risk	25/08/2016
DCM	M176	LV Agar (Liver Veal Agar)	Low risk	10/11/2020
DCM	M1977	Lysine Indole Motility Medium, Modified	Low risk	10/11/2020
DCM	MH081	MacConkey Agar	Low risk	22/04/2019
DCM	M1024	MacConkey Agar Base	Low risk	20/12/2012
DCM	M1819	MacConkey Agar II w/o CV	Low risk	20/12/2012
DCM	M008E	MacConkey Agar Medium	Low risk	20/12/2012
DCM	M081	MacConkey Agar w/ 0.15% Bile Salts, CV and NaCl	Low risk	20/12/2012
DCM	M061	MacConkey Agar w/ Bromo Thymol Blue	Low risk	20/12/2012
DCM	M1582	MacConkey Agar w/ CV and w/o NaCl	Low risk	20/12/2012
DCM	M081A	MacConkey Agar w/ CV, NaCl, and 0.15% Bile Salts	Low risk	20/12/2012
DCM	M008	MacConkey Agar w/o CV w/ 0.15% Bile Salts	Low risk	20/12/2012
DCM	M082A	MacConkey Agar w/o CV, NaCl w/ 0.5% Bile Salts	Low risk	20/12/2012
DCM	M082	MacConkey Agar w/o CV, NaCl w/ 0.5% Sodium Taurocholate	Low risk	20/12/2012
DCM	M008A	MacConkey Agar w/o CV, w/ 0.5% Bile Salts	Low risk	20/12/2012
DCM	M008B	MacConkey Agar w/o CV, w/ 1.2% Agar	Low risk	20/12/2012

DCM	M1785	MacConkey Agar w/o CV, w/0.5% Sodium Taurocholate	Low risk	20/12/2012
DCM	M1702	MacConkey Agar, RS	Low risk	20/12/2012
DCM	MH083	MacConkey Broth	Low risk	22/04/2019
DCM	M083	MacConkey Broth Purple w/BCP	Low risk	22/04/2019
DCM	MCD081	MacConkey HiCynth™ Agar w/ 0.15% Bile Salts	Low risk	25/08/2016
DCM	MCD082	MacConkey HiCynth™ Agar w/o CV, NaCl	Low risk	25/08/2016
DCM	MV1024	MacConkey HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV061	MacConkey HiVeg™ Agar w/ Bromo Thymol Blue	Low risk	20/12/2012
DCM	MV081	MacConkey HiVeg™ Agar w/ CV, NaCl, 0.003% NR and 1.5% Agar	Low risk	20/12/2012
DCM	MV081A	MacConkey HiVeg™ Agar w/ CV, NaCl, 0.005% NR and 1.5% Agar	Low risk	20/12/2012
DCM	MV082	MacConkey HiVeg™ Agar w/o CV and NaCl, w/ 0.004% NR and 2.0% Agar	Low risk	20/12/2012
DCM	MV082A	MacConkey HiVeg™ Agar w/o CV and NaCl, w/ 0.0075% NR and 1.2% Agar	Low risk	20/12/2012
DCM	MV008B	MacConkey HiVeg™ Agar w/o CV, w/ 0.003% NR and 1.2% Agar	Low risk	20/12/2012
DCM	MV008	MacConkey HiVeg™ Agar w/o CV, w/ 0.003% NR and 1.5% Agar	Low risk	20/12/2012
DCM	MV008A	MacConkey HiVeg™ Agar w/o CV, w/ 0.0075% NR and 1.2% Agar	Low risk	20/12/2012
DCM	MV083	MacConkey HiVeg™ Broth Purple w/ BCP	Low risk	22/04/2019
DCM	M298	MacConkey Sorbitol Agar (Sorbitol Agar)	Low risk	20/12/2012
DCM	M298I	MacConkey Sorbitol Agar Base	Low risk	20/12/2012
DCM	M1727R	MacConkey Sorbitol Agar Base (w/ Rhamnose)	Low risk	25/08/2016
DCM	M1727	MacConkey Sorbitol Agar Base w/ Rhamnose	Low risk	20/12/2012
DCM	MCD298	MacConkey Sorbitol HiCynth™ Agar (Sorbitol HiCynth™ Agar)	Low risk	28/04/2017
DCM	MV298	MacConkey Sorbitol HiVeg™ Agar (Sorbitol HiVeg™Agar)	Low risk	20/12/2012
DCM	M2074	MacConkey Sorbitol Rhamnose Selective Agar Base	Low risk	16/12/2017
DCM	M382	Malonate Broth	Low risk	25/08/2016
DCM	M137	Malt Extract Agar Base (w/ Mycological Peptone)	Low risk	20/12/2012
DCM	M995	Malt Extract Agar Base, Modified as per Thom and Church	Low risk	20/12/2012
DCM	M255	Malt Extract Broth Base	Low risk	20/12/2012
DCM	M1128	Malt Extract Broth, Modified as per Thom and Church	Low risk	20/12/2012
DCM	MV137	Malt Extract HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV995	Malt Extract HiVeg™ Agar Base, Modified	Low risk	20/12/2012
DCM	MV255	Malt Extract HiVeg™ Broth Base	Low risk	20/12/2012
DCM	M1967	Malt Yeast Agar	Low risk	20/12/2012
DCM	M1624	Mannitol Agar w/Prilion	Low risk	20/12/2012
DCM	M1071	Mannitol Lysine Agar	Low risk	20/12/2012
DCM	MCD1071	Mannitol Lysine HiCynth™Agar	Low risk	25/08/2016
DCM	M1320	Mannitol Motility Nitrate Medium	Low risk	20/12/2012
DCM	MV770	Mannitol Motility Test HiVeg™ Medium	Low risk	20/12/2012
DCM	M770	Mannitol Motility Test Medium	Low risk	20/12/2012
DCM	MH118	Mannitol Salt Agar	Low risk	22/04/2019

DCM	M118	Mannitol Salt Agar Base	Low risk	20/12/2012
DCM	M383	Mannitol Salt Broth	Low risk	20/12/2012
DCM	MCD118	Mannitol Salt HiCynth™ Agar Base	Low risk	12/08/2015
DCM	MV118	Mannitol Salt HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV383	Mannitol Salt HiVeg™ Broth	Low risk	20/12/2012
DCM	M1534	Mannitol Selenite Broth (Selenite Mannitol Broth) (Twin Pack)	Low risk	20/12/2012
DCM	M1537	Mannitol Selenite Broth w/Brilliant Green (Twin Pack)	Low risk	04/07/2018
DCM	MV379	Marine Oxidation Fermentation HiVeg™ Medium	Low risk	20/12/2012
DCM	M379	Marine Oxidation Fermentation Medium	Low risk	20/12/2012
DCM	M2085	Martin Lewis Agar Base	Low risk	22/04/2019
DCM	M1030	Maximum Recovery Diluent	Low risk	22/04/2019
DCM	MV1030	Maximum Recovery Diluent HiVeg™	Low risk	22/04/2019
DCM	M386	McBride Listeria Agar Base	Low risk	20/12/2012
DCM	MV386	McBride Listeria HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M1354	M-CP Agar Base	Low risk	10/11/2020
DCM	MV1354	M-CP HiVeg™Agar Base	Low risk	10/11/2020
DCM	M1426	M-E.coli Broth	Low risk	22/04/2019
DCM	M1594	MeReSa Agar Base	Low risk	20/12/2012
DCM	M1974R	MeReSa Agar Base (HiCrome™ Rapid MRSA Agar)	Low risk	25/08/2016
DCM	M1812	M-FC Basal Medium	Low risk	10/11/2020
DCM	M199	Middlebrook 7H10 Agar Base	Low risk	20/12/2012
DCM	M196	Middlebrook 7H10 Agar Base, Special	Low risk	20/12/2012
DCM	M511	Middlebrook 7H11 Agar Base	Low risk	20/12/2012
DCM	M511A	Middlebrook 7H11 Agar Base w/o Malachite Green	Low risk	20/12/2012
DCM	MV511	Middlebrook 7H11 HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M197	Middlebrook 7H9 Agar Base	Low risk	20/12/2012
DCM	M198	Middlebrook 7H9 Broth Base	Low risk	20/12/2012
DCM	M259	Mitis Salivarius Agar Base	Low risk	20/12/2012
DCM	MV259	Mitis Salivarius HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M5319	Modified B.Q. Vaccine Medium	Low risk	28/04/2017
DCM	M1150	Modified Bile Esculin Azide Agar	Low risk	20/12/2012
DCM	M892	Modified Buffered Charcoal Agar Base	Low risk	20/12/2012
DCM	MV892	Modified Buffered Charcoal HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M1660	Modified Cary-Blair Medium	Low risk	20/12/2012
DCM	MV460	Modified CPLM HiVeg™ Medium Base (Trichomonas Modified CPLM HiVeg™ Medium Base)	Low risk	20/12/2012
DCM	M460	Modified CPLM Medium Base (Trichomonas Modified CPLM Medium Base)	Low risk	20/12/2012
DCM	M1170	Modified Czapek Dox Agar	Low risk	20/12/2012
DCM	M1285	Modified EC Broth Base	Low risk	20/12/2012
DCM	M1445	Modified Lactobacillus Agar	Low risk	20/12/2012

DCM	M1643	Modified Lauryl Sulphate Tryptose Broth Base	Low risk	20/12/2012
DCM	M1457R	Modified Listeria Lecithinase Agar Base	Low risk	25/08/2016
DCM	M1897	Modified Listeria Oxford Agar Base	Low risk	25/11/2017
DCM	M891	Modified McBride Listeria Agar Base	Low risk	20/12/2012
DCM	MV891	Modified McBride Listeria HiVeg™™ Agar Base	Low risk	20/12/2012
DCM	M1139	Modified MYP Agar Base	Low risk	20/12/2012
DCM	MV1139	Modified MYP HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M1606	Modified Protease Agar	Low risk	20/12/2012
DCM	M1681	Modified Sabourauds Chloramphenicol Agar	Low risk	20/12/2012
DCM	M1068	Modified Salt Broth	Low risk	20/12/2012
DCM	M2049	Modified Shieh Agar (LMG Medium 215)	Low risk	28/04/2017
DCM	M1286I	Modified Soyabean Bile Broth Base	Low risk	22/04/2019
DCM	M795	Modified Thayer Martin Medium Base (w/o Supplement)	Low risk	20/12/2012
DCM	M393	Moeller Decarboxylase Broth Base (Decarboxylase Broth Base, Moeller)	Low risk	25/08/2016
DCM	MCD393	Moeller Decarboxylase HiCynth™ Broth Bas	Low risk	25/08/2016
DCM	M246	Mold Inhibitory Agar, Ulrich	Low risk	20/12/2012
DCM	M474	Monsur Medium Base	Low risk	20/12/2012
DCM	M1927	MRS Agar w/ Low pH	Low risk	10/11/2020
DCM	M1864	MSM Broth Base	Low risk	20/12/2012
DCM	M173	Mueller Hinton Agar	Low risk	20/12/2012
DCM	M1825	Mueller Hinton Agar 2% Glucose w/ Methylene blue	Low risk	20/12/2012
DCM	M1825R	Mueller Hinton Agar Modified (As per CLSI)	Low risk	25/08/2016
DCM	M1084	Mueller Hinton Agar No. 2	Low risk	20/12/2012
DCM	M5389	Mueller Hinton Agar w/ 2% NaCL	Low risk	30/10/2018
DCM	M391	Mueller Hinton Broth	Low risk	20/12/2012
DCM	M1657	Mueller Hinton Broth No. 2 Control Cations	Low risk	20/12/2012
DCM	MV173	Mueller Hinton HiVeg™ Agar	Low risk	20/12/2012
DCM	MV1084	Mueller Hinton HiVeg™ Agar No. 2	Low risk	20/12/2012
DCM	MV391	Mueller Hinton HiVeg™ Broth	Low risk	20/12/2012
DCM	M1202	Mueller Tellurite Agar Base	Low risk	20/12/2012
DCM	M1373	MUG EC O157 Agar	Low risk	16/12/2017
DCM	M1429	MUG EC O157 Agar, Modified	Low risk	20/12/2012
DCM	M1080	MUG MacConkey Agar	Low risk	20/12/2012
DCM	MV1080	MUG MacConkey HiVeg™ Agar	Low risk	20/12/2012
DCM	M1205	MUG Sorbitol Agar	Low risk	20/12/2012
DCM	M977	Mutans-Sanguis Agar	Low risk	20/12/2012
DCM	M094	Mycological Agar	Low risk	20/12/2012
DCM	M095	Mycological Agar w/ Low pH	Low risk	20/12/2012
DCM	M1422	Mycological Agar, Modified	Low risk	20/12/2012

DCM	M264	Mycological Broth	Low risk	20/12/2012
DCM	M265	Mycological Broth w/ Low pH	Low risk	20/12/2012
DCM	M266	Mycoplasma Agar Base (PPLO Agar Base)	Low risk	20/12/2012
DCM	M268	Mycoplasma Broth Base w/ CV (PPLO Broth Base w/ CV)	Low risk	20/12/2012
DCM	M267	Mycoplasma Broth Base w/o CV (PPLO Broth Base w/o CV)	Low risk	20/12/2012
DCM	M1498	Mycoplasma Cultivation Broth Base	Low risk	20/12/2012
DCM	MV266	Mycoplasma HiVeg™ Agar Base (PPLO HiVeg™ Agar Base)	Low risk	20/12/2012
DCM	MV268	Mycoplasma HiVeg™ Broth Base w/ CV (PPLO HiVeg™ Broth Base w/ CV)	Low risk	20/12/2012
DCM	MV267	Mycoplasma HiVeg™ Broth Base w/o CV (PPLO HiVeg™ Broth Base w/o CV)	Low risk	20/12/2012
DCM	MV624	Mycoplasma Synoviae HiVeg™ Medium Base	Low risk	20/12/2012
DCM	M624	Mycoplasma Synoviae Medium Base	Low risk	20/12/2012
DCM	M1374	Mycoplasma Urogenital Broth Base (Urogenital Mycoplasma Broth Base)	Low risk	20/12/2012
DCM	M636	MYP Agar Base (Phenol Red Egg Yolk Polymyxin Agar Base)	Low risk	20/12/2012
DCM	MCD636	MYP HiCynth™ Agar Base (Phenol Red Egg Yolk Polymyxin HiCynth™ Agar Base	Low risk	28/04/2017
DCM	MV636	MYP HiVeg™ Agar Base (Phenol Red Polymyxin HiVeg™ Agar Base)	Low risk	20/12/2012
DCM	MV217	Nickerson HiVeg™ Medium (Bi.G.G.Y. HiVeg™ Agar)	Low risk	20/12/2012
DCM	M217	Nickerson Medium (Bi.G.G.Y. Agar)	Low risk	20/12/2012
DCM	M072	Nitrate Agar	Low risk	10/11/2020
DCM	MV072	Nitrate HiVeg™ Agar	Low risk	10/11/2020
DCM	M681	NNN Modified Medium (Twin Pack)	Low risk	10/11/2020
DCM	M001	Nutrient Agar	Low risk	20/12/2012
DCM	M001A	Nutrient Agar	Low risk	20/12/2012
DCM	M087	Nutrient Agar 1.5%	Low risk	20/12/2012
DCM	M1269	Nutrient Agar No.2	Low risk	20/12/2012
DCM	M012	Nutrient Agar w/ 1% Peptone	Low risk	20/12/2012
DCM	M561	Nutrient Agar, pH 6.8	Low risk	20/12/2012
DCM	M002	Nutrient Broth	Low risk	20/12/2012
DCM	M1362	Nutrient Broth No. 2	Low risk	20/12/2012
DCM	M1902	Nutrient Broth No.3	Low risk	20/12/2012
DCM	M060	Nutrient Gelatin	Low risk	20/12/2012
DCM	MCD001	Nutrient HiCynth™ Agar	Low risk	12/08/2015
DCM	MCD002	Nutrient HiCynth™ Broth	Low risk	12/08/2015
DCM	MV001	Nutrient HiVeg™ Agar	Low risk	20/12/2012
DCM	MV087	Nutrient HiVeg™ Agar 1.5%	Low risk	20/12/2012
DCM	MV1269	Nutrient HiVeg™ Agar No.2	Low risk	20/12/2012
DCM	MV012	Nutrient HiVeg™ Agar w/ 1% HiVeg™ Peptone	Low risk	20/12/2012
DCM	MV561	Nutrient HiVeg™ Agar, pH 6.8	Low risk	20/12/2012

DCM	MV002	Nutrient HiVeg™ Broth	Low risk	20/12/2012
DCM	M1348	NYC Agar Base	Low risk	20/12/2012
DCM	MCD395	OF Basal HiCynth™ Medium	Low risk	25/08/2016
DCM	MV395	OF Basal HiVeg™ Medium	Low risk	20/12/2012
DCM	M395	OF Basal Medium	Low risk	20/12/2012
DCM	M1811	OFPBL Agar Base (Oxidation Fermentation Polymyxin Bacitracin Lactose Agar Base)	Low risk	20/12/2012
DCM	M1930	ONPG BROTH	Low risk	20/12/2012
DCM	M933	Orange Serum Agar	Low risk	22/04/2019
DCM	MV933	Orange SerumHiVeg™ Agar	Low risk	22/04/2019
DCM	M1454	Oxacillin Resistance Screening Agar Base	Low risk	20/12/2012
DCM	M1390	Pagano Levin Base	Low risk	20/12/2012
DCM	M867	Peizer TB Medium Base	Low risk	20/12/2012
DCM	M1207	Pepted M Broth	Low risk	20/12/2012
DCM	M028	Peptone Water	Low risk	20/12/2012
DCM	MCD837	Perfringens HiCynth™ Agar Base (T.S.C/S.F.P HiCynth™ Agar Base)	Low risk	28/04/2017
DCM	MV837	Perfringens HiVeg™ Agar Base (T.S.C/S.F.P HiCynth™ Agar Base)	Low risk	28/04/2017
DCM	M269A	Phenylethanol Agar Base	Low risk	20/12/2012
DCM	M269	Phenylethyl Alcohol Agar Base	Low risk	20/12/2012
DCM	MV269	Phenylethyl Alcohol HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M540	Phenylethyl Blood Agar Base (Anaerobic)	Low risk	20/12/2012
DCM	M1866	Phosphate Buffered Saline (PBS) pH 7.4	Low risk	22/04/2019
DCM	M519	Pike Streptococcal Broth Base	Low risk	20/12/2012
DCM	MV519	Pike Streptococcal HiVeg™ Broth Base	Low risk	20/12/2012
DCM	M282	PKU Test Agar Base	Low risk	20/12/2012
DCM	M398	PKU Test Agar w/ Thienylalanine	Low risk	20/12/2012
DCM	M091	Plate Count Agar (Standard Methods Agar)	Low risk	28/04/2017
DCM	MCD091	Plate Count HiCynth™Agar (Standard Methods HiCynth™ Agar)	Low risk	28/04/2017
DCM	MV091	Plate Count HiVeg™ Agar (Standard Methods HiVeg™ Agar)	Low risk	28/04/2017
DCM	M574	Plesiomonas Differential Agar (Inositol Brilliant Green Bile Agar)	Low risk	20/12/2012
DCM	MV574	Plesiomonas Differential HiVeg™ Agar (Inositol Brilliant Green HiVeg™ Agar)	Low risk	20/12/2012
DCM	M1446	PLET Agar Base	Low risk	20/12/2012
DCM	M1451	PLET Agar Base, Modified	Low risk	20/12/2012
DCM	M835	PNY Medium	Low risk	20/12/2012
DCM	MH096	Potato Dextrose Agar	Low risk	22/04/2019
DCM	M096	Potato Dextrose Agar	Low risk	22/04/2019
DCM	M5391	PPLO Agar Base	Low risk	30/10/2018
DCM	M1586	PPLO Modified Broth Base w/o CV	Low risk	20/12/2012

DCM	M899	Preston Enrichment Broth Base (Campylobacter Enrichment Broth Base)	Low risk	20/12/2012
DCM	MV899	Preston Enrichment HiVeg™ Broth Base (Campylobacter Enrichment HiVeg™ Broth Base)	Low risk	20/12/2012
DCM	M956	Propionibacter Isolation Agar Base	Low risk	20/12/2012
DCM	M1697	Proskauer Beck medium	Low risk	20/12/2012
DCM	M085	Pseudomonas Agar Base	Low risk	22/04/2019
DCM	MV085	Pseudomonas HiVeg Agar Base	Low risk	22/04/2019
DCM	M406	Pseudomonas Isolation Agar Base	Low risk	20/12/2012
DCM	MCD406	Pseudomonas Isolation HiCynth™ Agar	Low risk	25/08/2016
DCM	MV406	Pseudomonas Isolation HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M1489	PYR Agar	Low risk	10/11/2020
DCM	M1743	R2A Agar, Modified	Low risk	22/04/2019
DCM	MV1078	RajHans HiVeg™ Medium (Salmonella Differential HiVeg™ Agar) (Twin Pack)	Low risk	20/12/2012
DCM	M1078	RajHans Medium (Salmonella Differential Agar) (Twin Pack)	Low risk	20/12/2012
DCM	M1453A	Rapid HiColiform Broth w/Tryptophan	Low risk	22/04/2019
DCM	MCD1465	Rapid HiColiform HiCynth™ Agar	Low risk	10/11/2020
DCM	M1465	Rapid HiColiform™ Agar	Low risk	10/11/2020
DCM	MV1465	Rapid HiColiform™ HiVeg™ Agar	Low risk	10/11/2020
DCM	MCD1491	Rappaport Vassiliadis HiCynth™ Broth	Low risk	12/08/2015
DCM	M1530	Rappaport Vassiliadis R10 Medium	Low risk	20/12/2012
DCM	MH1491	Rappaport Vassiliadis Salmonella Enrichment Broth	Low risk	22/04/2019
DCM	M1491	Rappaport Vassiliadis Soya Broth (RVS Broth)	Low risk	20/12/2012
DCM	M1448	Rappaport Vassiliadis Soyabean Meal Broth (RVSM)	Low risk	20/12/2012
DCM	MH443	Reinforced Medium for Clostridia	Low risk	22/04/2019
DCM	M1626	Reuter's Sorbic Acid Agar Base	Low risk	20/12/2012
DCM	M459	Robinson Medium for Entamoeba (Twin Pack)	Low risk	20/12/2012
DCM	M149	Robinson'c Cooked M Medium (R.C. Medium)	Low risk	16/12/2017
DCM	M1899	Rogosa Agar, Modified	Low risk	20/12/2012
DCM	M130	Rogosa SL Agar	Low risk	20/12/2012
DCM	M958	Rogosa SL Agar w/ 0.15% Bile	Low risk	20/12/2012
DCM	M407	Rogosa SL Broth	Low risk	20/12/2012
DCM	MCD130	Rogosa SL HiCynth™ Agar	Low risk	28/04/2017
DCM	MV130	Rogosa SL HiVeg™ Agar	Low risk	20/12/2012
DCM	MV407	Rogosa SL HiVeg™ Broth	Low risk	20/12/2012
DCM	M842	Rose Bengal Agar Base	Low risk	20/12/2012
DCM	M640	Rose Bengal Chloramphenicol Agar	Low risk	22/04/2019
DCM	MV640	Rose Bengal Chloramphenicol HiVeg™ Agar	Low risk	22/04/2019
DCM	M1972	RPMI 1640 Agar w/ MOPS & 2% Glucose w/o Sodium Bicarbonate (Twin Pack)	Low risk	20/12/2012
DCM	MV576	RS HiVeg Medium Base	Low risk	22/04/2019

DCM	M576	RS Medium Base	Low risk	22/04/2019
DCM	M409	SABHI Agar Base	Low risk	20/12/2012
DCM	MV409	SABHI HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M1744	Sabouraud Agar Glucose 4%	Low risk	20/12/2012
DCM	M1067	Sabouraud Chloramphenicol Agar	Low risk	20/12/2012
DCM	MV1067	Sabouraud Chloramphenicol HiVeg™ Agar	Low risk	20/12/2012
DCM	M664	Sabouraud Cycloheximide Chloramphenicol Agar	Low risk	20/12/2012
DCM	MV664	Sabouraud Cycloheximide Chloramphenicol HiVeg™ Agar	Low risk	20/12/2012
DCM	MH063	Sabouraud Dextrose Agar	Low risk	22/04/2019
DCM	M063	Sabouraud Dextrose Agar	Low risk	20/12/2012
DCM	M286	Sabouraud Dextrose Agar Base, Modified (Dextrose Agar Base, Emmons)	Low risk	20/12/2012
DCM	MH033	Sabouraud Dextrose Broth	Low risk	22/04/2019
DCM	M033	Sabouraud Dextrose Broth (Sabouraud Liquid Medium)	Low risk	20/12/2012
DCM	MCD063	Sabouraud Dextrose HiCynth™ Agar	Low risk	12/08/2015
DCM	MCD033	Sabouraud Dextrose HiCynth™ Broth	Low risk	12/08/2015
DCM	MV063	Sabouraud Dextrose HiVeg™ Agar	Low risk	20/12/2012
DCM	MV286	Sabouraud Dextrose HiVeg™ Agar Base, Modified (Dextrose HiVeg™ Agar Base, Emmons)	Low risk	20/12/2012
DCM	MV033	Sabouraud Dextrose HiVeg™ Broth (Sabouraud Liquid HiVeg™ Medium)	Low risk	20/12/2012
DCM	M1313	Sabouraud Dextrose Maltose Agar	Low risk	20/12/2012
DCM	M1460	Sabouraud Dextrose Maltose Broth	Low risk	20/12/2012
DCM	MV1313	Sabouraud Dextrose Maltose HiVeg™ Agar	Low risk	20/12/2012
DCM	MCD013	Sabouraud Fluid HiCynth™ Medium	Low risk	12/08/2015
DCM	M1472	Sabouraud Glucose Agar Base w/ Antibiotics	Low risk	20/12/2012
DCM	M062	Sabouraud Maltose Agar	Low risk	20/12/2012
DCM	M064	Sabouraud Maltose Broth	Low risk	20/12/2012
DCM	MV062	Sabouraud Maltose HiVeg™ Agar	Low risk	20/12/2012
DCM	MV064	Sabouraud Maltose HiVeg™ Broth	Low risk	20/12/2012
DCM	M844	Saccharose Broth	Low risk	20/12/2012
DCM	M1619	Sakazakii DHL Agar	Low risk	20/12/2012
DCM	M942	Saline Agar	Low risk	20/12/2012
DCM	M1778	Saline Lysine Decarboxylase Medium	Low risk	20/12/2012
DCM	M1633	Salmonella Agar (HiCrome™ RajHans Medium)	Low risk	20/12/2012
DCM	M1634	Salmonella Agar, Modified (HiCrome™ RajHans Medium, Modified)	Low risk	20/12/2012
DCM	M573	Salmonella Agar, ONOZ	Low risk	20/12/2012
DCM	M1078	Salmonella Differential Agar (Twin Pack) (RajHans Medium)	Low risk	20/12/2012
DCM	M1082	Salmonella Differential Agar, Modified (Twin Pack)	Low risk	20/12/2012
DCM	MCD1078	Salmonella Differential HiCynth™ Agar (Twin Pack)	Low risk	25/08/2016

DCM	MV1078	Salmonella Differential HiVeg™ Agar (RajHans HiVeg™ Medium) (Twin Pack)	Low risk	20/12/2012
DCM	MV1082	Salmonella Differential HiVeg™ Agar, Modified (Twin Pack)	Low risk	20/12/2012
DCM	MV573	Salmonella HiVeg™ Agar, ONOZ	Low risk	20/12/2012
DCM	M1767	Salt Agar, Modified	Low risk	20/12/2012
DCM	M1290	Salt Broth, Modified	Low risk	20/12/2012
DCM	M155	Salt M Broth	Low risk	20/12/2012
DCM	M821	Salt Polymyxin Broth Base	Low risk	20/12/2012
DCM	MV821	Salt Polymyxin HiVeg™ Broth Base	Low risk	20/12/2012
DCM	M1276	Sauton's Fluid Medium Base	Low risk	20/12/2012
DCM	M1535	SBG Enrichment Broth (Twin Pack)	Low risk	20/12/2012
DCM	M291	Schaedler Agar	Low risk	20/12/2012
DCM	M292	Schaedler Broth	Low risk	20/12/2012
DCM	MV291	Schaedler HiVeg™ Agar	Low risk	20/12/2012
DCM	MV292	Schaedler HiVeg™ Broth	Low risk	20/12/2012
DCM	M1882	Selective Broth for MRSA	Low risk	20/12/2012
DCM	M052	Selenite Broth (Selenite F Broth) (Twin Pack)	Low risk	20/12/2012
DCM	M970	Selenite Broth Base w/o Biselenite	Low risk	20/12/2012
DCM	M1079	Selenite Cystine Broth Base w/o Biselenite	Low risk	20/12/2012
DCM	M1536	Selenite F Broth w/ Dulcitol (Dulcitol Selenite Broth) (Twin Pack)	Low risk	20/12/2012
DCM	M1534	Selenite Mannitol Broth (Mannitol Selenite Broth) (Twin Pack)	Low risk	20/12/2012
DCM	M1321	Semisolid LM Medium	Low risk	20/12/2012
DCM	M1282	Semisolid Rappaport Vassiliadis Medium, Modified	Low risk	22/04/2019
DCM	M1998	Semisolid RV Medium w/ 0.9% Agar	Low risk	25/08/2016
DCM	MV296	Sensitivity Test HiVeg™ Medium	Low risk	20/12/2012
DCM	M296	Sensitivity Test Medium	Low risk	20/12/2012
DCM	M1301	Sheep Blood Agar Base	Low risk	20/12/2012
DCM	M1739	Shepard's Differential Agar Base (A7 Agar Base)	Low risk	20/12/2012
DCM	M411	Simmons Agar Base	Low risk	20/12/2012
DCM	M099	Simmons Citrate Agar	Low risk	20/12/2012
DCM	M099S	Simmons Citrate Agar	Low risk	20/12/2012
DCM	M612A	Slanetz and Bartley Medium w/o TTC	Low risk	10/11/2020
DCM	M5296	SM Tryptone Glucose Glycerin Medium	Low risk	25/11/2017
DCM	M960	Smibert's Semisolid Brucella Medium	Low risk	20/12/2012
DCM	M106	Snyder Test Agar (B.C.G. - Dextrose Agar)	Low risk	20/12/2012
DCM	MV106	Snyder Test HiVeg™ Agar (B.C.G. - Dextrose HiVeg™ Agar)	Low risk	20/12/2012
DCM	M767	Sodium Azide Crystal Violet Blood Agar Base	Low risk	20/12/2012
DCM	M1079B	Sodium Biselenite	Low risk	22/04/2019
DCM	M298	Sorbitol Agar (MacConkey Sorbitol Agar)	Low risk	20/12/2012
DCM	MV298	Sorbitol HiVeg™Agar (MacConkey Sorbitol HiVeg™ Agar)	Low risk	20/12/2012

DCM	M299	Sorbitol Iron Agar	Low risk	20/12/2012
DCM	MV299	Sorbitol Iron HiVeg™ Agar	Low risk	20/12/2012
DCM	M935	Soya Peptone Yeast Extract Agar	Low risk	20/12/2012
DCM	M1286	Soyabean Bile Broth Base	Low risk	20/12/2012
DCM	M290	Soyabean Casein Digest Agar (Tryptone Soya Agar)	Low risk	22/04/2019
DCM	M109	Soyabean Casein Digest Agar w/ Yeast Extract and Hemin (Tryptone Soya Agar w/ Yeast Extract and Hemin)	Low risk	20/12/2012
DCM	M011	Soyabean Casein Digest Medium (Tryptone Soya Broth)	Low risk	22/04/2019
DCM	M323	Soyabean Casein Digest Medium w/ 0.1% Agar (Tryptone Soya Broth w/ 0.1% Agar)	Low risk	20/12/2012
DCM	M207	Soyabean Casein Digest Medium w/ Yeast Extract and Ferric pyrophosphate	Low risk	20/12/2012
DCM	M322	Soyabean Casein Digest Medium w/o Dextrose (Tryptone SoyaBroth w/o Dextrose)	Low risk	28/04/2017
DCM	MV1286	Soyabean HiVeg™ Broth Base	Low risk	20/12/2012
DCM	MV011	Soyabean HiVeg™ Medium	Low risk	22/04/2019
DCM	MV323	Soyabean HiVeg™ Medium w/ 0.1% Agar (Tryptone Soya HiVeg™ Broth w/ 0.1% Agar)	Low risk	20/12/2012
DCM	MV207	Soyabean HiVeg™ Medium w/ Yeast Extract and Ferric pyrophosphate	Low risk	20/12/2012
DCM	MV290	SoyabeanHiVeg™ Agar	Low risk	22/04/2019
DCM	MH011	Soybean Casein Digest Medium (Casein Soybean Digest Broth)	Low risk	22/04/2019
DCM	MH290	Soybean-Casein Digest Agar (Casein Soyabean Digest Agar)	Low risk	22/04/2019
DCM	M211	Special Infusion Agar (BHI Agar)	Low risk	20/12/2012
DCM	MV211	Special Infusion Agar, HiVeg™ (BHI Agar, HiVeg™)	Low risk	20/12/2012
DCM	M1613	Special YM Medium	Low risk	20/12/2012
DCM	M300	Specimen Preservative Medium Base (SP Hajna)	Low risk	20/12/2012
DCM	M445	Spirit Blue Agar	Low risk	20/12/2012
DCM	MV445	Spirit Blue HiVeg™ Agar	Low risk	20/12/2012
DCM	M412	Spirolate Broth, OMATA	Low risk	20/12/2012
DCM	MV412	Spirolate HiVeg™ Broth, OMATA	Low risk	20/12/2012
DCM	MCD108	SS HiCynth™ Agar (Salmonella Shigella HiCynth™ Agar)	Low risk	12/08/2015
DCM	M108	SS Agar (Salmonella Shigella Agar)	Low risk	20/12/2012
DCM	M108D	SS Agar (Salmonella Shigella Agar)	Low risk	16/12/2017
DCM	M1979R	SS Agar Modified (w/sucrose)	Low risk	25/08/2016
DCM	M1979	SS Agar w/sucrose	Low risk	20/12/2012
DCM	M1032	SS Agar, Modified	Low risk	20/12/2012
DCM	MV108	SS HiVeg™ Agar (Salmonella Shigella HiVeg™ Agar)	Low risk	20/12/2012
DCM	M1959	SS Selective Agar, Improved	Low risk	20/12/2012
DCM	M1703	SSDC agar	Low risk	20/12/2012
DCM	M1608	ß-Streptococcus Selective Agar Base	Low risk	20/12/2012
DCM	M675	Staib's Medium (Bird Seed Agar)	Low risk	20/12/2012
DCM	M883	Standard Infusion Agar	Low risk	20/12/2012

DCM	MV883	Standard Infusion Agar, HiVeg™	Low risk	20/12/2012
DCM	M116	Standard Nutrient Broth (H.S. Vaccine Medium)	Low risk	20/12/2012
DCM	MV116	Standard Nutrient HiVeg™ Broth (H.S. Vaccine HiVeg™ Medium)	Low risk	20/12/2012
DCM	M578	Standard Staphylococcus Broth	Low risk	20/12/2012
DCM	MV578	Standard Staphylococcus HiVeg™ Broth	Low risk	20/12/2012
DCM	M156	Staphylococcus Agar No. 110 w/ Azide	Low risk	20/12/2012
DCM	M521	Staphylococcus Agar No.110	Low risk	20/12/2012
DCM	MV521	Staphylococcus HiVeg™ Agar No. 110	Low risk	20/12/2012
DCM	M1965	Stenotrophomonas Selective Agar Base	Low risk	20/12/2012
DCM	M1840R	Streptococcus Agalactiae Selective Agar Base (HiCrome™ Strep B Selective Agar Base)	Low risk	30/10/2018
DCM	M465	Streptococcus Enrichment Broth (SE Broth)	Low risk	20/12/2012
DCM	MV465	Streptococcus Enrichment HiVeg™ Broth (SE HiVeg™ Broth)	Low risk	20/12/2012
DCM	M304	Streptococcus Selection Agar	Low risk	20/12/2012
DCM	M303	Streptococcus Selection Broth	Low risk	20/12/2012
DCM	MV304	Streptococcus Selection HiVeg™ Agar	Low risk	20/12/2012
DCM	MV303	Streptococcus Selection HiVeg™ Broth	Low risk	20/12/2012
DCM	M1735	Stuart Medium w/o Methylene Blue with Charcoal	Low risk	20/12/2012
DCM	M306	Stuart Transport Medium (Transport Medium, Stuart)	Low risk	20/12/2012
DCM	M1131	Stuart Transport Medium w/o Methylene Blue	Low risk	20/12/2012
DCM	M1203	Stuart Transport Medium w/o Sodium Glycerophosphate	Low risk	20/12/2012
DCM	M308	Sulpha Sensitivity Test Agar	Low risk	20/12/2012
DCM	MV837	T.S.C./S.F.P. HiVeg™ Agar Base (Perfringens HiVeg™ Agar Base)	Low risk	20/12/2012
DCM	M100	TB Broth Base	Low risk	20/12/2012
DCM	M034	TB Broth Base w/o Tween 80	Low risk	20/12/2012
DCM	MV100	TB HiVeg™ Broth Base	Low risk	20/12/2012
DCM	MV034	TB HiVeg™ Broth Base w/o Tween 80	Low risk	20/12/2012
DCM	M189	TCBS Agar	Low risk	20/12/2012
DCM	M870	TCBS Agar (Selective)	Low risk	20/12/2012
DCM	M870A	TCBS Agar, Modified	Low risk	20/12/2012
DCM	MCD870	TCBS HiCynth™ Agar (Selective)	Low risk	25/08/2016
DCM	MV189	TCBS HiVeg™ Agar	Low risk	20/12/2012
DCM	MV870	TCBS HiVeg™ Agar (Selective)	Low risk	20/12/2012
DCM	M529	Teepol Broth (Twin Pack)	Low risk	10/11/2020
DCM	MV529	Teepol HiVeg™ Broth (Twin Pack)	Low risk	10/11/2020
DCM	M1260	Tellurite Blood Agar Base	Low risk	20/12/2012
DCM	M448	Tellurite Glycine Agar Base	Low risk	20/12/2012
DCM	M616	Tergitol-7 Agar Base	Low risk	20/12/2012
DCM	M850	Tergitol-7 Agar H	Low risk	20/12/2012
DCM	M851	Tergitol-7 Broth	Low risk	20/12/2012

DCM	MV616	Tergitol-7 HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV850	Tergitol-7 HiVeg™ Agar H	Low risk	20/12/2012
DCM	MV851	Tergitol-7 HiVeg™ Broth	Low risk	20/12/2012
DCM	M032	Tetrathionate Broth Base (w/o Iodine and BG) (Fluid Tetrathionate Medium w/o Iodine and BG)	Low risk	20/12/2012
DCM	MV032	Tetrathionate HiVeg™ Broth Base (w/o Iodine and BG) (Fluid Tetrathionate HiVeg™ Medium w/o Iodine and BG)	Low risk	20/12/2012
DCM	MV413	Thayer Martin HiVeg™ Medium Base	Low risk	20/12/2012
DCM	M413	Thayer Martin Medium Base	Low risk	20/12/2012
DCM	M610	Thiogel Medium	Low risk	20/12/2012
DCM	M608	Thioglycollate Agar	Low risk	20/12/2012
DCM	M010	Thioglycollate Broth, Alternative (Alternative Thioglycollate Medium)(NIH Thioglycollate Broth)	Low risk	20/12/2012
DCM	MCD010	Thioglycollate HiCynth™ Broth, Alternative (Alternative Thioglycollate HiCynth™ Medium)(NIH Thioglycollate HiCynth™ Broth)	Low risk	12/08/2015
DCM	MV608	Thioglycollate HiVeg™ Agar	Low risk	20/12/2012
DCM	MV010	Thioglycollate HiVeg™ Broth, Alternative (Alternative Thioglycollate HiVeg™ Medium)(NIH HiVeg™ Thioglycollate Broth)	Low risk	20/12/2012
DCM	MV195	Thioglycollate HiVeg™ Medium, Linden (Brewer Thioglycollate HiVeg™ Medium, Modified)	Low risk	20/12/2012
DCM	M979	Thioglycollate Medium w/ Hemin and Vitamin K	Low risk	20/12/2012
DCM	M195	Thioglycollate Medium, Linden (Brewer Thioglycollate Medium, Modified)	Low risk	20/12/2012
DCM	M853	Thiol Broth	Low risk	20/12/2012
DCM	MV853	Thiol HiVeg™ Broth	Low risk	20/12/2012
DCM	MV852	Thiol HiVeg™ Medium	Low risk	20/12/2012
DCM	M852	Thiol Medium	Low risk	20/12/2012
DCM	M314	Tinsdale Agar Base	Low risk	20/12/2012
DCM	MV314	Tinsdale HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M313	Todd Hewitt Broth	Low risk	20/12/2012
DCM	MV313	Todd Hewitt HiVeg™ Broth	Low risk	20/12/2012
DCM	M2127	Todd Hewitt Broth w/colistin & Nalidixic Acid	Low risk	17/06/2021
DCM	M879	Tomato Juice Agar, Special	Low risk	20/12/2012
DCM	MV879	Tomato Juice HiVeg™ Agar, Special	Low risk	20/12/2012
DCM	M1149	Transgrow Medium Base	Low risk	20/12/2012
DCM	M315	Transport Charcoal Medium	Low risk	20/12/2012
DCM	M1487	Transport Liquid Medium	Low risk	20/12/2012
DCM	M306	Transport Medium Stuart (Stuart Transport Medium)	Low risk	20/12/2012
DCM	M202	Transport Medium w/o Charcoal (Cary - Blair Medium Base)	Low risk	20/12/2012
DCM	M684	Transport Medium, Amies w/o Charcoal	Low risk	20/12/2012
DCM	M665	Trichomonas Agar Base	Low risk	20/12/2012
DCM	M1204	Trichomonas Broth Base No. 2	Low risk	20/12/2012

DCM	M305	Trichomonas Broth Base, Kupferberg (Kupferberg Trichomonas Broth Base)	Low risk	20/12/2012
DCM	MV665	Trichomonas HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV305	Trichomonas HiVeg™ Broth Base, Kupferberg (Kupferberg Trichomonas HiVeg™ Broth Base)	Low risk	20/12/2012
DCM	MV460	Trichomonas Modified CPLM HiVeg™ Medium Base (Modified CPLM HiVeg™ Medium Base)	Low risk	20/12/2012
DCM	M460	Trichomonas Modified CPLM Medium Base (Modified CPLM Medium Base)	Low risk	20/12/2012
DCM	M531	Trichophyton Agar-1	Low risk	20/12/2012
DCM	M532	Trichophyton Agar-2	Low risk	20/12/2012
DCM	M533	Trichophyton Agar-3	Low risk	20/12/2012
DCM	M534	Trichophyton Agar-4	Low risk	20/12/2012
DCM	M535	Trichophyton Agar-5	Low risk	20/12/2012
DCM	M536	Trichophyton Agar-6	Low risk	20/12/2012
DCM	M152	Trichophyton Agar-7	Low risk	20/12/2012
DCM	MV531	Trichophyton HiVeg™ Agar-1	Low risk	20/12/2012
DCM	MV532	Trichophyton HiVeg™ Agar-2	Low risk	20/12/2012
DCM	MV533	Trichophyton HiVeg™ Agar-3	Low risk	20/12/2012
DCM	MV534	Trichophyton HiVeg™ Agar-4	Low risk	20/12/2012
DCM	MV535	Trichophyton HiVeg™ Agar-5	Low risk	20/12/2012
DCM	M021	Triple Sugar Iron Agar	Low risk	22/04/2019
DCM	MV021	Triple Sugar Iron HiVeg™ Agar	Low risk	22/04/2019
DCM	M1028	Tryptic Digest Broth(Field's Tryptic Digest Broth)	Low risk	20/12/2012
DCM	MV1028	Tryptic Digest Broth, HiVeg™ (Field's Tryptic Digest Broth, HiVeg™)	Low risk	20/12/2012
DCM	M1591	Tryptone Bile Glucuronic Agar (TBX Agar)	Low risk	22/04/2019
DCM	M463	Tryptone Broth (Tryptone Water)	Low risk	22/04/2019
DCM	MV364	Tryptone Nitrate HiVeg™ Medium (Indole Nitrate HiVeg™ Medium)	Low risk	20/12/2012
DCM	M364	Tryptone Nitrate Medium (Indole Nitrate Medium)	Low risk	20/12/2012
DCM	M969	Tryptone Peptone Glucose Yeast Extract Broth Base w/o Trypsin	Low risk	20/12/2012
DCM	MV969	Tryptone Peptone Glucose Yeast Extract HiVeg™ Broth Base w/o Trypsin	Low risk	20/12/2012
DCM	M323	Tryptone Soya Broth w/ 0.1% Agar (Soyabean Casein Digest Medium w/ 0.1% Agar)	Low risk	20/12/2012
DCM	MV323	Tryptone Soya HiVeg™ Broth w/ 0.1% Agar (Soyabean HiVeg™ Medium w/ 0.1% Agar)	Low risk	20/12/2012
DCM	M1948	Tryptone Soya Serum Bacitracin Vancomycin Agar (TSBV)	Low risk	08/12/2017
DCM	M1217	Tryptone Sucrose Tetrazolium Agar Base (TSTA)	Low risk	20/12/2012
DCM	M1056	Tryptone Tellurite Agar Base	Low risk	20/12/2012
DCM	MV463	Tryptone Water, HiVeg™ (Tryptone Broth,HiVeg™)	Low risk	22/04/2019
DCM	M1975	Tryptone yeast extract cystine w/sucrose and w/O bacitracin agar (TYCSB)	Low risk	20/12/2012
DCM	M2046I	Tryptone Yeast Sodium Sulphite Agar Base	Low risk	10/11/2020

DCM	M538	Tryptose Agar	Low risk	20/12/2012
DCM	M996	Tryptose Agar w/ Thiamine HCl	Low risk	20/12/2012
DCM	MV996	Tryptose Agar w/ Thiamine HCl, HiVeg™	Low risk	20/12/2012
DCM	MV538	Tryptose Agar, HiVeg™	Low risk	20/12/2012
DCM	M097	Tryptose Blood Agar Base	Low risk	20/12/2012
DCM	M450	Tryptose Blood Agar Base w/ Yeast Extract	Low risk	20/12/2012
DCM	MV450	Tryptose Blood Agar Base w/ Yeast Extract, HiVeg™	Low risk	20/12/2012
DCM	MV097	Tryptose Blood Agar Base, HiVeg™	Low risk	20/12/2012
DCM	M177	Tryptose Broth	Low risk	20/12/2012
DCM	M997	Tryptose Broth w/ Thiamine HCl	Low risk	20/12/2012
DCM	MV177	Tryptose Broth, HiVeg™	Low risk	20/12/2012
DCM	M5393	Tryptose Phosphate Broth	Low risk	30/10/2018
DCM	M093	Tryptose Phosphate Broth	Low risk	20/12/2012
DCM	MV093	Tryptose Phosphate Broth, HiVeg™	Low risk	20/12/2012
DCM	M1532	Tryptose Phosphate Broth, Modified	Low risk	20/12/2012
DCM	M093G	Tryptose Phosphate Broth, Sterile	Low risk	22/04/2019
DCM	M2060	Tryptose Serum Agar Base	Low risk	10/11/2020
DCM	M2019	Tryptose Serum Broth Base(Modified Newin	Low risk	25/08/2016
DCM	M837	Tryptose Sulphite Cycloserine (T.S.C. / S.F.P.) Agar Base (Perfringens Agar Base)	Low risk	20/12/2012
DCM	M1780	TS Saline Agar (Triple Sugar Saline Iron Agar)	Low risk	20/12/2012
DCM	M2016	TSB w/6.5% NaCL	Low risk	25/08/2016
DCM	M1220	TTC Broth Base (Triclosan Ticarcillin Chlorate Broth)	Low risk	20/12/2012
DCM	MV1220	TTC HiVeg™ Broth Base	Low risk	20/12/2012
DCM	M1912	Tween Esterase Test Agar Base	Low risk	20/12/2012
DCM	M1817	Universal Fastidious Culture Agar	Low risk	20/12/2012
DCM	M1818	Universal Fastidious Culture Broth	Low risk	10/11/2020
DCM	M112S	Urea Agar Base (Christensen)	Low risk	20/12/2012
DCM	M112	Urea Agar Base (Christensen) (Autoclavable)	Low risk	20/12/2012
DCM	M112A	Urea Agar Base (Filter Sterilizable) (w/o Agar)	Low risk	20/12/2012
DCM	M112I	Urea Agar Base, Christensen	Low risk	20/12/2012
DCM	M111A	Urea Broth (Filter Sterilizable)	Low risk	20/12/2012
DCM	M111	Urea Broth Base (Diagnostic Stuart's Urea Broth Base)	Low risk	20/12/2012
DCM	MV112	Urea HiVeg™ Agar Base (Christensen) (Autoclavable)	Low risk	20/12/2012
DCM	M1784I	Urea Indole Broth, Modified	Low risk	20/12/2012
DCM	M1784	Urea Indole Medium	Low risk	20/12/2012
DCM	M328	V Infusion Agar	Low risk	20/12/2012
DCM	M329	V Infusion Broth	Low risk	20/12/2012
DCM	M1057	Vaginalis Agar Base	Low risk	20/12/2012
DCM	M1763	Vancomycin Resistant Enterococci (VRE) Agar Base	Low risk	20/12/2012

DCM	M1762	Vancomycin Resistant Enterococci (VRE) Broth Base	Low risk	20/12/2012
DCM	M416	Veillonella Agar Base	Low risk	20/12/2012
DCM	MV416	Veillonella HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M820	Vibrio Agar	Low risk	20/12/2012
DCM	MV820	Vibrio HiVeg™ Agar	Low risk	20/12/2012
DCM	M049	Violet Red Bile Agar	Low risk	28/04/2017
DCM	M049A	Violet Red Bile Agar	Low risk	16/12/2017
DCM	M1684	Violet Red Bile Agar w/ Glucose and Lactose	Low risk	22/04/2019
DCM	MH581	Violet Red Bile Glucose Agar	Low risk	22/04/2019
DCM	M581	Violet Red Bile Glucose Agar w/o Lactose	Low risk	25/11/2017
DCM	MCD581	Violet Red Bile Glucose HiCynth™ Agar w/o Lactose	Low risk	04/07/2018
DCM	MV581	Violet Red Bile Glucose HiVeg™ Agar w/o Lactose	Low risk	04/07/2018
DCM	MCD049	Violet Red Bile HiCynth™ Agar	Low risk	28/04/2017
DCM	MV049	Violet Red HiVeg™ Agar	Low risk	28/04/2017
DCM	MCD023	Vogel Johnson HiCynth™ Agar Base w/o Tellurite (V.J. HiCynth™ Agar)	Low risk	12/08/2015
DCM	M023	Vogel-Johnson Agar Base w/o Tellurite (V.J. Agar)	Low risk	20/12/2012
DCM	MU023	Vogel-Johnson Agar Medium	Low risk	20/12/2012
DCM	MV023	Vogel-Johnson HiVeg™ Agar Base w/o Tellurite (V. J. HiVeg™ Agar)	Low risk	20/12/2012
DCM	MV662	VP HiVeg™ Medium	Low risk	20/12/2012
DCM	M662	VP Medium	Low risk	20/12/2012
DCM	M626	Wagatsuma Agar Base	Low risk	20/12/2012
DCM	MV626	Wagatsuma HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M1059	Wayne Sulphatase Agar Base	Low risk	20/12/2012
DCM	M832	Wilkins Chalgren Anaerobic Agar Base	Low risk	20/12/2012
DCM	M863	Wilkins Chalgren Anaerobic Broth Base	Low risk	20/12/2012
DCM	MV832	Wilkins Chalgren Anaerobic HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV863	Wilkins Chalgren Anaerobic HiVeg™ Broth Base	Low risk	25/08/2016
DCM	M331	Wilson Blair Agar Base	Low risk	20/12/2012
DCM	M332	Wilson Blair Agar w/ BG	Low risk	20/12/2012
DCM	MV331	Wilson Blair HiVeg™ Agar Base	Low risk	20/12/2012
DCM	MV332	Wilson Blair HiVeg™ Agar w/ BG	Low risk	20/12/2012
DCM	MV031	XLD HiVeg™ Agar	Low risk	20/12/2012
DCM	M1147	XLT4 Agar Base	Low risk	20/12/2012
DCM	MV1147	XLT4 HiVeg™ Agar Base	Low risk	20/12/2012
DCM	M336	Xylose Lysine Agar Base	Low risk	20/12/2012
DCM	M031	Xylose Lysine Deoxycholate Agar (XLD Agar)	Low risk	20/12/2012
DCM	MCD031	Xylose Lysine Deoxycholate HiCynth™ Agar (XLD HiCynth™ Agar)	Low risk	12/08/2015
DCM	MH031	Xylose-Lysine-Deoxycholate Agar	Low risk	22/04/2019

DCM	M424	Yeast Malt Agar (YM Agar) (ISP Medium No. 2)	Low risk	22/04/2019
DCM	M425	Yeast Malt Broth (YM Broth)	Low risk	20/12/2012
DCM	MV424	Yeast Malt HiVeg™ Agar (YM HiVeg™ Agar)	Low risk	22/04/2019
DCM	MV425	Yeast Malt HiVeg™ Broth (YM HiVeg™ Broth)	Low risk	20/12/2012
DCM	M1421	YEP Agar	Low risk	30/10/2018
DCM	M1823	YEP Agar, Modified	Low risk	10/11/2020
DCM	M1367	Yersinia Enrichment Broth Base	Low risk	20/12/2012
DCM	M843	Yersinia Selective Agar Base	Low risk	20/12/2012
DCM	M1861	Yersinia Selective Broth Base	Low risk	20/12/2012
DCM	MV843	Yersinia Selective HiVeg™ Agar Base	Low risk	20/12/2012
DCM	EC211CR	BHI Agar (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC210CR	BHI Broth (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC073DR	Blood Agar Base (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC1297ACR	HiCrome™ Candida Differential Agar (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC1297ARDR	HiCrome™ Candida Differential Agar (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC1297ADR	HiCrome™ Candida Differential Agar (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC1674CCLR	HiCrome™ MeReSa Agar Base (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC1353CCLR	HiCrome™ UTI Agar (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC1353CR	HiCrome™ UTI Agar (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC1353DR	HiCrome™ UTI Agar (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC211CCL	HiEncap™ BHI Agar (HiEncap™ Special Infusion Agar)	Low risk	12/08/2015
DCM	EC210D	HiEncap™ BHI Broth	Low risk	12/08/2015
DCM	EC210CCL	HiEncap™ BHI Broth	Low risk	12/08/2015
DCM	EC073D	HiEncap™ Blood Agar Base	Low risk	12/08/2015
DCM	EC073CCL	HiEncap™ Blood Agar Base	Low risk	12/08/2015
DCM	EC081CCL	HiEncap™ MacConkey Agar w/0.15% Bile Salt	Low risk	12/08/2015
DCM	EC082ACCL	HiEncap™ MacConkey Agar w/o CV, NaCl w/Bile Salts	Low risk	12/08/2015
DCM	EC173CCL	HiEncap™ Mueller Hinton Agar	Low risk	12/08/2015
DCM	EC173D	HiEncap™ Mueller Hinton Agar	Low risk	12/08/2015
DCM	EC1084CCL	HiEncap™ Mueller Hinton Agar No.2	Low risk	12/08/2015
DCM	EC1084D	HiEncap™ Mueller Hinton Agar No.2	Low risk	12/08/2015
DCM	EC391CCL	HiEncap™ Mueller Hinton Broth	Low risk	12/08/2015
DCM	EC391D	HiEncap™ Mueller Hinton Broth	Low risk	12/08/2015
DCM	EC001DR	HiEncap™ Nutrient Agar	Low risk	25/08/2016
DCM	EC001CCL	HiEncap™ Nutrient Agar	Low risk	12/08/2015
DCM	EC001D	HiEncap™ Nutrient Agar	Low risk	12/08/2015
DCM	EC002CCL	HiEncap™ Nutrient Broth	Low risk	12/08/2015
DCM	EC002D	HiEncap™ Nutrient Broth	Low risk	12/08/2015

DCM	EC002M	HiEncap™ Nutrient Broth	Low risk	12/08/2015
DCM	EC091D	HiEncap™ Plate Count Agar	Low risk	16/12/2017
DCM	EC091CCL	HiEncap™ Plate Count Agar	Low risk	16/12/2017
DCM	EC063CCL	HiEncap™ Sabouraud Dextrose Agar	Low risk	12/08/2015
DCM	EC033CCL	HiEncap™ Sabouraud Dextrose Broth	Low risk	12/08/2015
DCM	EC033D	HiEncap™ Sabouraud Dextrose Broth	Low risk	12/08/2015
DCM	EC173DR	Mueller Hinton Agar (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC1084DR	Mueller Hinton Agar No.2 (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC391CR	Mueller Hinton Broth (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC002CR	Nutrient Broth (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC063CCLR	Sabouraud Dextrose Agar (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC033CR	Sabouraud Dextrose Broth (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	EC031CCLR	Xylose Deoxycholate Agar (XLD Agar) (HiEncap™ water-soluble capsule)	Low risk	25/08/2016
DCM	GM618	Alkaline Peptone Water, Granulated	Low Risk	12/08/2015
DCM	GM491	Anaerobic Agar (Brewer) , Granulated	Low Risk	12/08/2015
DCM	GM672	Aspargine Broth (Coccidiodin and Histoplasmin Broth) , Granulated	Low Risk	12/08/2015
DCM	GM043	Baird Parker Agar Base,Granulated	Low Risk	12/08/2015
DCM	GM1091	Baird Staphylococcus Enrichment Broth Base, Granulated	Low risk	10/11/2020
DCM	GM211	BHI Agar (Special Infusion Agar) , Granulated	Low Risk	12/08/2015
DCM	GM210	BHI Broth, Granulated	Low Risk	12/08/2015
DCM	GM217	Bi.G.G.Y. Agar (Nickerson Medium) , Granulated	Low Risk	12/08/2015
DCM	GM027	Bismuth Sulphite Agar, Granulated	Low Risk	12/08/2015
DCM	GM073	Blood Agar Base (Infusion Agar) , Granulated	Low Risk	12/08/2015
DCM	GM073R	Blood Agar Base (Infusion Agar) w/o Blood, Granulated	Low risk	25/08/2016
DCM	GM834A	Blood Agar Base No. 2 w/ 1.2% Agar, Granulated	Low Risk	12/08/2015
DCM	GM016A	Brilliant Green Agar Base w/ 1.2% Agar, Granulated	Low Risk	12/08/2015
DCM	GM971	Brilliant Green Agar Base w/ Phosphates, Granulated	Low risk	20/12/2012
DCM	GM074	Brucella Agar Base, Granulated	Low Risk	12/08/2015
DCM	GM614	Buffered Peptone Water , Granulated	Low risk	22/04/2019
DCM	GM1275	Buffered Peptone Water w/ NaCl, Granulated	Low Risk	12/08/2015
DCM	GMH1275	Buffered Sodium Chloride-Peptone Solution pH 7.0 , Granulated	Low risk	22/04/2019
DCM	GM792	C.L.E.D. Agar w/ Bromo Thymol Blue, Granulated	Low Risk	12/08/2015
DCM	GMH024	Cetrimide Agar , Granulated	Low risk	22/04/2019
DCM	GM024	Cetrimide Agar Base, Granulated	Low Risk	12/08/2015
DCM	GM497	Clostridial Agar, Granulated	Low risk	25/08/2016
DCM	GMH144	Columbia Agar , Granulated	Low risk	22/04/2019
DCM	GM144	Columbia Blood Agar Base, Granulated	Low Risk	12/08/2015
DCM	GM188	D.T.M. Agar Base (Dermatophyte Test Agar Base) , Granulated	Low Risk	12/08/2015

DCM	GM030	Deoxycholate Agar, Granulated	Low Risk	12/08/2015
DCM	GM065	Deoxycholate Citrate Agar, Granulated	Low Risk	12/08/2015
DCM	GM286	Dextrose Agar Base, Emmons (Sabouraud Dextrose Agar Base, Modified) , Granulated	Low Risk	12/08/2015
DCM	GM1129	Dichloran Glycerol Medium Base , Granulated	Low risk	22/04/2019
DCM	GM1603	Differential Reinforced Clostridial Agar,Granulated	Low risk	10/11/2020
DCM	GM127	EC Broth, Granulated	Low Risk	12/08/2015
DCM	GM317	EMB Agar, Granulated	Low Risk	12/08/2015
DCM	GM022	EMB Agar, Levine, Granulated	Low Risk	12/08/2015
DCM	GM029	Endo Agar, Granulated	Low Risk	12/08/2015
DCM	GM029R	Endo Agar, Special	Low risk	25/08/2016
DCM	GM1075	Endo Agar,Modified, Granulated	Low Risk	12/08/2015
DCM	GMH287	Enterobacteria Enrichment Broth, Mossel , Granulated	Low risk	22/04/2019
DCM	GM013	Fluid Sabouraud Medium (Sabouraud Medium,Fluid) , Granulated	Low Risk	12/08/2015
DCM	GM025	Fluid Selenite Cystine Medium (Selenite Cystine Broth) (Twin Pack) , Granulated	Low Risk	12/08/2015
DCM	GM032	Fluid Tetrathionate Medium w/o Iodine and BG (Tetrathionate Broth Base w/o Iodine and BG) , Granulated	Low Risk	12/08/2015
DCM	GM009	Fluid Thioglycollate medium (Thioglycollate medium Fluid) , Granulated	Low risk	22/04/2019
DCM	GM434	GC Agar Base,Granulated	Low Risk	04/07/2018
DCM	GM070	Glucose Phosphate Broth (Buffered Glucose Broth) , Granulated	Low risk	12/08/2015
DCM	GM070R	Glucose Phosphate Broth (Buffered Glucose Broth) , Granulated	Low risk	04/07/2018
DCM	GMV070	Glucose Phosphate HiVeg™ Broth (Buffered Glucose HiVeg™ Broth) , Granulated	Low risk	20/12/2012
DCM	GM242	GN Broth, Hajna, Granulated	Low Risk	12/08/2015
DCM	GM467	Hektoen Enteric Agar, Granulated	Low Risk	12/08/2015
DCM	GM1297A	HiCrome™ Candida Differential Agar, Granulated	Low Risk	12/08/2015
DCM	GM1353	HiCrome™ UTI Agar, Granulated	Low Risk	12/08/2015
DCM	GM1007	KF Streptococcus Agar Base w/ BCP, Granulated	Low Risk	12/08/2015
DCM	GM1232	Kimmig Fungi Agar Base, Granulated	Low Risk	12/08/2015
DCM	GM1543	King's Medium A Base, Granulated	Low Risk	12/08/2015
DCM	GM078	Kligler Iron Agar, Granulated	Low Risk	12/08/2015
DCM	GM641	Lactobacillus MRS Agar (MRS Agar) , Granulated	Low Risk	12/08/2015
DCM	GM369	Lactobacillus MRS Broth (MRS Broth) , Granulated	Low Risk	12/08/2015
DCM	GM1003	Lactose Broth , Granulated	Low risk	22/04/2019
DCM	GM080	Lauryl Sulphate Broth (Lauryl Tryptose Broth) , Granulated	Low risk	22/04/2019
DCM	GM1380	Leifson Agar, Granulated	Low Risk	12/08/2015
DCM	GM890A	Listeria Enrichment Medium Base (UVM) , Granulated	Low Risk	12/08/2015
DCM	GM1064	Listeria Identification Agar Base (PALCAM) , Granulated	Low risk	22/04/2019
DCM	GM1090	Listeria Identification Broth Base (PALCAM) , Granulated	Low risk	22/04/2019

DCM	GM1145	Listeria Oxford Medium Base, Granulated	Low Risk	12/08/2015
DCM	GM889	Listeria Selective Broth Base, Granulated	Low Risk	12/08/2015
DCM	GM1865	Listeria Selective Enrichment Broth , Granulated	Low risk	22/04/2019
DCM	GM1001	LM Agar, Granulated	Low Risk	12/08/2015
DCM	GM162	Lowenstein Jensen Medium Base (L.J. Medium) , Granulated	Low Risk	12/08/2015
DCM	GMH081	MacConkey Agar , Granulated	Low risk	22/04/2019
DCM	GM081	MacConkey Agar w/0.15% Bile Salts,CV and NaCL, Granulated	Low Risk	12/08/2015
DCM	GM082A	MacConkey Agar w/o CV,NaCL w/0.5% Bile Salts, Granulated	Low Risk	12/08/2015
DCM	GM082	MacConkey Agar w/o CV,NaCLw/0.5% Sodium Taurocholate, Granulated	Low Risk	12/08/2015
DCM	GMH083	MacConkey Broth , Granulated	Low risk	22/04/2019
DCM	GM083	MacConkey Broth Purple w/BCP , Granulated	Low risk	22/04/2019
DCM	GM137	Malt Extract Agar Base (w/ Mycological Peptone) , Granulated	Low Risk	12/08/2015
DCM	GM255	Malt Extract Broth Base, Granulated	Low Risk	12/08/2015
DCM	GMH118	Mannitol Salt Agar , Granulated	Low risk	22/04/2019
DCM	GM118	Mannitol Salt Agar Base , Granulated	Low risk	12/08/2015
DCM	GM1030	Maximum Recovery Diluent , Granulated	Low risk	22/04/2019
DCM	GM1170	Modified Czapek Dox Agar, Granulated	Low risk	25/08/2016
DCM	GM1285	Modified EC Broth Base, Granulated	Low Risk	12/08/2015
DCM	GM1286I	Modified Soyabean Bile Broth Base , Granulated	Low risk	22/04/2019
DCM	GM1084	Mueller Hinton Agar No. 2, Granulated	Low Risk	12/08/2015
DCM	GM173	Mueller Hinton Agar, Granulated	Low Risk	12/08/2015
DCM	GM391	Mueller Hinton Broth, Granulated	Low Risk	12/08/2015
DCM	GM636	MYP Agar Base (Phenol Red Egg Yolk Polymyxin Agar Base) , Granulated	Low Risk	12/08/2015
DCM	GM1269	Nutrient Agar No.2 , Granulated	Low risk	12/08/2015
DCM	GM001	Nutrient Agar, Granulated	Low Risk	12/08/2015
DCM	GM002	Nutrient Broth, Granulated	Low Risk	12/08/2015
DCM	GM395	OF Basal Medium, Granulated	Low Risk	12/08/2015
DCM	GM933	Orange Serum Agar , Granulated	Low risk	22/04/2019
DCM	GM028	Peptone Water, Granulated	Low Risk	04/07/2018
DCM	GM837	Perfringens Agar Base (Tryptose Sulphite Cycloserine Agar Base) (T.S.C./S.F.P. Agar Base) , Granulated	Low Risk	12/08/2015
DCM	GM091	Plate Count Agar (Standard Methods Agar),Granulated	Low Risk	28/04/2017
DCM	GMH096	Potato Dextrose Agar , Granulated	Low risk	22/04/2019
DCM	GM096	Potato Dextrose Agar , Granulated	Low risk	22/04/2019
DCM	GM085	Pseudomonas Agar Base , Granulated	Low risk	22/04/2019
DCM	GM085	Pseudomonas Agar Base, Granulated	Low Risk	22/04/2019
DCM	GMH1491	Rappaport Vassiliadis Salmonella Enrichment Broth , Granulated	Low risk	22/04/2019
DCM	GM1491	Rappaport Vassiliadis Soya Broth (RVS Broth) , Granulated	Low Risk	12/08/2015
DCM	GMH443	Reinforced Medium for Clostridia , Granulated	Low risk	22/04/2019

DCM	GM149	Robinson's Cooked M Medium (R.C. Medium), Granulated	Low Risk	16/12/2017
DCM	GM130	Rogosa SL Agar, Granulated	Low Risk	12/08/2015
DCM	GM842	Rose Bengal Agar Base, Granulated	Low risk	12/08/2015
DCM	GM1067	Sabouraud Chloramphenicol Agar, Granulated	Low risk	25/08/2016
DCM	GM063	Sabouraud Dextrose Agar , Granulated	Low Risk	12/08/2015
DCM	GMH063	Sabouraud Dextrose Agar , Granulated	Low risk	22/04/2019
DCM	GM033	Sabouraud Dextrose Broth (Sabouraud Liquid Medium) , Granulated	Low Risk	12/08/2015
DCM	GMH033	Sabouraud Dextrose Broth , Granulated	Low risk	22/04/2019
DCM	GMV033	Sabouraud Dextrose HiVeg™ Broth (Sabouraud Liquid HiVeg™ Medium) , Granulated	Low Risk	12/08/2015
DCM	GM1313	Sabouraud Dextrose Maltose Agar, Granulated	Low Risk	12/08/2015
DCM	GM062	Sabouraud Maltose Agar, Granulated	Low Risk	12/08/2015
DCM	GM1619	Sakazakii DHL Agar, Granulated	Low Risk	12/08/2015
DCM	GM1078	Salmonella Differential Agar (Twin Pack), Raj Hans Medium (Twin Pack) , Granulated	Low Risk	12/08/2015
DCM	GM052	Selenite Broth (Selenite F Broth) (Twin Pack) , Granulated	Low Risk	12/08/2015
DCM	GM612A	Slanetz and Bartley Medium w/o TTC, Granulated	Low risk	10/11/2020
DCM	GM298R	Sorbitol Agar (Sorbitol MacConkey Agar)	Low risk	25/08/2016
DCM	GM290	Soyabean Casein Digest Agar (Tryptone Soya Agar) , Granulated	Low risk	22/04/2019
DCM	GM011	Soyabean Casein Digest Medium (Tryptone Soya Broth) , Granulated	Low risk	22/04/2019
DCM	GMH011	Soybean Casein Digest Medium (Casein Soybean Digest Broth) , Granulated	Low risk	22/04/2019
DCM	GMH290	Soybean-Casein Digest Agar (Casein Soyabean Digest Agar) , Granulated	Low risk	22/04/2019
DCM	GM108	SS Agar (Salmonella Shigella Agar) , Granulated	Low Risk	12/08/2015
DCM	GM189	TCBS Agar, Granulated	Low Risk	12/08/2015
DCM	GM010	Thioglycollate Broth, Alternative (Alternative Thioglycollate Medium)(NIH Thioglycollate Broth) , Granulated	Low risk	12/08/2015
DCM	GM021	Triple Sugar Iron Agar , Granulated	Low risk	22/04/2019
DCM	GM463	Tryptone Broth (Tryptone Water) , Granulated	Low risk	22/04/2019
DCM	GM177	Tryptose Broth, Granulated	Low Risk	12/08/2015
DCM	GM112	Urea Agar Base (Christensen) (Autoclavable)	Low Risk	30/10/2018
DCM	GM112A	Urea Agar Base (Filter sterilizable), Granulated	Low risk	25/08/2016
DCM	GM111A	Urea Broth (Filter sterilizable), Granulated	Low risk	25/08/2016
DCM	GM049	Violet Red Bile Agar, Granulated	Low risk	28/04/2017
DCM	GMH581	Violet Red Bile Glucose Agar , Granulated	Low risk	22/04/2019
DCM	GM581	Violet Red Bile Glucose Agar w/o Lactose, Granulated	Low risk	04/07/2018
DCM	GM031	Xylose Lysine Deoxycholate Agar (XLD Agar) , Granulated	Low Risk	12/08/2015
DCM	GMH031	Xylose-Lysine-Deoxycholate Agar , Granulated	Low risk	22/04/2019

Product group	Type/ Model / Ref number	Device Name	Risk Class	Date of CE compliance
Dehydrated Culture Media -Supplements				
DCM-S	FD001	Non Spore Anaerobic Supplement	Low risk	20/12/2012
DCM-S	FD002	G.N. Spore Anaerobic Supplement	Low risk	20/12/2012
DCM-S	FD003	Polymyxin B Selective Supplement	Low risk	20/12/2012
DCM-S	FD003B	Polymyxin B Selective Supplement	Low risk	04/07/2018
DCM-S	FD004	Bordetella Selective Supplement	Low risk	20/12/2012
DCM-S	FD005	Brucella Selective Supplement	Low risk	20/12/2012
DCM-S	FD006	Campylobacter Supplement-I (Blaser-Wang)	Low risk	20/12/2012
DCM-S	FD007	Campylobacter Supplement - II (Butzler)	Low risk	20/12/2012
DCM-S	FD008	Campylobacter Supplement- III (Skirrow)	Low risk	20/12/2012
DCM-S	FD009	Campylobacter Growth Supplement	Low risk	20/12/2012
DCM-S	FD010	Clostridium Difficile Supplement	Low risk	20/12/2012
DCM-S	FD013	S.F.P. Supplement (Perfringens S.F.P. Supplement)	Low risk	20/12/2012
DCM-S	FD014	T.S.C. Supplement (Perfringens T.S.C. Supplement)	Low risk	20/12/2012
DCM-S	FD015	Dermato Supplement	Low risk	20/12/2012
DCM-S	FD017	Legionella Selective Supplement	Low risk	20/12/2012
DCM-S	FD018	Middlebrook OADC Growth Supplement	Low risk	20/12/2012
DCM-S	FD019	Middlebrook ADC Growth Supplement	Low risk	20/12/2012
DCM-S	FD019R	Middlebrook ADC Growth Supplement	Low risk	10/11/2020
DCM-S	FD020	Oleic Albumin Supplement	Low risk	20/12/2012
DCM-S	FD021	GC Supplement w/ Antibiotics	Low risk	20/12/2012
DCM-S	FD022	Haemoglobin Powder	Low risk	20/12/2012
DCM-S	FD023	V.C.N. Supplement	Low risk	20/12/2012
DCM-S	FD024	V.C.N.T. Supplement	Low risk	20/12/2012
DCM-S	FD025	Vitamino Growth Supplement (Twin Pack)	Low risk	20/12/2012
DCM-S	FD025R	Vitamino Growth Supplement (Twin Pack)	Low risk	10/11/2020
DCM-S	FD026	Linco T Supplement	Low risk	20/12/2012
DCM-S	FD026R	Linco T Supplement	Low risk	10/11/2020
DCM-S	FD027	Yeast Autolysate Supplement	Low risk	20/12/2012
DCM-S	FD028	Vanclo T Supplement	Low risk	20/12/2012
DCM-S	FD029	Cetrinix Supplement	Low risk	22/04/2019
DCM-S	FD030	Staph-Strepto Supplement	Low risk	20/12/2012
DCM-S	FD031	Strepto supplement	Low risk	25/08/2016
DCM-S	FD033	Chloramphenicol Selective Supplement	Low risk	20/12/2012
DCM-S	FD034	Yersinia Selective Supplement	Low risk	20/12/2012
DCM-S	FD035	CC Supplement	Low risk	20/12/2012
DCM-S	FD036	CFC Supplement	Low risk	22/04/2019
DCM-S	FD037	Legionella Selective Supplement II	Low risk	20/12/2012

DCM-S	FD038	Legionella Selective Supplement III	Low risk	20/12/2012
DCM-S	FD039	Aeromonas Selective Supplement	Low risk	20/12/2012
DCM-S	FD040	Legionella Selective Supplement IV (MWY)	Low risk	20/12/2012
DCM-S	FD041A	Legionella Supplement (Twin Pack)	Low risk	20/12/2012
DCM-S	FD041AR	Legionella Growth Supplement (Legionella Supplement) (Twin Pack)	Low risk	25/08/2016
DCM-S	FD042	Campylobacter Selective Supplement IV (Preston Selective Supplement)	Low risk	20/12/2012
DCM-S	FD043	Doyle's Antibiotic Supplement	Low risk	20/12/2012
DCM-S	FD045	Egg Yolk Emulsion (100 ml per vial)	Low risk	20/12/2012
DCM-S	FD045B	Egg Yolk Emulsion	Low risk	04/07/2018
DCM-S	FD045L	Egg Yolk Emulsion (50ml per vial)	Low risk	04/07/2018
DCM-S	FD045R	Egg Yolk Emulsion (100 ml per vial)	Low risk	25/08/2016
DCM-S	FD045RC	Egg Yolk Emulsion (100 ml per vial)	Low risk	10/11/2020
DCM-S	FD046	Egg Yolk Tellurite Emulsion (100 ml per vial)	Low risk	20/12/2012
DCM-S	FD046B	Egg Yolk Tellurite Emulsion	Low risk	04/07/2018
DCM-S	FD046L	Egg Yolk Tellurite Emulsion (50ml per vial)	Low risk	04/07/2018
DCM-S	FD046N	Egg Yolk Tellurite Emulsion, Modified	Low risk	04/07/2018
DCM-S	FD046NL	Egg Yolk Tellurite Emulsion, Modified	Low risk	04/07/2018
DCM-S	FD046R	Egg Yolk Tellurite Emulsion	Low risk	10/11/2020
DCM-S	FD047	Potassium Tellurite 3.5% (1 ml per vial)	Low risk	20/12/2012
DCM-S	FD048	Urea 40% (5 ml per vial)	Low risk	20/12/2012
DCM-S	FD049	C.B.I. Supplement	Low risk	20/12/2012
DCM-S	FD052	Potassium Tellurite 1% (1 ml per vial)	Low risk	20/12/2012
DCM-S	FD053	Gruft Mycobacterial Supplement	Low risk	20/12/2012
DCM-S	FD054	GBS Supplement	Low risk	20/12/2012
DCM-S	FD056	G. Vaginalis Selective Supplement	Low risk	20/12/2012
DCM-S	FD057	TTC Solution 1% (10 ml per vial)	Low risk	20/12/2012
DCM-S	FD059	Basic Fuchsin (6.0 gm per vial)	Low risk	20/12/2012
DCM-S	FD061	Listeria Selective Supplement (PALCAM)	Low risk	22/04/2019
DCM-S	FD061R	Listeria Selective Supplement (PALCAM)	Low risk	04/07/2018
DCM-S	FD062	Bacteroides Selective Supplement	Low risk	20/12/2012
DCM-S	FD063	Listeria Selective Supplement II	Low risk	20/12/2012
DCM-S	FD063I	Listeria Selective Supplement II	Low risk	20/12/2012
DCM-S	FD066	Leptospira Enrichment	Low risk	20/12/2012
DCM-S	FD068	Sulpha Supplement	Low risk	20/12/2012
DCM-S	FD069	B P Sulpha Supplement	Low risk	20/12/2012
DCM-S	FD070	McBride Listeria Supplement	Low risk	20/12/2012
DCM-S	FD071	Oxford Listeria Supplement	Low risk	20/12/2012
DCM-S	FD072	KL Virulence Enrichment (20 ml per vial)	Low risk	20/12/2012
DCM-S	FD072D	KL Virulence Enrichment (500 ml)	Low risk	10/11/2020

DCM-S	FD072M	KL Virulence Enrichment (1000 ml)	Low risk	10/11/2020
DCM-S	FD073	Diphtheria Virulence Supplement (Part A & B)	Low risk	20/12/2012
DCM-S	FD075	Mycoplasma Enrichment Supplement	Low risk	20/12/2012
DCM-S	FD075R	Mycoplasma Enrichment Supplement	Low risk	10/11/2020
DCM-S	FD078	Campylobacter Selective Supplement (Karmali)	Low risk	10/11/2020
DCM-S	FD082	Ampicillin Supplement	Low risk	20/12/2012
DCM-S	FD090	Campylobacter Selective Supplement	Low risk	20/12/2012
DCM-S	FD091	Bromo Thymol Blue Supplement (20 mg per vial)	Low risk	20/12/2012
DCM-S	FD092	MUG Supplement (50 mg per vial)	Low risk	10/11/2020
DCM-S	FD093	Bromo Cresol Purple	Low risk	22/04/2019
DCM-S	FD094	Trichomonas Selective Supplement II	Low risk	20/12/2012
DCM-S	FD095	10% Lactic Acid Solution (10 ml per vial)	Low risk	20/12/2012
DCM-S	FD096	Novobiocin Supplement	Low risk	22/04/2019
DCM-S	FD099	Trichomonas Selective Supplement I	Low risk	20/12/2012
DCM-S	FD100	Mueller Tellurite Serum (25 ml per vial)	Low risk	20/12/2012
DCM-S	FD102	Ticarcillin Supplement	Low risk	20/12/2012
DCM-S	FD103	Potassium Chlorate Supplement	Low risk	20/12/2012
DCM-S	FD105	Park and Sanders Selective Supplement II	Low risk	20/12/2012
DCM-S	FD106	Campylobacter Supplement VI (Butzler)	Low risk	20/12/2012
DCM-S	FD111	Kimmig Selective Supplement (Twin Pack)	Low risk	20/12/2012
DCM-S	FD112	George Kimmig Selective Supplement	Low risk	20/12/2012
DCM-S	FD114	Vitamin K1 Supplement	Low risk	20/12/2012
DCM-S	FD117	Haemophilus Growth Supplement	Low risk	20/12/2012
DCM-S	FD118	Mucasol	Low risk	20/12/2012
DCM-S	FD119	Streptococcus Selective Supplement	Low risk	20/12/2012
DCM-S	FD120	Chlortetracycline Selective Supplement	Low risk	20/12/2012
DCM-S	FD126	Listeria Moxalactam Supplement	Low risk	20/12/2012
DCM-S	FD130	Nalidixic Selective Supplement	Low risk	20/12/2012
DCM-S	FD132	Campylobacter Selective Supplement w/ Hemin (Karmali)	Low risk	10/11/2020
DCM-S	FD135	CCDA Selective Supplement	Low risk	20/12/2012
DCM-S	FD136	Listeria UVM Supplement I	Low risk	20/12/2012
DCM-S	FD137	Listeria UVM Supplement II	Low risk	20/12/2012
DCM-S	FD142	Legionella Growth Supplement (BCYE)	Low risk	10/11/2020
DCM-S	FD142X	Legionella Growth Supplement	Low risk	10/11/2020
DCM-S	FD143	Legionella (GVPC) Selective Supplement	Low risk	20/12/2012
DCM-S	FD144	Legionella BMPA Selective Supplement	Low risk	10/11/2020
DCM-S	FD147	Tellurite - Cefixime Supplement	Low risk	20/12/2012
DCM-S	FD149	Neomycin Supplement	Low risk	20/12/2012
DCM-S	FD150	NYC Supplement	Low risk	20/12/2012
DCM-S	FD152	XLT4 Supplement	Low risk	20/12/2012

DCM-S	FD153	M-CP Selective Supplement - I	Low risk	10/11/2020
DCM-S	FD154	M-CP Selective Supplement - II	Low risk	10/11/2020
DCM-S	FD154A	M-CP Selective Supplement, Modified	Low risk	10/11/2020
DCM-S	FD157	Urea 5% (5 ml per vial)	Low risk	20/12/2012
DCM-S	FD158	Campylobacter Selective Supplement IV (Preston), Modified	Low risk	20/12/2012
DCM-S	FD159	Doyle'S Antibiotic Supplement, Modified	Low risk	04/07/2018
DCM-S	FD160	Legionella (GVPA) Selective Supplement, Modified	Low risk	04/07/2018
DCM-S	FD161	Brucella Selective Supplement, Modified	Low risk	04/07/2018
DCM-S	FD163	Listeria Selective Supplement II, Modified	Low risk	04/07/2018
DCM-S	FD164	Park and Sanders Selective Supplement II, Modified	Low risk	04/07/2018
DCM-S	FD165	Campylobacter Supplement -II (Butzler), Modified	Low risk	04/07/2018
DCM-S	FD169	CC Supplement, Modified	Low risk	04/07/2018
DCM-S	FD171	McBride Listeria Supplement, Modified	Low risk	04/07/2018
DCM-S	FD172	Oxford Listeria Supplement, Modified	Low risk	28/04/2017
DCM-S	FD172R	Oxford Listeria Supplement, Modified	Low risk	04/07/2018
DCM-S	FD173	Mycoprep (for 2 tests)	Low risk	16/12/2017
DCM-S	FD173B	Mycoprep (for 10 tests)	Low risk	16/12/2017
DCM-S	FD175	Mycoplasma Urogenital Selective Supplement	Low risk	20/12/2012
DCM-S	FD176	Dermato Supplement, Modified	Low risk	04/07/2018
DCM-S	FD179	Antibiotic Mixture for Borrelia (100 X) (5 ml per vial)	Low risk	20/12/2012
DCM-S	FD180	Rabbit serum	Low risk	25/08/2016
DCM-S	FD181	HiCrome™ Listeria Selective Supplement	Low risk	10/11/2020
DCM-S	FD183	Legionella Selective Supplement II, Modified	Low risk	04/07/2018
DCM-S	FD185	Anthracis Selective Supplement	Low risk	20/12/2012
DCM-S	FD187	HiCrome™ EC O157 : H7 Selective Supplement	Low risk	05/11/2020
DCM-S	FD190	HiCrome°Hicrome ECC Selective Supplement	Low risk	22/04/2019
DCM-S	FD191	Oxacillin Resistance Selective Supplement	Low risk	20/12/2012
DCM-S	FD192	HiCrome™ Candida Selective Supplement	Low risk	20/12/2012
DCM-S	FD195	Fibrinogen Plasma Trypsin Inhibitor Supplement	Low risk	20/12/2012
DCM-S	FD196	Tetracycline Selective Supplement	Low risk	20/12/2012
DCM-S	FD198	Mycoplasma Cultivation Supplement	Low risk	20/12/2012
DCM-S	FD201	Albumin Glucose Supplement	Low risk	20/12/2012
DCM-S	FD206	Legionella Growth Supplement w/o L-Cysteine	Low risk	05/11/2020
DCM-S	FD206R	Legionella Growth Supplement w/o L-Cysteine	Low risk	10/11/2020
DCM-S	FD212	L. mono Selective Supplement I	Low risk	20/12/2012
DCM-S	FD212A	OA Listeria Selective Supplement	Low risk	10/11/2020
DCM-S	FD212B	L. mono Selective Supplement I	Low risk	04/07/2018
DCM-S	FD213	L. mono Selective Supplement II	Low risk	20/12/2012
DCM-S	FD214	L. mono Enrichment Supplement I	Low risk	20/12/2012
DCM-S	FD215	Vitamino Growth Supplement, Modified (Twin Pack)	Low risk	20/12/2012

DCM-S	FD215B	Vitamino Growth Supplement, Modified	Low risk	22/04/2019
DCM-S	FD225	Klebsiella Selective Supplement	Low risk	10/11/2020
DCM-S	FD226	Enterococcus faecium Selective Supplement	Low risk	10/11/2020
DCM-S	FD227	L. mono Enrichment Supplement II	Low risk	20/12/2012
DCM-S	FD229	MeReSa Selective Supplement	Low risk	20/12/2012
DCM-S	FD230	HiCrome EC 0157: H7 Selective Supplement	Low risk	22/04/2019
DCM-S	FD232	Burkholderia Cepacia Selective Supplement	Low risk	20/12/2012
DCM-S	FD233	Vancomycin Supplement	Low risk	20/12/2012
DCM-S	FD236	Sorbic Acid Supplement	Low risk	20/12/2012
DCM-S	FD241	Poctri supplement	Low risk	25/08/2016
DCM-S	FD242	Legionella Selective Supplement(GVPN)	Low risk	20/12/2012
DCM-S	FD243	Clostridium Difficile Supplement	Low risk	20/12/2012
DCM-S	FD245	HiCrome™ Nickels & Leesment Selective Supplement	Low risk	10/11/2020
DCM-S	FD246	Cefixime Supplement	Low risk	20/12/2012
DCM-S	FD247	ECO157:H7 Selective Supplement	Low risk	22/04/2019
DCM-S	FD248	Coagulase Plasma	Low risk	04/07/2018
DCM-S	FD248A	Coagulase Plasma w/ EDTA (From Rabbit)	Low risk	22/04/2019
DCM-S	FD248B	Rabbit plasma with EDTA and 15% NaCl	Low risk	22/04/2019
DCM-S	FD248R	Coagulase Supplement for Staphilococci	Low risk	22/04/2019
DCM-S	FD252	Gentamycin Selective Supplement	Low risk	22/04/2019
DCM-S	FD253	Urea Solution	Low risk	20/12/2012
DCM-S	FD254	Ureaplasma Selective Supplement	Low risk	04/07/2018
DCM-S	FD255	Ureaplasma Growth Supplement	Low risk	20/12/2012
DCM-S	FD259	Cefoxitin Supplement	Low risk	20/12/2012
DCM-S	FD261	Vancomycin Supplement	Low risk	20/12/2012
DCM-S	FD266	Listeria Moxalactam Supplement Modified	Low risk	20/12/2012
DCM-S	FD269	OFPBL Selective Supplement	Low risk	25/11/2017
DCM-S	FD270	Chromogenic Supplement	Low risk	10/11/2020
DCM-S	FD271	MDR Acinetobacter Selective Supplement	Low risk	25/08/2016
DCM-S	FD274	HiCrome™ Selective Salmonella Agar Supplement	Low risk	22/04/2019
DCM-S	FD277	HiCrome™ VRE Agar supplement	Low risk	20/12/2012
DCM-S	FD278	HiCrome™ ESBL Agar Supplement	Low risk	20/12/2012
DCM-S	FD279	HiCrome™ KPC Agar Supplement	Low risk	20/12/2012
DCM-S	FD280	Sterile Charcoal Supplement for Legionella Agar	Low risk	10/11/2020
DCM-S	FD283R	HiCrome™ Candida Differential Selective Supplement	Low risk	20/12/2012
DCM-S	FD284	Acriflavin-Cefsulodin-Vancomycin Supplement (ACV Supplement)	Low risk	20/12/2012
DCM-S	FD285	Bifidobacterium Selective Supplement	Low risk	20/12/2012
DCM-S	FD286	Yersinia Selective Supplement	Low risk	20/12/2012
DCM-S	FD287	Growth Supplement I for MSM	Low risk	20/12/2012
DCM-S	FD288	Growth Supplement II for MSM	Low risk	20/12/2012

DCM-S	FD290	Novobiocin Selective Supplement	Low risk	20/12/2012
DCM-S	FD295	HiCrome™ ECO157:H7 Selective Supplement Modified	Low risk	22/04/2019
DCM-S	FD299	Selective Supplement for MRSA	Low risk	20/12/2012
DCM-S	FD300	Hayflick Supplement	Low risk	20/12/2012
DCM-S	FD302	Group A Selective Supplement	Low risk	20/12/2012
DCM-S	FD304	Arcobacter Selective Supplement	Low risk	05/11/2020
DCM-S	FD306	Modified Listeria Oxford Selective Supplement	Low risk	22/04/2019
DCM-S	FD309	Monensin Selective Supplement	Low risk	22/04/2019
DCM-S	FD312	VIA Supplement	Low risk	20/12/2012
DCM-S	FD319	MRSA Supplement	Low risk	25/08/2016
DCM-S	FD319R	MeReSa Selective Supplement (MRSA Selective Supplement)	Low risk	25/08/2016
DCM-S	FD320	Clostridium difficle Selective Supplement	Low risk	25/08/2016
DCM-S	FD321	TVCSB Supplement	Low risk	25/08/2016
DCM-S	FD322	Middlebrook ADC Growth Supplement, Modified	Low risk	25/08/2016
DCM-S	FD323	TSBV Supplement	Low risk	25/08/2016
DCM-S	FD324	Bacillus Selective Supplement	Low risk	25/08/2016
DCM-S	FD327	NAD Supplement	Low risk	25/08/2016
DCM-S	FD329	Middlebrook OADC Enrichment Supplement	Low risk	25/08/2016
DCM-S	FD332	Lecithin solution	Low risk	10/11/2020
DCM-S	FD333	Modified L.mono Selective supplement	Low risk	10/11/2020
DCM-S	FD334	Mycoplasma selective supplement	Low risk	25/08/2016
DCM-S	FD335	Leeds Acinetobacter selective supplement	Low risk	25/08/2016
DCM-S	FD335R	MDR Acinetobacter Selective Supplement	Low risk	25/08/2016
DCM-S	FD338	LCN Supplement	Low risk	25/08/2016
DCM-S	FD340	PACT Supplement	Low risk	28/04/2017
DCM-S	FD342	Rapid Listeria Selective Supplement	Low risk	10/11/2020
DCM-S	FD343	Growth Supplement for Fastidious Organism	Low risk	16/12/2017
DCM-S	FD344	ECC Selective Supplement Modified	Low risk	22/04/2019
DCM-S	FD345	Ciprofloxacin Supplement	Low risk	10/11/2020
DCM-S	FD347	PCP Supplement	Low risk	04/07/2018
DCM-S	FD347B	PCP Supplement	Low risk	10/11/2020
DCM-S	FD348	OADS Supplement	Low risk	16/12/2017
DCM-S	FD349	Vancomycin Polymyxin B Supplement	Low risk	04/07/2018
DCM-S	FD352	Acinetobacter Selective Supplement	Low risk	30/10/2018
DCM-S	FD353	VCAT Supplement	Low risk	30/10/2018
DCM-S	FD354	STEC Selective Supplement	Low risk	30/10/2018
DCM-S	FD355	HiCrome™ Colistin Resistant Selective Supplement	Low risk	30/10/2018
DCM-S	FD356	Diphenyl supplement	Low risk	22/04/2019
DCM-S	FD357	Carba Selective Supplement	Low risk	10/11/2020
DCM-S	FD360	C.auris Selective Supplement	Low risk	05/11/2019
DCM-S	FD361	BCSA Selective Supplement	Low risk	05/11/2019

DCM-S	FD362	Coagulase Supplement (for M2126)	Low risk	10/11/2020
DCM-S	FD363	HiMRSA Selective Supplement	Low risk	17/06/2021
DCM-S	FD725R	Mycoprep (Modified,Bulk powder)	Low risk	25/08/2016
DCM-S	FD726	Mycoprep (Modified, powder for 1000ml)	Low risk	25/08/2016
DCM-S	FD743R	Bifido Selective Supplement C	Low risk	25/08/2016
DCM-S	FD744R	Bifido Selective Supplement D	Low risk	25/08/2016
DCM-S	FD745R	Bifido Selective Supplement E	Low risk	25/08/2016
DCM-S	FD749	Supplement for HiCrome™ Candida Agar	Low risk	04/07/2018
DCM-S	FD750	L. J. Media Supplement w/ Capreomycin	Low risk	25/08/2016
DCM-S	FD751	L. J. Medium Supplement w/ Clarithromycin	Low risk	25/08/2016
DCM-S	FD752	L. J. Media Supplement w/ D-Cycloserine	Low risk	25/08/2016
DCM-S	FD753	L. J. Media Supplement w/ Ethambutol	Low risk	25/08/2016
DCM-S	FD754	L. J. Media Supplement w/ Ethionamide	Low risk	25/08/2016
DCM-S	FD755	L. J. Medium Supplement w/ Gatifloxacin	Low risk	25/08/2016
DCM-S	FD756	L. J. Media Supplement w/ Isoniazide	Low risk	25/08/2016
DCM-S	FD757	L. J. Media Supplement w/ Kanamycin	Low risk	25/08/2016
DCM-S	FD758	L. J. Medium Supplement w/ Levofloxacin	Low risk	25/08/2016
DCM-S	FD759	L. J. Medium Supplement w/ Lomefloxacin	Low risk	04/07/2018
DCM-S	FD760	L. J. Medium Supplement w/ Ofloxacin	Low risk	04/07/2018
DCM-S	FD761	L. J. Medium Supplement w/ p-Aminosalicylic acid	Low risk	04/07/2018
DCM-S	FD762	L. J. Medium Supplement w/ Pyrazinamide	Low risk	04/07/2018
DCM-S	FD763	L.J.Medium Supplementw/Rifabutin	Low risk	04/07/2018
DCM-S	FD764	L.J.Medium Supplementw/Rifampicin	Low risk	04/07/2018
DCM-S	FD765	L.J.Medium Supplementw/Sodium Salicylate	Low risk	04/07/2018
DCM-S	FD766	L.J.Medium Supplementw/Streptomycin	Low risk	04/07/2018
DCM-S	FD767	L.J.Medium Supplementw/TCH	Low risk	04/07/2018
DCM-S	FD768	Chloramphenicol Supplement	Low risk	04/07/2018
DCM-S	FD772	L.J. Media Supplement w/Amikacin	Low risk	04/07/2018
DCM-S	FD775	L.J. Media Supplement w/ p-Nitrobenzoic acid	Low risk	04/07/2018
DCM-S	FD780	L.J. Media Supplement w/Moxifloxacin	Low risk	04/07/2018
DCM-S	FD804	Enriched growth Supplement for Mycobacteria	Low risk	04/07/2018
DCM-S	FD805	Growth Supplement for Anaerobic cultures	Low risk	10/11/2020
DCM-S	FD808	Supplement for GC Agar Base	Low risk	10/11/2020
DCM-S	FD812	Selective Supplement for Gram positive bacteria (Clostridium, Staphylococcus spp. etc.)	Low risk	10/11/2020
DCM-S	FD814	PANTA Supplement	Low risk	10/11/2020
DCM-S	FD815B	Selective Supplement for SS Agar	Low risk	10/11/2020
DCM-S	FD816	Selective supplement for Enterobacteriaceae	Low risk	10/11/2020
DCM-S	FD817	Selective Supplement for Staphylococcus	Low risk	10/11/2020
DCM-S	FD820	Selective Supplement for SS Agar	Low risk	10/11/2020

Product group	Type/ Model / Ref number	Device Name	Risk Class	Date of CE compliance
Ready Prepared Media			Low risk	10/06/2021
RPM - Ready Prepared Plates	HB001	HiCombi™ Nutrient - MacConkey Agar Plate	Low risk	20/12/2012
RPM - Ready Prepared Plates	HB003	HiCombi™ CLED - MacConkey Agar Plate	Low risk	20/12/2012
RPM - Ready Prepared Plates	HB004	HiCombi™ XLD - MacConkey Agar Plate	Low risk	20/12/2012
RPM - Ready Prepared Plates	HB005	HiCombi™ Cetrimide - MacConkey Agar Plate	Low risk	20/12/2012
RPM - Ready Prepared Plates	HB006	HiCombi™ Blood- MacConkey Agar Plate	Low risk	20/12/2012
RPM - Ready Prepared Plates	HB007	HiCombi™ MacConkey-Mannitol Salt Agar	Low risk	20/12/2012
RPM - Ready Prepared Plates	HB008	HiCombi™ Blood -Chocolate Agar	Low risk	20/12/2012
RPM - Ready Prepared Plates	HB009	HiCombi™ Blood -Mannitol Salt Agar	Low risk	20/12/2012
RPM - Ready Prepared Plates	HB010	HiCombi™ Chocolate - MacConkey Agar Plate	Low risk	20/12/2012
RPM - Ready Prepared Plates	HB017	HiCombi™ Sabouraud Dextrose-Sheep Blood Agar Plate	Low risk	17/06/2021
RPM- HiDip Slides	HD001	HiDip™ Cled-Cetri-Mac Medium	Low risk	20/12/2012
RPM- HiDip Slides	HD002	HiDip™ Mac-Cled-Sab Medium	Low risk	20/12/2012
RPM- HiDip Slides	HD003	HiDip™ Mac-Cled-Bile Esculin Medium	Low risk	20/12/2012
RPM- HiDip Slides	HD004	HiDip™ Cled-Mac Medium	Low risk	20/12/2012
RPM- HiDip Slides	HD005	HiDip™ Cled-MUG Mac Medium	Low risk	20/12/2012
RPM- HiDip Slides	HD006	HiDip™ Cled-HiCrome™ UTI Medium	Low risk	20/12/2012
RPM- HiDip Slides	HD007	HiDip™ Mac-HiCrome™ UTI Medium	Low risk	20/12/2012
RPM- HiDip Slides	HD007R	HiDip™ Mac-HiCrome™ UTI Medium	Low risk	10/11/2020
RPM- HiDip Slides	HD018	HiDip™ TSA-CLED Agar w/ B.T.B Indicator Medium	Low Risk	20/12/2012
RPM- HiDip Slides	HD020	HiDip™ Pseudomonas Agar - MacConkey Agar Medium	Low risk	20/12/2012
RPM- HiDip Slides	HD021	HiDip™ PCA - MacConkey Agar Medium	Low risk	20/12/2012
RPM- HiDip Slides	HD024	HiDip™ Modified Rogosa Medium-Modified Rogosa Medium	Low risk	20/12/2012
RPM- HiDip Slides	HD025	HiDip™ Modified Nickerson Medium-Modified Nickerson Medium	Low risk	20/12/2012
RPM- HiDip Slides	HD041	HiDip HiCrome™ Universal Agar-PCA	Low risk	28/04/2017
RPM- HiDip Slides	HD042	HiDip HiCrome™ UTI Agar - Dey Engley Neutralzing agar	Low risk	28/04/2017
RPM- HiDip Slides	HD046	HiDip TSA-TCBS	Low risk	30/10/2018
RPM- HiDip Slides	HD047	HiDip TSA-MRS	Low risk	30/10/2018
RPM- HiSafe Blood Culturing System	LQ003	BHI	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ003A	BHI	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ004	BHI - Supplemented w/ 0.05% SPS	Low risk	20/12/2012

RPM- HiSafe Blood Culturing System	LQ004R	BHI - Supplemented w/ 0.05% SPS	Low risk	10/11/2020
RPM- HiSafe Blood Culturing System	LQ004A	BHI - Supplemented w/ 0.05% SPS	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ004AR	BHI - Supplemented w/ 0.05% SPS	Low risk	10/11/2020
RPM- HiSafe Blood Culturing System	LQ005	TSB - Tryptone Soya Broth w/ 10% Sucrose	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ005A	TSB - Tryptone Soya Broth w/ 10% Sucrose	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ006	Columbia Broth	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ006A	Columbia Broth	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ007	Thioglycollate Broth	Low Risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ007R	Thioglycollate Broth	Low Risk	10/11/2020
RPM- HiSafe Blood Culturing System	LQ007A	Thioglycollate Broth	Low Risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ007AR	Thioglycollate Broth	Low Risk	10/11/2020
RPM- HiSafe Blood Culturing System	LQ008	Schaedler Broth	Low Risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ008A	Schaedler Broth	Low Risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ009	TSB - Tryptone Soya Broth	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ009A	TSB - Tryptone Soya Broth	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ010	Glucose Broth Supplemented w/ 0.05% SPS	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ010A	Glucose Broth Supplemented w/ 0.05% SPS	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ010AR	Glucose Broth Supplemented w/ 0.05% SPS	Low risk	10/11/2020
RPM- HiSafe Blood Culturing System	LQ010V	Glucose Broth supplemented w/0.05% SPS	Low risk	22/04/2019
RPM- HiSafe Blood Culturing System	LQ011	TSB - Tryptone Soya Broth Supplemented w/ 0.05% SPS	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ011A	TSB - Tryptone Soya Broth Supplemented w/ 0.05% SPS	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ011AR	TSB - Tryptone Soya Broth Supplemented w/ 0.05% SPS	Low risk	10/11/2020
RPM- HiSafe Blood Culturing System	LQ013V	Hartley Broth	Low risk	22/04/2019
RPM- HiSafe Blood Culturing System	LQ014	Modified Wilkins Chalgren Broth	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ014A	Modified Wilkins Chalgren Broth	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ012	HiCombi™ Dual Performance Medium	Low Risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ012R	HiCombi™ Dual Performance Medium	Low Risk	10/11/2020

RPM- HiSafe Blood Culturing System	LQ013	Hartley Broth	Low Risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ013A	Hartley Broth	Low Risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ023	Fluid thioglycollate Medium w/0.05% SPS	Low Risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ023A	Fluid thioglycollate Medium w/0.05% SPS	Low Risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ029	HiCombi™ Dual Performance Salmonella Medium - SS	Low Risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ029A	HiCombi™ Dual Performance Salmonella Medium - SS	Low Risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ029AR	HiCombi™ Dual Performance Salmonella Medium - SS	Low Risk	10/11/2020
RPM- Ready Prepared Dual Media	LQ030	HiCombi™ Dual Performance Salmonella Medium - XLD	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ030A	HiCombi™ Dual Performance Salmonella Medium - XLD	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ031	HiCombi™ Dual Performance Salmonella Medium - DCA	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ031A	HiCombi™ Dual Performance Salmonella Medium - DCA	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ031AR	HiCombi™ Dual Performance Salmonella Medium - DCA	Low risk	10/11/2020
RPM- Ready Prepared Dual Media	LQ032	HiCombi™ Dual Performance Salmonella Medium - HEA	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ032A	HiCombi™ Dual Performance Salmonella Medium - HEA	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ033	HiCombi™ Dual Performance Medium	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ033R	HiCombi™ Dual Performance Medium	Low risk	10/11/2020
RPM- Ready Prepared Dual Media	LQ034	HiCombi™ Dual Performance Fungal Medium Kit	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ034R	HiCombi™ Dual Performance Fungal Medium Kit	Low Risk	10/11/2020
RPM- Ready Prepared Dual Media	LQ034A	HiCombi™ Dual Performance Fungal Medium Kit	Low Risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ034AR	HiCombi™ Dual Performance Fungal Medium Kit	Low Risk	10/11/2020

RPM- Ready Prepared Dual Media	LQ035	HiCombi™ Dual Performance Selective Medium - HEA	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ035A	HiCombi™ Dual Performance Selective Medium - HEA	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ035AR	HiCombi™ Dual Performance Selective Medium - HEA	Low risk	10/11/2020
RPM- Ready Prepared Dual Media	LQ036	HiCombi™ Dual Performance Selective Medium - SS	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ036R	HiCombi™ Dual Performance Selective Medium - SS	Low risk	10/11/2020
RPM- Ready Prepared Dual Media	LQ036A	HiCombi™ Dual Performance Selective Medium - SS	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ036AR	HiCombi™ Dual Performance Selective Medium - SS	Low risk	10/11/2020
RPM- Ready Prepared Dual Media	LQ037	HiCombi™ Dual Performance Selective Medium - HEA	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ038	HiCombi™ Dual Performance Selective Medium - SS	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ038A	HiCombi™ Dual Performance Selective Medium - SS	Low risk	25/08/2016
RPM- Ready Prepared Liquid Medium	LQ004Al	BHI-Supplemented w/0.05% SPS	Low risk	25/08/2016
RPM- Ready Prepared Liquid Medium	LQ004AL	BHI-Supplemented w/0.05% SPS	Low risk	25/08/2016
RPM- Ready Prepared Liquid Medium	LQ004V	BHI - Supplemented w/ 0.05% SPS	Low risk	25/08/2016
RPM- Ready Prepared Liquid Medium	LQ0151	Medium 11. GN Broth	Low risk	04/07/2018
RPM- Ready Prepared Liquid Medium	LQ069	Alkaline Peptone Water	Low Risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ069R	Enrichment Medium For Vibrio	Low Risk	25/08/2016
RPM- Ready Prepared Liquid Medium	LQ070	Selenite Broth	Low risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ070V	Selenite Broth	Low Risk	25/08/2016

RPM- Ready Prepared Liquid Medium	LQ077	BHI Broth	Low risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ077V	BHI Broth	Low risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ077R	Enrichment Medium	Low risk	25/08/2016
RPM- Ready Prepared Liquid Medium	LQ079	Bile Broth	Low Risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ079V	Bile Broth	Low Risk	22/04/2019
RPM- Ready Prepared Liquid Medium	LQ080	Cooked M Medium	Low Risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ080C	Cooked M Medium	Low Risk	04/07/2018
RPM- Ready Prepared Liquid Medium	LQ080V	Cooked M Medium	Low Risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ088	Tetrathionate Broth	Low risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ089	Peptone Water	Low risk	04/07/2018
RPM- Ready Prepared Liquid Medium	LQ089X	Peptone Water	Low risk	04/07/2018
RPM- Ready Prepared Liquid Medium	LQ093	Cooked M Medium w/ Glucose, Hemin & Vitamin K	Low Risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ095	Hartley Broth w/ 0.05% SPS	Low Risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ095A	Hartley Broth w/ 0.05% SPS	Low Risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ104	Rappaport Vassiliadis Salmonella Enrichment Broth	Low Risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ104C	Rappaport Vassiliadis Salmonella Enrichment Broth	Low Risk	04/07/2018
RPM- Ready Prepared Liquid Medium	LQ104V	Rappaport Vassiliadis Salmonella Enrichment Broth	Low Risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ104XX	Rappaport Vassiliadis Salmonella Enrichment Broth	Low Risk	28/04/2017
RPM- Ready Prepared Liquid Medium	LQ105	Kirchner Medium Base	Low Risk	20/12/2012

RPM- Ready Prepared Dual Media	LQ109	HiCombi™ Dual Performance Trans Isolate Medium	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ109R	HiCombi™ Dual Performance Trans Isolate Medium	Low risk	10/11/2020
RPM- Ready Prepared Liquid Medium	LQ126	Urea Indole Medium	Low risk	04/07/2018
RPM- Ready Prepared Liquid Medium	LQ129	Sabouraud's Dextrose Broth	Low risk	04/07/2018
RPM- Ready Prepared Liquid Medium	LQ129V	Sabouraud's Dextrose Broth	Low risk	25/08/2016
RPM- Ready Prepared Liquid Medium	LQ132	Campylo Thioglycollate Broth w/Selective Supplement	Low Risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ134	L Broth	Low Risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ146	Mannitol Selenite Broth	Low risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ157	GN Broth, Hajna	Low risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ159	Hayflick Medium	Low risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ170	Selective Enrichment Medium For Group B	Low risk	25/08/2016
RPM- Ready Prepared Liquid Medium	LQ180V	Brucella Broth	Low risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ181V	Mannitol Salt Broth	Low risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ182V	Mueller Hinton Broth	Low risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ296X	Hugh Leifson Medium	Low risk	10/11/2020
RPM- HiSafe Blood Culturing System	LQ188	HiCombi™ Dual Performance Fungal Medium, Modified	Low risk	20/12/2012
RPM- HiSafe Blood Culturing System	LQ208	Eugonic LT100 Broth	Low Risk	22/04/2019
RPM- Ready Prepared Liquid Medium	LQ208L	Eugonic LT100 Broth	Low risk	28/04/2017
RPM- Ready Prepared Liquid Medium	LQ208CCL	Eugonic LT100 Broth	Low risk	28/04/2017

RPM- Ready Prepared Liquid Medium	LQ210C	BHI Broth	Low risk	20/12/2012
RPM- Ready Prepared Liquid Medium	LQ210D	BHI Broth	Low risk	20/12/2012
RPM- Ready Prepared Dual Media	LQ241	HiCombi Trans Isolate Medium	Low risk	28/04/2017
RPM- Ready Prepared Liquid Medium	LQ246CCL	Sauton's Fluid Medium Base	Low risk	16/12/2017
RPM- Ready Prepared Liquid Medium	LQ314II	HiMiC™ Diluent	Low risk	10/11/2020
RPM- Ready Prepared Liquid Medium	LQ319V	Thioglycollate Medium with Hemin & Vitamin K	Low risk	17/06/2021
RPM- Ready Prepared Liquid Medium	LQ319VIII	Thioglycollate Medium with Hemin & Vitamin K	Low risk	17/06/2021
RPM- Ready Prepared Liquid Medium	LQ089CCLR	Peptone Water	Low risk	17/06/2021
RPM -Ready Prepared Plates	MP001	Nutrient Agar Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP001L	Nutrient Agar Plate (150mm plate)	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP015	Hoyles Media Plate with supplements.	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP016	Brilliant Green Agar, Modified Plate	Low Risk	30/10/2018
RPM -Ready Prepared Plates	MP022	EMB Agar, Levine Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP023	Vogel Johnson Agar Plate (V.J. Agar Plate)	Low Risk	22/04/2019
RPM -Ready Prepared Plates	MP024	Cetrimide Agar Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP029	Endo Agar Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP031	Xylose Lysine Deoxycholate Agar (XLD Agar) Plate	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP043	Baird Parker Agar Plate	Low risk	25/08/2016
RPM -Ready Prepared Plates	MP043L	Baird Parker Agar Plate	Low risk	04/07/2018
RPM -Ready Prepared Plates	MP043M	Baird Parker Agar Plate (150mm)	Low risk	16/12/2017
RPM -Ready Prepared Plates	MP049	Violet Red Bile Agar Plate	Low risk	16/12/2017
RPM -Ready Prepared Plates	MP063	Sabouraud Dextrose Agar Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP063L	Sabouraud Dextrose Agar Plate (150 mm plate)	Low Risk	20/12/2012

RPM -Ready Prepared Plates	MP063M	Sabouraud Dextrose Agar Plate (120 mm plate)	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP065	Deoxycholate Citrate Agar Plate	Low Risk	30/10/2018
RPM -Ready Prepared Plates	MP073	Blood Agar Plate	Low risk	10/11/2020
RPM -Ready Prepared Plates	MP074	Brucella Agar Plate	Low Risk	22/04/2019
RPM -Ready Prepared Plates	MP081	MacConkey Agar w/ 0.15% Bile Salts, CV and NaCl Plate	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP081XL	MacConkey Agar w/ 0.15% Bile Salts, CV and NaCl Plate (200mm plate)	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP082	MacConkey Agar w/o CV, NaCl w/ 0.5% Sodium Taurocholate Plate	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP091	Plate Count Agar Plate	Low risk	16/12/2017
RPM -Ready Prepared Plates	MP103	Chocolate Agar Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP108	SS Agar (Salmonella Shigella Agar) Plate	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP1032	SS Agar Plate, Modified (Salmonella Shigella Agar Plate, Modified)	Low risk	10/11/2020
RPM -Ready Prepared Plates	MP1039	Brucella Agar Plate with Hemin & Vitamin K1	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP1057	G. vaginilis Selective Agar Plate	Low Risk	30/10/2018
RPM -Ready Prepared Plates	MP1067	Sabouraud Chloramphenicol Agar Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP1084	Mueller Hinton Agar No. 2 Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP1084HB	Mueller Hinton Agar No.2 Plate w/ Horse Blood	Low risk	10/11/2020
RPM -Ready Prepared Plates	MP1084SB	Mueller Hinton Agar No.2 Plate w/ Sheep Blood	Low risk	10/11/2020
RPM -Ready Prepared Plates	MP1139	Modified MYP Agar Plate	Low risk	10/11/2020
RPM -Ready Prepared Plates	MP118	Mannitol Salt Agar Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP1259	Haemophilus Test Agar Plate	Low Risk	30/10/2018
RPM -Ready Prepared Plates	MP1260	Tellurite Blood Agar Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP1295	HiCrome™ E.coli Agar Plate	Low risk	10/11/2020
RPM -Ready Prepared Plates	MP1297A	HiCrome™TM Candida Differential Agar Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP1301	Sheep Blood Agar Plate	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP1301C	Sheep Blood Agar Plate (Individually Packed)	Low risk	28/04/2017
RPM -Ready Prepared Plates	MP1301M	Sheep Blood Agar Plate	Low risk	04/07/2018
RPM -Ready Prepared Plates	MP1345	Anaerobic Blood Agar Plate w/Neomycin	Low risk	30/10/2018

RPM -Ready Prepared Plates	MP1353	HiCrome™ UTI Agar Plate	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP137	Malt Extract Agar Plate	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP144	Columbia 5% Sheep Blood Agar Plate	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP1418	HiCrome™ UTI Agar Plate, Modified	Low risk	10/11/2020
RPM -Ready Prepared Plates	MP1454	Oxacillin Resistant Screening Agar Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP1540I	HiCrome™ Listeria Ottaviani Agosti Agar Plate	Low Risk	17/06/2021
RPM -Ready Prepared Plates	MP1548	Chocolate No. 2 Agar Plate	Low risk	10/11/2020
RPM -Ready Prepared Plates	MP1594	MeReSa Agar Plate	Low Risk	30/10/2018
RPM -Ready Prepared Plates	MP160	DCLS Agar Plate	Low Risk	30/10/2018
RPM -Ready Prepared Plates	MP1600	HiCrome™ Universal Agar Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP1640	Burkholderia Cepacia Agar Plate	Low Risk	04/07/2018
RPM -Ready Prepared Plates	MP1674	HiCrome™ MeReSa Agar Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP1682	HiCrome™ Vibrio Agar Plate	Low Risk	17/06/2021
RPM -Ready Prepared Plates	MP1702	MacConkey Agar RS Plate	Low Risk	30/10/2018
RPM -Ready Prepared Plates	MP173	Mueller Hinton Agar Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP173C	Mueller Hinton Agar Plate (100 mm Plate)	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP173L	Mueller Hinton Agar Plate (150mm plate)	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP173M	Mueller Hinton Agar Plate (120mm plate)	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP173XL	Mueller Hinton Agar Plate (200mm plate)	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP173SP	Mueller Hinton Agar Plate (150 mm scored plate)	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP175	Bordet Gengou Agar Plate w/15% Sheep blood	Low Risk	25/08/2016
RPM -Ready Prepared Plates	MP175SB	Bordet Gengou Agar Plate with 25% Sheep Blood	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP1763	VRE Agar Plate	Low Risk	30/10/2018
RPM -Ready Prepared Plates	MP180	Lead Acetate Agar Plate	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP1806	Mueller Hinton Agar plate w/ 5% Sheep Blood	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP1806M	Mueller Hinton Agar plate w/ 5% Sheep Blood	Low Risk	04/07/2018
RPM -Ready Prepared Plates	MP1811	OFBL Agar Plate (Oxidation Fermentation Polymyxin Bacitracin Lactose Agar Plate)	Low risk	10/11/2020

RPM -Ready Prepared Plates	MP1825	Mueller Hinton Agar Plate with 2% Glucose w/Methylene Blue	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP1829	HiCrome™ ESBL Agar Plate	Low Risk	30/10/2018
RPM -Ready Prepared Plates	MP1831	HiCrome™ KPC Agar Plate	Low Risk	28/04/2017
RPM -Ready Prepared Plates	MP1837	HiCrome™ Staph Agar Plate, Modified	Low Risk	28/04/2017
RPM -Ready Prepared Plates	MP1858	Bifidobacterium Agar Modified Plate	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP188	D.T.M Agar Plate	Low Risk	30/10/2018
RPM -Ready Prepared Plates	MP1832	HiCrome™ Coliform Agar Plate, Modified	Low risk	10/11/2020
RPM -Ready Prepared Plates	MP1925	HiCrome™ VRE Agar Plate	Low Risk	30/10/2018
RPM -Ready Prepared Plates	MP1938	HiCrome™ Acinetobacter Agar Plate	Low Risk	16/12/2017
RPM -Ready Prepared Plates	MP1947	Enriched Tryptone Soya Agar Plate (ETSA)	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP1948	Tryptone Soya Serum Bacitracin Vancomycin Agar (TSBV)	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP1949	Tryptone Soya Agar w/ Hemin & Menadione	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP1966	HiCrome™ Strep B Selective Agar Plate	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP1974	HiCrome™ Rapid MRSA Agar Plate	Low risk	25/08/2016
RPM -Ready Prepared Plates	MP2062I	HiCrome™ Cronobacter Isolation Agar Plate (CCI Agar Plate)	Low risk	17/06/2021
RPM -Ready Prepared Plates	MP2085	Martin Lewin Agar	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP2089	Burkholderia cepacia Selective Agar Plate	Low risk	10/11/2020
RPM -Ready Prepared Plates	MP211	BHI Agar Plate	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP2116	HiCrome™ Salmoconfirm Selective Agar Plate	Low risk	17/06/2021
RPM -Ready Prepared Plates	MP217	Bi.G.G.Y. Agar Plate (Nickerson Agar Plate)	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP291	Schaedler Agar Plate	Low risk	16/12/2017
RPM -Ready Prepared Plates	MP1296	HiCrome™ Salmonella Agar Plate	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP298	MacConkey Sorbitol Agar Plate	Low risk	16/12/2017
RPM -Ready Prepared Plates	MP317	EMB Agar Plate	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP406	Pseudomonas Isolation Agar Plate	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP413	Thayer Martin Agar Plate w/VCNT	Low risk	16/12/2017
RPM -Ready Prepared Plates	MP467	Hektoen Enteric Agar Plate	Low risk	04/07/2018

RPM -Ready Prepared Plates	MP491	Anaerobic Agar (Brewer) Plate	Low risk	04/07/2018
RPM -Ready Prepared Plates	MP540	Phenylethyl Blood Agar Plate w/ 5% Sheep Blood	Low risk	25/08/2016
RPM -Ready Prepared Plates	MP5269	Modified Nickerson Medium	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP5208	CNA Agar Plate with 5% Sheep Blood	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP5304	Blood agar Plate w/5mg/l Gentamicin	Low risk	25/08/2016
RPM -Ready Prepared Plates	MP5316	Chocolate Agar Plate w/ 5% Sheep Blood	Low risk	28/04/2017
RPM -Ready Prepared Plates	MP5332	Sabouraud Dextrose Agar Plate w/Chloramphenicol & gentamicin	Low risk	04/07/2018
RPM -Ready Prepared Plates	MP5333	Chocolate Agar Plate w/ Bacitracin	Low risk	04/07/2018
RPM -Ready Prepared Plates	MP5334	Sabouraud Dextrose Agar plate w/Penicillin & Streptomycin	Low risk	04/07/2018
RPM -Ready Prepared Plates	MP5339	Regan Lowe Agar Plate (Charcoal Blood Plate w/Cephalexin)	Low risk	16/12/2017
RPM -Ready Prepared Plates	MP5340	Bordet Gengou Blood Agar Plate w/Cephalexin	Low risk	16/12/2017
RPM -Ready Prepared Plates	MP5380	BHI Agar Plate w/ Blood	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP5381	BHI Agar Plate w/ Vancomycin	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP5382	BHI Blood agar plate w/ Vancomycin	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP5383	BCYE Selective Agar Plate	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP5384	GBS Agar	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP5386	Sabouraud Dextrose Agar Plate w/Gentamicin	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP5387	Sabouraud Dextrose Agar Plate w/ Cycloheximide	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP5389	Mueller Hinton Agar Plate w/ 2% NaCL	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP5390	Helicobacter Pylori Selective Agar	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP5476	Mucormycosis Selective Agar Plate	Low risk	10/06/2021
RPM -Ready Prepared Plates	MP5477	Candida Selective Agar Plate	Low risk	10/06/2021
RPM -Ready Prepared Plates	MP511	Middlebrook 7H11 Agar w/TCH	Low risk	04/07/2018
RPM -Ready Prepared Plates	MP5426	Middlebrook 7H11 Agar w/ PANTA supplement	Low risk	10/11/2020
RPM -Ready Prepared Plates	MP616	Tergitol-7 Agar Plate	Low risk	25/08/2016
RPM -Ready Prepared Plates	MP641	MRS Agar Plate	Low risk	28/04/2017
RPM -Ready Prepared Plates	MP636C	MYP Agar Plate (100mm plate)	Low risk	10/11/2020

RPM -Ready Prepared Plates	MP641-I	MRS Agar w/ 10 ppm cycloheximide	Low risk	28/04/2017
RPM -Ready Prepared Plates	MP664	Sabouraud Dextrose Agar Plate w/Chloramphenicol (50mg/L) and Cycloheximide 500mg/L	Low Risk	20/12/2012
RPM -Ready Prepared Plates	MP792	CLED Agar w/ Bromothymol Blue Plate	Low risk	20/12/2012
RPM -Ready Prepared Plates	MP805	Bacteroides Bile Esculin Agar Plate	Low risk	25/08/2016
RPM -Ready Prepared Plates	MP813I	BCYE Agar Plate	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP843	Yersinia Selective Agar Plate	Low risk	30/10/2018
RPM -Ready Prepared Plates	MP870	TCBS Agar Plate	Low risk	25/08/2016
RPM -Ready Prepared Plates	MP975A	Anaerobic Blood Agar Plate	Low risk	25/08/2016
RPM -Ready Prepared Plates	MP994	Campylobacter Agar Plate	Low risk	20/12/2012
RPM -Ready Prepared Plates	MPV081	MacConkey HiVeg™ Agar Plate w/ CV, Nacl, 0.003% NR and 1.5% Agar Plate	Low risk	10/11/2020
RPM -Ready Prepared Plates	MPV173	Mueller Hinton HiVeg™ Agar Plate	Low risk	10/11/2020
RPM -Ready Prepared Plates	QP001	Middlebrooke 7H11 Agar Plate	Low risk	04/07/2018
RPM- Transport Medium w/ swabs	MQ651P	HiCulture™ Transport Swabs w/ Amies Medium w/ Charcoal	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MQ5203P	HiCulture™ Transport Swab w/ Enteric Pathogen Transport Medium	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MQ306P	HiCulture™ Transport Swabs w/ Stuart Transport Medium	Low risk	20/12/2012
RPM- Viral Transport Medium w/ swabs	AL167	HiViral Transport Medium	Low risk	20/12/2012
RPM- Viral Transport Medium w/ swabs	MS052A	HiCulture™ Transport Swabs w/Selenite Medium (A)	Low risk	25/08/2016
RPM- Viral Transport Medium w/ swabs	MS316	HiCulture™ Transport Swabs w/CVTR Medium	Low risk	20/12/2012
RPM- Viral Transport Medium w/ swabs	MS316S	HiCulture™ Transport Swabs w/CVTR Medium	Low risk	10/11/2020
RPM- Viral Transport Medium w/ swabs	MS316SR	HiCulture™ Transport Swabs w/CVTR Medium w/metal stick	Low risk	10/11/2020
RPM- Viral Transport Medium w/ swabs	MS316A	HiCulture™ Transport Swabs w/CVTR Medium,Modified	Low risk	25/08/2016
RPM- Viral Transport Medium w/ swabs	MS1145	HiCulture™ Listeria Isolation and Transport Swabs	Low risk	20/12/2012
RPM- Viral Transport Medium w/ swabs	MS1145R	HiCulture™ Listeria Isolation and Transport Swabs	Low risk	10/11/2020

RPM- Viral Transport Medium w/ swabs	MS1145S	HiCulture™ Listeria Isolation and Transport Swabs with metal stick	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MS1514	Hiculture™ Transport swabs w/Modified Campylobacter Thioglycollate Medium	Low risk	25/08/2016
RPM- Transport Medium w/ swabs	MS1514R	Hiculture™ Transport swabs w/Modified Campylobacter Thioglycollate Medium in polystyrene tube	Low risk	10/11/2020
RPM- Transport Medium w/ swabs	MS1557	Hiculture™ Transport swabs w/BHI broth for H.pylori	Low risk	25/08/2016
RPM- Transport Medium w/ swabs	MS1759	Hiculture™ Transport swabs	Low risk	25/08/2016
RPM- Transport Medium w/ swabs	MS2016A	HiCulture™ Transport Swabs w/ Soyabean Casein Digest Medium w/6.5% NaCL	Low risk	25/08/2016
RPM- Transport Medium w/ swabs	MS2016B	HiCulture™ Transport Swabs w/ Soyabean Casein Digest Medium w/6.5% NaCL	Low risk	25/08/2016
RPM- Transport Medium w/ swabs	MS202	HiCulture™ Transport Swabs w/ Cary Blair Medium	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MS202A	HiCulture™ Transport Swabs w/ Cary Blair Medium (A)	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MS202R	HiCulture™ Transport Swabs w/ Cary Blair Medium in polystyrene tube	Low risk	10/11/2020
RPM- Transport Medium w/ swabs	MS202S	HiCulture™ Transport Swabs w/ Cary Blair Medium with metal stick	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MS2055	HiCulture™ Transport Medium for Helicobacter pylori	Low risk	28/04/2017
RPM- Transport Medium w/ swabs	MS2127	HiCulture™ Transport Swab w/ Todd Hewitt Broth w/Colistin & Nalidixic Acid	Low risk	10/11/2020
RPM- Transport Medium w/ swabs	MS306	HiCulture™ Transport Swabs w/ Stuart Transport Medium	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MS306R	HiCulture™ Transport Swabs w/ Stuart Transport Medium	Low risk	10/11/2020
RPM- Transport Medium w/ swabs	MS306S	HiCulture™ Transport Swabs w/ Stuart Transport Medium with metal stick	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MS5002	HiCulture™ Transport Swabs w/ 0.85% Sodium chloride and 0.1% Buffered Ppetone Water in polystyrene tube	Low risk	04/07/2018
RPM- Transport Medium w/ swabs	MS5215	HiViral™ Transport Medium for Cloacal Samples	Low risk	25/08/2016
RPM- Transport Medium w/ swabs	MS5296	HiCulture™ Skim Milk Tryptone Glucose Glycerin Medium swabs	Low risk	25/08/2016
RPM- Transport Medium w/ swabs	MS5321	HiCulture Sterile swabs w/ 0.9% Saline	Low risk	22/04/2019
RPM- Transport Medium w/ swabs	MS651	HiCulture™ Transport Swabs w/ Amies Medium w/ Charcoal	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MS651R	HiCulture™ Transport Swabs w/ Amies Medium w/ Charcoal in polystyrene tube	Low risk	10/11/2020
RPM- Transport Medium w/ swabs	MS651S	HiCulture™ Transport Swabs w/ Amies Medium w/ Charcoal with metal stick	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MS651SR	HiCulture™ Transport Swabs w/ Amies Medium w/ Charcoal with metal stick	Low risk	10/11/2020
RPM- Transport Medium w/ swabs	MS684	HiCulture™ Transport Swabs w/ Amies Medium w/o Charcoal	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MS684R	HiCulture™ Transport Swabs w/ Amies Medium w/o Charcoal in polystyrene tube	Low risk	10/11/2020
RPM- Transport Medium w/ swabs	MS684A	HiCulture™ Transport Swabs w/ Amies Medium (A)	Low risk	25/08/2016

RPM- Transport Medium w/ swabs	MS684B	HiCulture™ Transport Swabs w/ Amies Medium (B)	Low risk	25/08/2016
RPM- Transport Medium w/ swabs	MS684C	HiCulture™ Transport Swabs w/ Amies Medium (C)	Low risk	25/08/2016
RPM- Transport Medium w/ swabs	MS684D	HiCulture™ Transport Swabs w/ Amies Medium (D)	Low risk	25/08/2016
RPM- Transport Medium w/ swabs	MS684S	HiCulture™ Transport Swabs w/ Amies Medium w/o Charcoal with metal stick	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MS010	HiCulture™ Transport Swabs w/ Alternative Thioglycollate Medium	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MS010R	HiCulture™ Transport Swabs w/ Alternative Thioglycollate Medium in polystyrene tube	Low risk	10/11/2020
RPM- Transport Medium w/ swabs	MS010S	HiCulture™ Transport Swabs w/ Alternative Thioglycollate Medium with metal stick	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MS113	HiCulture™ Transport Swabs w/ Chlamydospore Medium	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MS113R	HiCulture™ Transport Swabs w/ Chlamydospore Medium in polystyrene tube	Low risk	10/11/2020
RPM- Transport Medium w/ swabs	MS113S	HiCulture™ Transport Swabs w/ Chlamydospore Medium with metal stick	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MS198S	HiCulture™ Transport Swab w/ Middlebrook 7H9 Broth w/metal stick	Low risk	20/12/2012
RPM- Transport Medium w/ swabs	MS5478	HiFungal Transport medium w/ Swab	Low risk	10/06/2021
RPM- Ready Prepared Medium	MT001	Modified Middlebrook 7H9 Broth with Indicator	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL001	L.J. Medium Slant	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL001H	L.J. Medium in glass bottle	Low risk	04/07/2018
RPM- L.J.Medium Slants	SL001B	L.J. Medium Slant	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL001L	L.J. Medium Slant in long tube	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL001LD	L.J. Medium Slant (in long tube)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL001M	L.J.Medium Slant (In Medium Length tube)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL001T	L.J. Medium Slant in thick glass bottles	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL001X	L.J. Medium Slant	Low risk	17/06/2021
RPM- L.J.Medium Slants	SL002	L.J.Medium Kit	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL003	L.J.Medium Plus Kit	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL004	L.J.Medium w/ Pyruvate	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL004L	L.J.Medium w/ Pyruvate (0.2%)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL005	L.J.Medium w/ Streptomycin (4 mcg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL005L	L.J.Medium w/Streptomycin (4 mcg / ml)	Low risk	20/12/2012

RPM- L.J.Medium Slants	SL006	L.J.Medium w/ INH	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL007	L.J.Medium Slant w/ Rifampicin (40µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL008	Acid Egg Medium Slant	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL009	Acid Egg Medium Slant w/ pyruvate	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL010	Modified L. J. Medium Plus Kit	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL011	L.J. Medium Slant w/ Ciprofloxacin	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL011L	L.J. Medium Slant w/ Ciprofloxacin (12.5 mcg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL012	L.J. Medium Slant w/ Amikacin	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL013	L.J. Medium Slant w/ Clarithromycin	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL014	L.J. Medium Slant w/Ethionamide (20µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL015	L.J. Medium Slant w/Rifabutin (0.5 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL016	L. J. Medium Plus Kit w/ kanamycin µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL017	L.J. Medium Slant w/ D-Cycloserine (30 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL017L	L.J. Medium Slant w/ D-Cycloserine (30 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL018	L.J.Medium w/Pyrazinamide of pH 5.5	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL018L	L.J. Medium Slant w/ Pyrazinamide pH 5.5	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL019	L.M. Slant (Loeffler Medium)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL020	L.J. Medium w/TCH	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL021	L.J. Medium Slant w/ p-Nitrobenzoic acid (500 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL021L	L.J. Medium Slant w/ p-Nitrobenzoic acid	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL022	L.J. Medium Slant w/o Glycerol	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL023	Tuberculosis First Line Kit (Total 7 slants)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL023L	Tuberculosis First Line Kit (Total 7 slants)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL023LD	Tuberculosis First Line Kit (Total 7slants)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL023R	Tuberculosis First Line Kit (Total 7 slants)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL024	Tuberculosis Second Line Kit (Total 10 slants)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL024L	Tuberculosis Second Line Kit (Total 10 slants)	Low risk	20/12/2012

RPM- L.J.Medium Slants	SL024LD	Tuberculosis Second Line Kit (Total 10 slants)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL024R	Tuberculosis Second Line Kit (Total 8 slants)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL025	Dorset Egg Medium Slant	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL026	L.J. Medium Slant w/Streptomycin (5mcg)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL027	L.J. Medium Slant w/Ethambutol (2mcg)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL029	L.J. Medium Slant w/P-Amino Salicylic acid	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL029L	L.J. Medium Slant w/ p-Aminosalicylic acid	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL031	Dermatophyte Test Medium Slant	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL032	Kligler Iron Agar Slant	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL033	Motility Indole Lysine Agar Slant	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL034	Simmons Citrate Agar Slant	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL034T	Simmon Citrate Agar Slant in long tubes	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL035	Urea Agar Slant	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL035T	Urea Agar Slant in Tube	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL036	Sabouraud Dextrose Agar Slant	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL036L	Sabouraud Dextrose Agar Slant	Low risk	08/12/2017
RPM- L.J.Medium Slants	SL037	Tuberculosis First Line Plus Kit (Total 9 slants)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL037R	Tuberculosis First Line Plus Kit (9 slants)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL038	Tuberculosis Second Line Plus Kit (Total 11 slants)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL038R	Tuberculosis Second Line Plus Kit (11 slants)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL038U	Lowenstein - Jensen Medium Slant with tu	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL040	L.J. Medium Slant w/ Moxifloxacin	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL041	Gelatin Agar Slant	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL042	MIU Medium Slant	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL043	Nitrate Agar Slant	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL044	Phenyl Alanine Agar Slant	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL045	Triple Sugar Iron Agar Slant	Low risk	20/12/2012

RPM- Ready Prepared Slants	SL045T	Triple Sugar Iron Agar Slant in Tube	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL047	L.J.Medium Slant w/ Ethambutol (2µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL049	L.J. Medium Slant w/ Ofloxacin (2 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL049L	L.J Medium Slant w/ Ofloxacin (2µg/ml) (long tube)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL055L	L.J.Medium Slant w/ Isoniazide (0.2 mcg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL061	L.J. Medium Slant w/ Pyrazinamide (50 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL066	L.J. Medium Slant w/ Capreomycin (20 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL067	L.J. Medium Slant w/ Capreomycin (40 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL067L	L.J Medium Slant w/ Capreomycin (40 µg/ml) (long tube)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL067X	L.J Medium Slant w/ Capreomycin (40 µg/ml)	Low risk	17/06/2021
RPM- L.J.Medium Slants	SL070	L.J. Medium Slant w/ D-Cycloserine (40 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL071	L.J. Medium Slant w/ Ethambutol (4 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL072	L.J. Medium Slant w/ Ethambutol (5 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL076	L.J. Medium Slant w/Ethionamide (40µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL078	L.J. Medium Slant w/ Isoniazide (0.2 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL079	L.J. Medium Slant w/ Isoniazide (5 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL081	L.J. Medium Slant w/ Kanamycin (20 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL081L	L.J. Medium Slant w/ Kanamycin (20µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL082	L.J. Medium Slant w/ Kanamycin (30 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL091	L.J. Medium Slant w/ p-Aminosalicyclic acid (0.25 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL092	L.J. Medium Slant w/ p-Aminosalicyclic acid (0.5 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL092L	L.J. Medium Slant w/ p-Aminosalicyclic acid	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL094	L.J. Medium Slant w/ Ciprofloxacin 2µg/ml	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL098	L.J. Medium Slant w/ Pyruvate (0.2%)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL099	L.J.Medium Slants w/ Isoniazid (0.2 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL105L	L.J.Medium Slant w/ Rifampicin (20mcg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL107	L.J. Medium Slant w/ Rifampicin (50 µg/ml)	Low risk	20/12/2012

RPM- L.J.Medium Slants	SL109	L.J. Medium Slant w/ Streptomycin (8 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL110	L.J. Medium Slant w/ Streptomycin (25 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL115	L.J. Medium Slant w/ Pyrazinamide of pH 5.5	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL115L	L.J. Medium Slant w/ Pyrazinamide pH 5.5	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL116	Rapid UTI Diagnostic Slants	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL120L	L.J. Medium Slant pH 5.5	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL121	HiPyrazide glass tube w/ PYZ agar	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL121R	HiPyrazide glass tube w/ PYZ agar	Low risk	10/11/2020
RPM- L.J.Medium Slants	SL122	HiCatalase glass tubes w/ 5ml of L.J. medium	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL122R	HiCatalase glass tubes w/ 5ml of L.J. medium	Low risk	10/11/2020
RPM- L.J.Medium Slants	SL123	Tuberculosis first line plus kit (Modified)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL124	L.J. Medium slant (Tubes with Aluminium caps)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL125	L.J. Medium w/Isoniazid (1.0µg/ml) (Tube	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL125L	L.J.Medium Slant w/ Isoniazide (1mcg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL125M	L.J.Medium Slant w/ Isoniazid in Maccart	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL125X	L. J. Medium Slant w/ Isoniazide (1µg/ml)	Low risk	17/06/2021
RPM- L.J.Medium Slants	SL126	L.J. Medium w/Rifampicin (40.0µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL126L	L.J.Medium Slant w/ Rifampicin (40mcg/ml	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL126M	L.J.Medium Slant w/ Rifampicin in Maccar	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL126X	L. J. Medium Slant w/ Rifampicin (40.0 µg/ml)	Low risk	17/06/2021
RPM- L.J.Medium Slants	SL127	L.J. Medium w/Ethambutol (2.0µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL127L	L.J. Medium Slant w/Ethambutol (2µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL127X	L. J. Medium Slant w/ Ethambutol (2.0 µg/ml)	Low risk	17/06/2021
RPM- L.J.Medium Slants	SL128	L.J. Medium w/Streptomycin (10.0µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL128L	L.J.Medium w/Streptomycin - 10mcg / Ml	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL129	L.J. Medium w/Ethionamide (30.0µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL130	L.J. Medium w/Kanamycin (30.0µg/ml	Low risk	20/12/2012

RPM- L.J.Medium Slants	SL130L	L.J. Medium Slant w/ Kanamycin (30µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL131	L.J. Medium w/Ofloxacin (2.0µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL132	L.J. Medium w/Capreomycin (30.0µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL133	L.J. Medium w/P-aminosalicylic acid (1.0	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL136L	Tuberculosis Second Line Kit, Modified	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL141	Modified L. J. Medium Plus Kit	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL142	Cystine Tryptone Agar with 1% Sugars	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL143	Tuberculosis First Line Kit, Modified	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL144	L.J Medium slant w/ Amikacin (1.0 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL147	L.J. Medium Slant w/Rifampicin (64µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL148	L.J. Medium Slant w/Ethambutol (6µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL149	L.J. Medium Slant w/Streptomycin (16µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL150	L.J Medium slant w/ Streptomycin (32 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL151	TB Five Antitubercular Kit w/o Control	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL152	Kit for Mycobiograme in Lowenstein Jensen	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL153	Tuberculosis First Line Plus Kit (Modified)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL154	L.J. Medium Plus Kit (total 9 slants)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL155L	L.J. Medium Slant w/ TCH	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL156	L.J.Medium Slant w/Rifampicin (128 µg /ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL157	L.J.Medium Slant w/Pyrazinamide pH 5.5	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL158	L.J.Medium Slant w/Ethambutol (8 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL159	L.J. Medium Slant w/Ethambutol (16 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL160L	Tuberculosis kit with antitubercular Age	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL161	L.J. Medium Slant w/ Ciprofloxacin (16 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL162	L.J. Medium Slant w/ Ciprofloxacin	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL163	L.J. Medium Slant w/Amikacin (20 µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL164	L.J. Medium Slant w/Amikacin (700 µg/ml)	Low risk	20/12/2012

RPM- L.J.Medium Slants	SL165L	L.J.Medium w/ Pyruvate (0.48%)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL166L	Tuberculosis kit with antitubercular Agent	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL167	L.J. Medium slants w/ Augmentin(20µg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL168	L.J.Medium Slant w/ Ofloxacin (40µg/ml)	Low risk	25/08/2016
RPM- L.J.Medium Slants	SL168L	L.J.Medium Slant w/ Ofloxacin (40µg/ml) (long tube)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL169	L.J.Medium Slant w/ Ethionamide (20µg/ml	Low risk	25/08/2016
RPM- L.J.Medium Slants	SL169L	L.J.Medium Slant w/ Ethionamide (20µg/ml) (long tube)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL170L	L.J Medium Slant w/ Ethionamide (40µg/ml) (long tube)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL170X	L.J Medium Slant w/ Ethionamide (40 µg/ml)	Low risk	17/06/2021
RPM- L.J.Medium Slants	SL171L	L.J Medium Slant w/ p-Amino salicylic acid (1µg/ml) (long tube)	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL172	Chocolate Agar Slant	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL173	Nutrient Agar Slant	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL174	B.C.G.-Dextrose Agar Butt (Synder Test Agar)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL175L	L.J.Medium Slant w/ Amikacin (30mcg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL175X	L. J. Medium Slant w/ Amikacin (30 mcg/ml)	Low risk	17/06/2021
RPM- L.J.Medium Slants	SL176L	L.J.Medium Slant w/ Ofloxacin (4mcg/ml)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL177	Tuberculosis First Line Kit, Modified (Total 5 slants)	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL179	L.J.Slopes for BCG Vaccines	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL180	BHI Agar Slant w/5% Sheep Blood	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL181	BHI Agar Slant w/10 % Sheep Blood,Chloramphenicol and Gentamicin	Low risk	20/12/2012
RPM- Ready Prepared Slants	SL182	BHI CC Agar Slant w/10 % Sheep Blood and Gentamicin	Low risk	20/12/2012
RPM- L.J.Medium Slants	SL187	L.J.Medium slants w/ LCN Supplement	Low risk	25/08/2016
RPM- L.J.Medium Slants	SL188L	L.J.Medium Slant w/ Levofloxacin (2 mg/ml)	Low risk	16/12/2017
RPM- L.J.Medium Slants	SL188X	L.J Medium Slant w/ Levofloxacin (2 µg/ml)	Low risk	17/06/2021
RPM- L.J.Medium Slants	SL189L	L.J.Medium Slant w/ Levofloxacin (2.5 mg/ml)	Low risk	16/12/2017
RPM- L.J.Medium Slants	SL189X	L.J Medium Slant w/ Moxifloxacin (2.5 µg/ml)	Low risk	17/06/2021
RPM- L.J.Medium Slants	SL190	L.J.Medium Slant w/ Rifampicin (20mcg/ml)	Low risk	04/07/2018

RPM- L.J.Medium Slants	SL191	L.J.Medium Slant w/ Amikacin (8mcg/ml)	Low risk	04/07/2018
RPM- L.J.Medium Slants	SL192	L.J.Medium Slant w/ Ofloxacin (5mcg/ml)	Low risk	04/07/2018
RPM- L.J.Medium Slants	SL193	L.J.Medium Slant w/ Levofloxacin (5 mcg/ml)	Low risk	04/07/2018
RPM- L.J.Medium Slants	SL194	L.J.Medium Slant w/ Ethionamide (5 mcg/ml)	Low risk	04/07/2018
RPM- L.J.Medium Slants	SL195	L.J.Medium Slant w/ Ethionamide (25 mcg/ml)	Low risk	04/07/2018
RPM- L.J.Medium Slants	SL196	L.J.Medium Slant w/ Prothionamide (5 mcg/ml)	Low risk	04/07/2018
RPM- L.J.Medium Slants	SL197	L.J.Medium Slant w/ Prothionamide (25 mcg/ml)	Low risk	04/07/2018
RPM- L.J.Medium Slants	SL198	L.J.Medium Slant w/ Linezolid (30 mcg/ml)	Low risk	04/07/2018
RPM- L.J.Medium Slants	SL199	L.J.Medium Slant w/ Clofazimine (1 mcg/ml)	Low risk	04/07/2018
RPM- L.J.Medium Slants	SL202	Middlebrook 7H10 Agar Slant	Low risk	30/10/2018
RPM- L.J.Medium Slants	SL204	L.J. Medium Slant w/ Prothionamide (40 mcg/ml)	Low risk	22/04/2019
RPM- L.J.Medium Slants	SL205	L.J. Medium Slant w/ Amikacin (40 mcg/ml)	Low risk	22/04/2019
RPM- L.J.Medium Slants	SL211	BHI Agar Slant	Low risk	30/10/2018
RPM- L.J.Medium Slants	SL1067L	Sabouraus Chloramphenicol Agar Slant	Low risk	16/12/2017
RPM- Ready Prepared Solid Medium	SM001	Nutrient Agar	Low risk	20/12/2012
RPM- Ready Prepared Solid Medium	SM001CCL	Nutrient Agar	Low risk	22/04/2019
RPM- Ready Prepared Solid Medium	SM001D	Nutrient Agar	Low risk	20/12/2012
RPM- Ready Prepared Solid Medium	SM016C	Brilliant Green Agar, Modified	Low risk	22/04/2019
RPM- Ready Prepared Solid Medium	SM027C	Bismuth Sulphite Agar	Low risk	22/04/2019
RPM- Ready Prepared Solid Medium	SM049C	Violet Red Bile Agar	Low risk	17/06/2021
RPM- Ready Prepared Solid Medium	SM049D	Violet Red Bile Agar	Low risk	22/04/2019
RPM- Ready Prepared Solid Medium	SM063	Sabouraud Dextrose Agar	Low risk	04/07/2018
RPM- Ready Prepared Solid Medium	SM063D	Sabouraud Dextrose Agar	Low risk	25/08/2016

RPM- Ready Prepared Solid Medium	SM078	Kligler Iron Agar	Low risk	25/08/2016
RPM- Ready Prepared Solid Medium	SM081	MacConkey Agar	Low risk	20/12/2012
RPM- Ready Prepared Solid Medium	SM081D	MacConkey Agar	Low risk	20/12/2012
RPM- Ready Prepared Solid Medium	SM082	MacConkey Agar	Low risk	20/12/2012
RPM- Ready Prepared Solid Medium	SM082D	MacConkey Agar	Low risk	20/12/2012
RPM- Ready Prepared Solid Medium	SM091	Plate Count Agar	Low risk	04/07/2018
RPM- Ready Prepared Solid Medium	SM091D	Plate Count Agar	Low risk	22/04/2019
RPM- Ready Prepared Solid Medium	SM091DCC	Plate Count Agar	Low risk	04/07/2018
RPM- Ready Prepared Solid Medium	SM091M	Plate Count Agar	Low risk	04/07/2018
RPM- Ready Prepared Solid Medium	SM103A	Modified Chocolate Agar Kit w/o Selective	Low risk	25/08/2016
RPM- Ready Prepared Solid Medium	SM103AR	Modified Chocolate Agar kit w/osupplement	Low risk	10/11/2020
RPM- Ready Prepared Solid Medium	SM103H	Modified Chocolate Agar kit	Low risk	25/08/2016
RPM- Ready Prepared Solid Medium	SM103HR	Modified Chocolate Agar kit w/supplement	Low risk	10/11/2020
RPM- Ready Prepared Solid Medium	SM1067	Sabouraud Chloramphenicol Agar Plate	Low risk	04/07/2018
RPM- Ready Prepared Solid Medium	SM1067C	Sabouraud Chloramphenicol Agar Plate	Low risk	04/07/2018
RPM- Ready Prepared Solid Medium	SM1067D	Sabouraud Chloramphenicol Agar	Low risk	17/06/2021
RPM- Ready Prepared Solid Medium	SM1067CCL	Sabouraud Chloramphenicol Agar Plate	Low risk	04/07/2018
RPM- Ready Prepared Solid Medium	SM1296D	HiCrome™ Salmonella Agar	Low risk	04/07/2018

RPM- Ready Prepared Solid Medium	SM1297A	HiCrome™ Candida Differential Agar	Low risk	25/08/2016
RPM- Ready Prepared Solid Medium	SM1353	HiCrome™ UTI Agar	Low risk	20/12/2012
RPM- Ready Prepared Solid Medium	SM1353CC	HiCrome™ UTI Agar	Low risk	04/07/2018
RPM- Ready Prepared Solid Medium	SM154D	Reinforced Clostridial Agar	Low risk	10/11/2020
RPM- Ready Prepared Solid Medium	SM173	Mueller Hinton Agar	Low risk	20/12/2012
RPM- Ready Prepared Solid Medium	SM173CCL	Mueller Hinton Agar	Low risk	22/04/2019
RPM- Ready Prepared Solid Medium	SM173D	Mueller Hinton Agar	Low risk	20/12/2012
RPM- Ready Prepared Solid Medium	SM211	BHI Agar	Low risk	20/12/2012
RPM- Ready Prepared Solid Medium	SM211D	BHI Agar	Low risk	20/12/2012
RPM- Ready Prepared Solid Medium	SM331C	Wilson Blair Agar	Low risk	22/04/2019
RPM- Ready Prepared Solid Medium	SM434	GC Agar	Low risk	25/08/2016
RPM- Ready Prepared Solid Medium	SM434R	Modified GC Agar Kit	Low risk	10/11/2020
RPM- Ready Prepared Solid Medium	SM434H	GC Agar,Modified	Low risk	25/08/2016
RPM- Ready Prepared Solid Medium	SM467	Hektoen Enteric Agar	Low risk	20/12/2012
RPM- Ready Prepared Solid Medium	SM467D	Hektoen Enteric Agar	Low risk	20/12/2012
RPM- Ready Prepared Solid Medium	SM792	C.L.E.D. Agar w/ Bromothymol Blue	Low risk	30/10/2018
RPM- Ready Prepared Solid Medium	SM837	Tryptose Sulphite Cycloserine(T.S.C) Agar	Low risk	17/06/2021
RPM- Ready Prepared Solid Medium	SM933D	Orange Serum Agar	Low risk	22/04/2019

RPM- Ready Prepared UTI Diagnostic Kits	K041	Rapid UTI ABST Kit	Low Risk	20/12/2012
RPM- Ready Prepared UTI Diagnostic Kits	K084A	Ecopathology Uro Kit-1	Low risk	20/12/2012
RPM- Ready Prepared UTI Diagnostic Kits	K084B	Ecopathology Uro Kit-1, Modified	Low risk	30/10/2018
RPM- Ready Prepared UTI Diagnostic Kits	K085A	Ecopathology Uro Kit-2	Low risk	20/12/2012
RPM- Ready Prepared UTI Diagnostic Kits	K089	Ecopathology Uro Kit-3	Low risk	20/12/2012
RPM- Ready Prepared UTI Diagnostic Kits	K090	Ecopathology Uro Kit-4	Low risk	20/12/2012
RPM- Biochemical Kits for Mycobacteria	K043	Nitrate Reduction Test Kit for Mycobacteria	Low risk	20/12/2012
RPM- Biochemical Kits for Mycobacteria	K044	Catalase Test Kit for Mycobacteria	Low risk	20/12/2012
RPM- Biochemical Kits for Mycobacteria	K044R	Catalase Test Kit for Mycobacteria	Low risk	10/11/2020
RPM- Biochemical Kits for Mycobacteria	K045	Pyrazinmidase Test Kit for Mycobacteria	Low risk	20/12/2012
RPM- Biochemical Kits for Mycobacteria	K045R	Pyrazinmidase Test Kit for Mycobacteria (	Low risk	10/11/2020
RPM- Biochemical Kits for Mycobacteria	K046	Thiopene Carboxylic Hydrazide Test Kit for Mycobacteria	Low risk	20/12/2012
RPM- Biochemical Kits for Mycobacteria	K047	Niacin Detection Kit w/ syringe	Low risk	20/12/2012
RPM- Biochemical Kits for Mycobacteria	K048	Niacin Detection Kit Modified w/o syringe	Low risk	20/12/2012
RPM- Biochemical Kits for Mycobacteria	K050	Kit for Selective Isolation of M.tuberculosis	Low risk	20/12/2012
RPM-MRSA Kits	K058S	MRSA Alert kit (w/swabs)	Low risk	25/08/2016
RPM-MRSA Kits	K058SR	MeReSa Agar Base,MRSA Alert Kit (w/swabs)	Low risk	25/08/2016
RPM-MRSA Kits	K086R	Enterococcus Presumptive Broth (VRE Alert)	Low risk	25/08/2016
RPM- Ready Prepared Diagnostic Kits	K144	Mucormycosis Detection Kit	Low risk	10/06/2021
RPM- Biochemical Identification Kits	KB001	HiIMViC™ Biochemical Test Kit	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB001R	HiIMViC Biochemical Test Kit	Low risk	25/08/2016

RPM- Biochemical Identification Kits	KB002	HiAssorted™ Biochemical Test Kit	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB002R	HiAssorted Biochemical Test Kit	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KB003	Hi25™ Enterobacteriaceae Identification Kit	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB003R	Hi25 Enterobacteriaceae Identification Kit	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KB004	HiStaph™ Identification Kit	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB004R	HiStaph Identification Kit	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KB005A	HiStrep™ Identification Kit	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB005AR	HiStrep Identification Kit	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KB006	HiCandida™ Identification Kit	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB006R	HiCandida Identification Kit	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KB007	HiVibrio™ Identification Kit	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB007R	HiVibrio Identification Kit	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KB008	HiNeisseria™ Identification Kit	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB008R	HiNeisseria Identification Kit	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KB009	HiCarbo™ Kit	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB009R	HiCarbo Kit	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KB009A	HiCarbo™ Kit- Part A	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB009AR	HiCarbo Kit- Part A	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KB009B1	HiCarbo™ Kit- Part B	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB009C	HiCarbo™ Kit- Part C	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB010	HiE. coli™ Identification Kit	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB010R	HiE.coli™ Identification Kit	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KB011	HiSalmonella™ Identification Kit	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB011R	HiSalmonella Identification Kit	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KB012A	HiListeria™ Identification Kit	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB012AR	HiListeria Identification Kit	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KB013	HiBacillus™ Identification Kit	Low risk	20/12/2012

RPM- Biochemical Identification Kits	KB013R	HiCarbo Kit (HiBacillus Identification Kit)	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KB014	HiAcinetobacter™ Identification Kit	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KB014R	HiCarbo Kit (HiAcinetobacter Identification Kit)	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KB015	HiCorynebacteria Identification Kit	Low risk	12/08/2015
RPM- Biochemical Identification Kits	KB016	Hi24™ Enterobacteriaceae Identification Kit,Modified	Low risk	12/08/2015
RPM- Biochemical Identification Kits	KB019	Hi24™ Nonfermenters Identification Kit	Low risk	28/04/2017
RPM- Biochemical Identification Kits	KB020	HiLacto Identification Kit	Low risk	28/04/2017
RPM- Biochemical Identification Kits	KB021	HiBifido Identification Kit	Low risk	28/04/2017
RPM- Biochemical Identification Kits	KBM001	HiMotility™ Biochemical Kit for E.coli	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KBM001R	HiMotility Biochemical Kit for E.coli	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KBM002	HiMotility™ Biochemical Kit for Salmonella	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KBM002R	HiMotility™ Biochemical Kit for Salmonella	Low risk	25/08/2016
RPM- Biochemical Identification Kits	KBM003A	HiMotility™ Biochemical Kit for Listeria	Low risk	20/12/2012
RPM- Biochemical Identification Kits	KBM003AR	HiMotility™ Biochemical Kit for Listeria	Low risk	25/08/2016

Product group	**Type/ Model / Ref number**	**Device Name**	**Risk Class**	**Date of CE compliance**
Epidemeology Screening Kit				
ESK- Hi Aureus Confirmation Kits	K053AD	Hiaureus Coagulase Confrimation Kit (w/o swabs)	Low risk	07/02/2012
ESK- Hi Aureus Confirmation Kits	K053ADS	Hiaureus Coagulase Confrimation Kit (w/ swabs)	Low risk	07/02/2012

Product group	Type/ Model / Ref number	Device Name	Risk Class	Date of CE compliance
Bacteriological Differentiation Aids				
BDA- HiDtect Rapid Identification Discs	DT001	HiDtect™ UTI Identification Disc	Low risk	20/12/2012
BDA- HiDtect Rapid Identification Discs	DT003	HiDtect™ Pseudomonas Identification Disc	Low risk	20/12/2012
BDA- HiDtect Rapid Identification Discs	DT015	HiDtect™ Universal Enviro Identification Disc	Low risk	20/12/2012
BDA- Readymade Indicators in Liquid	I001	Andrade's Indicator	Low risk	20/12/2012
BDA- Readymade Indicators in Liquid	I002	Bromocresol Green Indicator	Low risk	20/12/2012
BDA- Readymade Indicators in Liquid	I003	Bromocresol Purple Indicator	Low risk	20/12/2012
BDA- Readymade Indicators in Liquid	I004	Bromophenol Blue Indicator	Low risk	20/12/2012
BDA- Readymade Indicators in Liquid	I005	Bromothymol Blue Indicator	Low risk	20/12/2012
BDA- Readymade Indicators in Liquid	I006	Methyl Orange Indicator	Low risk	20/12/2012
BDA- Readymade Indicators in Liquid	I007	Methyl Red Indicator	Low risk	20/12/2012
BDA- Readymade Indicators in Liquid	I008	Neutral Red Indicator	Low risk	20/12/2012
BDA- Readymade Indicators in Liquid	I009	Phenolphthalein, 0.1% w/v	Low risk	20/12/2012
BDA- Readymade Indicators in Liquid	I010	Phenol Red Indicator	Low risk	20/12/2012
BDA- Readymade Indicators in Liquid	I011	Thymol Blue Indicator	Low risk	20/12/2012
BDA- Readymade Indicators in Liquid	I012	Thymolphthalein Indicator	Low risk	20/12/2012
BDA- Readymade Indicators in Liquid	I013	Universal Indicator	Low risk	20/12/2012
BDA- Readymade Indicators in Liquid	I014	Mixed Indicator Solution (25X)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K001	Gram Stains - Kit (contains S012, S032, S013 and S027 or S038)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K001CCL	Gram Stains - Kit (contains S012, S032, S013 and S027 or S038)	Low risk	04/07/2018
BDA- Readymade Stains in Liquid	K001D	Gram Staining Kit	Low risk	04/07/2018
BDA- Readymade Stains in Liquid	K001L	Gram Stains - Kit (contains S012, S032, S013 and S027 or S038)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K001M	Gram Stains - Kit	Low risk	22/04/2019
BDA- Readymade Stains in Liquid	K002	Albert`s Metachromatic Stains - Kit	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K002L	Albert`s Metachromatic Stains - Kit	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K003	Neisser's Metachromatic Stains - Kit (contains S013, S023 and S037)	Low risk	20/12/2012

BDA- Readymade Stains in Liquid	K003L	Neisser's Metachromatic Stains - Kit (contains S013, S023 and S037)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K004	Capsule Stains - Kit (contains S021, S025 and S047)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K004L	Capsule Stains - Kit (contains S021, S025 and S047)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K005	ZN Acid Fast Stains - Kit (contains S033,S005 and S022)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K005CCL	ZN Acid Fast Stains - Kit (contains S033,S005 and S022)	Low risk	04/07/2018
BDA- Readymade Stains in Liquid	K005D	ZN Acid Fast Stains - Kit	Low risk	04/07/2018
BDA- Readymade Stains in Liquid	K005L	ZN Acid Fast Stains - Kit (contains S033, S005 & S022)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K005M	ZN Acid Fast Stains - Kit (contains S033, S005 & S022)	Low risk	22/04/2019
BDA- Readymade Stains in Liquid	K006	Schaeffer & Fulton's Spore Stains - Kit (contains S028 and S029)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K006L	Schaeffer & Fulton's Spore Stains - Kit (contains S028 and S029)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K011	Malarial Parasite - Kit (contains S008 and S009)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K011L	Malarial Parasite - Kit (contains S008 and S009)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K021	Fluorescent Stains - Kit for Mycobacteria (contains S042, S043 and S044)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K021L	Fluorescent Stains - Kit for Mycobacteria (contains S042, S043 and S044)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K021R	Fluorescent Stains Kit for Mycobacteria (conatins S054,S055,S056)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K021Y	Fluorescent Stains Kit for Mycobacteria (conatins S042Y,S043Y,S044Y)	Low risk	04/07/2018
BDA- Readymade Stains in Liquid	K049	Malarial Parasite - Kit (contains S008 and S009)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K061	HiFluo-Phenol Free Stain - kit for Mycobacteria [Kit contains 200ml each of Auramine – Rhodamine solution (Phenol free)-S082, Decolourizer-S099 (2 x200), Potassium Permanganate Solution-S083]	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K062	HiCold Stain TB - Kit for Mycobacteria [Kit contains 500ml each of Carbol Fuchsin Solution-S080, Decolourizer-S099, Counter Stain (Loeffler's Methylene Blue)-S081]	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K062S	HiCold Stain TB - Kit for Mycobacteria [Kit contains 100ml each of Carbol Fuchsin Solution-S080, Decolourizer-S099, Counter Stain (Loeffler's Methylene Blue) S081]	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	K063	Modified Neisser's Metachromatic Stains - Kit (1 minute staining)	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R001	Barium Chloride Solution, 10% w/v	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R002	Benedict's Qualitative Reagent	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R003	Benedict's Quantitative Reagent	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R004	C.S.F. Diluting Fluid	Low risk	20/12/2012

BDA - Readymade Reagents in Liquid	R005	Ehrlich's Aldehyde Reagent	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R006	Folin & Wu's Alkaline Copper Solution	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R007	Folin & Wu's Phosphate, Molybdate Solution	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R008	Kovacs' Indole Reagent	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R009	a-Naphthylamine solution	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R010	Nessler's Reagent	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R011	Potassium Chromate, 5% w/v	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R012	Potassium Oxalate, 5% w/v	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R013	R.B.C. Diluting Fluid (Hayemis)	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R014	Sodium Citrate, 3.8% w/v	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R015	Sulphanilic acid, 0.8%	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R016	W.B.C. Diluting Fluid	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R017	Nessler's Reagent	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R018	Fouchet's Reagent	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R019	E.D.T.A. (di-sodium) 5%	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R020	Sulphosalicylic Acid 3%	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R021	Topfer Reagent	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R022	o-Toluidine reagent	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R023	R.B.C. Diluting Fluid (Grower's)	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R024	o-Toluidine Reagent	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R026	Gordon-McLeod Reagent (Oxidase reagent)	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R027	Gaby-Hadley Reagent A	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R028	Gaby-Hadley Reagent B	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R029	Barritt Reagent A (for VP test)	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R030	Barritt Reagent B (for VP test)	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R031	O'Meara Reagent	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R035	DMACA Reagent	Low risk	20/12/2012

BDA - Readymade Reagents in Liquid	R036	TDA Reagent	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R037	Fehling Solution No. 1	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R038	Fehling Solution No. 2	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R043	PYR Reagent	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R044	Iodine Solution	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R075	10X RBC Lysis Buffer Solution	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R083	Thrombocount reagent	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R084	HiDecal (mild decalcifying solution)	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R085	HiDecal (strong decalcifying solution)	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R092	McFarland Standard Tube	Low risk	20/12/2012
BDA - Readymade Reagents in Liquid	R092A	Mcfarland standard 0.5	Low risk	22/04/2019
BDA - Readymade Reagents in Liquid	R092B	Mcfarland standard 1	Low risk	22/04/2019
BDA - Readymade Reagents in Liquid	R092C	Mcfarland standard 2	Low risk	22/04/2019
BDA - Readymade Reagents in Liquid	R092D	Mcfarland standard 3	Low risk	22/04/2019
BDA - Readymade Reagents in Liquid	R092E	Mcfarland standard 4	Low risk	22/04/2019
BDA - Readymade Reagents in Liquid	R092R	Test Tubes (McFarland Standard Tube)	Low risk	25/08/2016
BDA - Readymade Reagents in Liquid	R092S	McFarland Standard Set (0.5,1,2)	Low risk	04/07/2018
BDA - Readymade Reagents in Liquid	R097	Millons reagent	Low risk	28/04/2017
BDA- Readymade Stains in Liquid	S001	Albert's Stain A	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S002	Albert's Stain B	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S003	Borax Carmine (Grenacher's), Alcoholic Stain	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S004	Borax Carmine (Grenacher's), Aqueous Stain	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S005	Carbol Fuchsin (ZN,Strong)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S005D	Carbol Fuchsin (ZN,Strong)	Low risk	04/07/2018
BDA- Readymade Stains in Liquid	S005M	Carbol Fuchsin (ZN,Strong)	Low risk	22/04/2019
BDA- Readymade Stains in Liquid	S006	Carbol Fuchsin (ZN, Dilute)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S007	Eosin, 2% w/v	Low risk	20/12/2012

BDA- Readymade Stains in Liquid	S008	Field's Stain A	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S009	Field's Stain B	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S010	Gentian Violet	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S011	Giemsa's Stain	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S012	Gram's Crystal Violet	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S012D	Gram's Crystal Violet	Low risk	04/07/2018
BDA- Readymade Stains in Liquid	S012M	Gram's Crystal Violet	Low risk	22/04/2019
BDA- Readymade Stains in Liquid	S013	Gram's Iodine	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S013D	Gram's Iodine	Low risk	04/07/2018
BDA- Readymade Stains in Liquid	S013M	Gram's Iodine	Low risk	22/04/2019
BDA- Readymade Stains in Liquid	S014	Haematoxylin (Delafield's)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S015	Lactophenol	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S016	Lactophenol Cotton Blue	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S017	Lactophenol Picric Acid	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S018	Leishman's Stain (Twin Pack)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S018S	Leishman's Stain Solution	Low risk	25/11/2017
BDA- Readymade Stains in Liquid	S019	Lugol's Iodine	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S020	Malachite Green, 1% w/v	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S021	Methylene Blue (Aqueous)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S022	Methylene Blue (Loeffler's)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S022D	Methylene Blue (Loeffler's)	Low risk	04/07/2018
BDA- Readymade Stains in Liquid	S022M	Methylene Blue (Loeffler's)	Low risk	22/04/2019
BDA- Readymade Stains in Liquid	S023	Neisser's Methylene Blue	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S024	Newman's Stain, Modified	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S025	Nigrosin Stain,10% w/v	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S026	Picric Acid (Saturated, Aqueous)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S027	Safranin, 0.5% w/v	Low risk	20/12/2012

BDA- Readymade Stains in Liquid	S027D	Safranin, 0.5% w/v	Low risk	04/07/2018
BDA- Readymade Stains in Liquid	S027M	Safranin, 0.5% w/v	Low risk	22/04/2019
BDA- Readymade Stains in Liquid	S028	Schaeffer & Fulton's Spore Stain A	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S029	Schaeffer & Fulton's Spore Stain B	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S030	Wright's Stain	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S031	Mayer's Mucicarmine Stain	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S032	Gram's Decolourizer	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S032D	Gram's Decolourizer	Low risk	04/07/2018
BDA- Readymade Stains in Liquid	S032M	Gram's Decolourizer	Low risk	22/04/2019
BDA- Readymade Stains in Liquid	S033	Acid Fast Decolourizer	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S033D	Acid Fast Decolourizer	Low risk	04/07/2018
BDA- Readymade Stains in Liquid	S033M	Acid Fast Decolourizer	Low risk	22/04/2019
BDA- Readymade Stains in Liquid	S034	Haematoxylin (Harris)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S035	Papanicolaou-OG-6	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S036	Papanicolaou-EA-36	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S037	Neutral Red Solution	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S038	Basic Fuchsin 0.1% w/v	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S038D	Basic Fuchsin 0.1% w/v	Low risk	04/07/2018
BDA- Readymade Stains in Liquid	S038M	Basic Fuchsin 0.1% w/v	Low risk	22/04/2019
BDA- Readymade Stains in Liquid	S039	May-Grunwald's Stain	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S041	FA Rhodamine Counterstain	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S042	Phenolic auramine	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S042Y	Phenolic auramine O	Low risk	08/12/2017
BDA- Readymade Stains in Liquid	S043	Mycobacteria decolourizer	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S043Y	Mycobacteria decolourizer	Low risk	16/12/2017
BDA- Readymade Stains in Liquid	S044	Potassium permanganate	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S044Y	Potassium permanganate	Low risk	08/12/2017

BDA- Readymade Stains in Liquid	S047	M'Fadyean Stain (Polychrome Methylene Blue)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S054	Fluorochrome Solution	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S055	Decolourising Solution	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S056	Background Solution	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S057	Grams Iodine, Stabilized	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S058	Haematoxylin (Mayer)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S059	Haematoxylin (Ehrlich)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S062	Fixing solution, for fixing Haematological samples	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S066	Brilliant Cresyl Blue Solution	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S067	Congo red (1% aqueous)Solution	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S068	Papanicolaou-EA-50	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S070	Schiff's fuchsin-sulphite reagent	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S073	Periodic Acid Solution (PAS)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S074	Schiff's Reagent	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S076	Haematoxylin (Gill No.3)	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S102	Fixative, for fixing cytological or histological samples	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S109	Fixative (Buffered Formalin fixative) for fixing cytological or histological samples	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S118	Fixative, for rapid fixing of haematological samples	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S119	Fixative (BFA), for Rapid fixing of haematological samples	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S125	Romanowsky-Giemsa (RG) stain	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S126	Shorr's Stain solution	Low risk	20/12/2012
BDA- Readymade Stains in Liquid	S127	Gabbett Counterstaining Solution	Low risk	16/12/2017
BDA- Readymade Stains in Liquid	S128	HiGrams Stain Crystal Violet	Low risk	16/12/2017
BDA- Readymade Stains in Liquid	S129	HiGrams Iodine	Low risk	16/12/2017
BDA- Readymade Stains in Liquid	S130	HiGrams Decolouriser	Low risk	16/12/2017
BDA- Readymade Stains in Liquid	S131	HiGrams Counter Stain	Low risk	16/12/2017
BDA- Readymade Stains in Liquid	S132	HiCarbol Fuchsin	Low risk	16/12/2017

BDA- Readymade Stains in Liquid	S133	HiAcid Fast Decolouriser	Low risk	16/12/2017
BDA- Readymade Stains in Liquid	S134	HiAcid Fast Counter Stain	Low risk	16/12/2017
BDA- Readymade Stains in Liquid	S135	Solution for Leishman's Stain L (Twin Pack)	Low risk	16/12/2017
BDA- Readymade Stains in Liquid	S136	Solution for Leishman's Stain R (Twin Pack)	Low risk	16/12/2017
BDA- Readymade Stains in Liquid	S137	Solution for Leishman's Stain HP (Twin Pack)	Low risk	16/12/2017
BDA- Readymade Stains in Liquid	S138	Gentian Violet 1 % Solution	Low risk	22/04/2019
BDA- Differentiation Discs	DD015	Bacitracin	Low risk	20/12/2012
BDA- Differentiation Discs	DD024	Bile Esculin	Low risk	20/12/2012
BDA- Differentiation Discs	DD040	DMACA Indole	Low risk	20/12/2012
BDA- Differentiation Discs	DD035	Hippurate hydrolysis	Low risk	20/12/2012
BDA- Differentiation Strips	DD034	Lead Acetate Paper strips	Low risk	20/12/2012
BDA- Differentiation Discs	DD041	Nitrate Discs	Low risk	20/12/2012
BDA- Differentiation Discs	DD042	Nitrate Reagent Discs	Low risk	20/12/2012
BDA- Differentiation Discs	DD008	ONPG	Low risk	20/12/2012
BDA- Differentiation Discs	DD009	Optochin	Low risk	20/12/2012
BDA- Differentiation Discs	DD009R	Optochin (5mcg)	Low risk	25/08/2016
BDA- Differentiation Discs	DD018	Oxidase	Low risk	20/12/2012
BDA- Differentiation Discs	DD020	X factor	Low risk	20/12/2012
BDA- Differentiation Discs	DD022	X+V Factor	Low risk	20/12/2012
BDA- Differentiation Discs	DD021	V Factor	Low risk	20/12/2012
BDA- Differentiation Discs	DD047	Vibrio 0129 Differential Disc (10 mcg)	Low risk	20/12/2012
BDA- Differentiation Discs	DD048	Vibrio 0129 Differential Disc (150 mcg)	Low risk	20/12/2012
BDA- Differentiation Discs	DD055	Bacitracin B	Low risk	25/08/2016
BDA- Differentiation Discs	DD056	Sodium Biselenite Disc	Low risk	04/07/2018
BDA- Differentiation Discs	DB001	Sodium Biselenite Bud	Low risk	04/07/2018

Product group	Type/ Model / Ref number	Device Name	Risk Class	Date of CE compliance
Antimicrobial Susceptibility Systems				
ASS- Sensitivity Discs (Multi Discs)	DE001	Dodeca Universal-I	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE002	Dodeca G-I-Plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE003	Dodeca G-I-Minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE004	Dodeca UTI-I	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE005	Dodeca UTI-II	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE006	Dodeca UTI-III	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE007	Dodeca Universal-II	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE008	Dodeca Universal-III	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE009	Dodeca G-II-Plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE010	Dodeca G-II-Minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE011	Dodeca UTI-IV	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE012	Dodeca Universal-IV	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE013	Dodeca Universal-V	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE014	Dodeca Universal-VI	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE015	Dodeca Universal-VII	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE016	Dodeca Universal III	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE017	Dodeca Universal-IX	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE018	Dodeca G-III-Plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE019	Dodeca G-III-Minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE020	Dodeca Pseudo-I	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE021	Dodeca UTI-V	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE022	Dodeca Universal X	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE023	Dodeca G-IV Plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE024	Dodeca G-IV minus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE025	Dodeca UTI-VI	Low risk	20/12/2012

ASS- Sensitivity Discs (Multi Discs)	DE026	Dodeca Universal -XI	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE027	Dodeca Universal -XII	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE028	Dodeca Universal -XIII	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE029	Dodeca G-V minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE030	Dodeca UTI-VII	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE031	Dodeca G-VI minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE032	Dodeca G-V Plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE033	Dodeca G-VII Minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE034	Dodeca UTI-VIII	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE035	Dodeca Universal XIV	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE036	Dodeca G-VI Plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE037	Dodeca G-VIII Minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE038	Dodeca G-VII Plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE039	Dodeca G-IX Minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE040	Dodeca UTI-IX	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE041	Dodeca Pseudo-II	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE042	Dodeca Universal XV	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE043	Dodeca G-X Minus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE044	Dodeca - G-VIII Plus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE045	Dodeca G-XI Minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE046	Dodeca G-XII Minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE047	Dodeca G-IX Plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE048	Dodeca Staphylococci - 1	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE049	Dodeca Staphylococci - 2	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE050	Dodeca Enterococcus -1	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE051	Dodeca Pseudomonas -1	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE052	Dodeca Pseudomonas 2	Low risk	25/08/2016

ASS- Sensitivity Discs (Multi Discs)	DE053	Dodeca Enterobacteriaceae - 1	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE054	Dodeca Enterobacteriaceae - 2	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	DE700	Dodeca Staphylococci - 1	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE701	Dodeca Staphylococci - 2	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE702	Dodeca Enterococcus - 1	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE703	Dodeca Pseudomonas - 1	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE704	Dodeca Pseudomonas - 2	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE705	Dodeca Enterobacteriaceae - 1	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE706	Dodeca Enterobacteriaceae - 2	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE707	Dodeca Universal - 16	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE708	Dodeca UTI - 10	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE709	Dodeca G-Minus 13	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE710	Dodeca G-Plus 10	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE711	Dodeca G minus XIV	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE712	Dodeca G minus XV	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE713	Dodeca G minus 16	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE714	Dodeca G minus 17	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE715	Dodeca G minus 18	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE716	Dodeca G plus 11	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE717	Dodeca G plus 12	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE718	Dodeca G minus 19	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE719	Dodeca UTI 10	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE720	Dodeca UTI 11	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE721	Dodeca Universal 16	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE722	Dodeca Universal 17	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE723	Dodeca G Plus 13	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE724	Dodeca UTI-12	Low risk	25/08/2016

ASS- Sensitivity Discs (Multi Discs)	DE725	Dodeca Universal-18	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE726	Dodeca UTI - 13	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE727	Dodeca G-minus 20	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE728	Dodeca UTI 14	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE729	Dodeca G-Plus 14	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE730	Dodeca G-Minus 21	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE731	Dodeca G-Minus 22	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE732	Dodeca Universal 19	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE733	Dodeca Universal 20	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE734	Dodeca Universal 21	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE735	Dodeca Universal 22	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE736	Dodeca G-Plus 15	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE737	Dodeca G-Minus 23	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE738	Dodeca G-Minus 24	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE739	Dodeca UTI 13	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE740	Dodeca G-Plus 16	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE741	Dodeca G-Minus 25	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE742	Dodeca Pseudomonas -3	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	DE743	Dodeca G-Minus 26	Low risk	04/07/2018
ASS- Sensitivity Discs (Multi Discs)	DE744	Dodeca UTI 15	Low risk	04/07/2018
ASS- Sensitivity Discs (Multi Discs)	DE745	Dodeca Pseudomonas -4	Low risk	04/07/2018
ASS- Sensitivity Discs (Multi Discs)	DE746	Dodeca G-Plus 17	Low risk	04/07/2018
ASS- Sensitivity Discs (Multi Discs)	DE747	Dodeca G-Minus 27	Low risk	04/07/2018
ASS- Sensitivity Discs (Multi Discs)	DE748	Dodeca UTI 16	Low risk	04/07/2018
ASS- Sensitivity Discs (Multi Discs)	DE749	Dodeca G-Plus 18	Low risk	10/11/2020
ASS- Sensitivity Discs (Multi Discs)	DE750	Dodeca G-Plus 19	Low risk	10/11/2020
ASS- Sensitivity Discs (Multi Discs)	DE751	Dodeca G-Minus 28	Low risk	10/11/2020

ASS- Sensitivity Discs (Multi Discs)	DE752	Dodeca G-Minus 29	Low risk	10/11/2020
ASS- Sensitivity Discs (Multi Discs)	DE753	Dodeca G-Plus 20	Low risk	10/11/2020
ASS- Sensitivity Discs (Multi Discs)	DE754	Dodeca G-Minus 30	Low risk	10/11/2020
ASS- Sensitivity Discs (Multi Discs)	DE755	Dodeca Pseudomonas -5	Low risk	10/11/2020
ASS- Sensitivity Discs (Multi Discs)	DE756	Dodeca G-Minus 31	Low risk	10/11/2020
ASS- Sensitivity Discs (Multi Discs)	DE757	Dodeca G-Plus 21	Low risk	10/11/2020
ASS- Ezy MIC Strips	EM001	Amikacin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM002	Amoxycillin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM003	Amoxyclav (2:1)	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM004	Azithromycin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM006	Aztreonam	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM008	Cefazolin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM009	Cefdinir	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM011	Cefpirome	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM012	Ceftazidime	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM013	Ceftriaxone	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM016	Chloramphenicol	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM017	Ciprofloxacin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM018	Clarithromycin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM019	Clindamycin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM020	Colistin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM020S	Colistin	Low risk	04/07/2018
ASS- Ezy MIC Strips	EM021	Co-Trimoxazole (1:19)	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM021S	Co-Trimoxazole (1:19)	Low risk	04/07/2018
ASS- Ezy MIC Strips	EM022	Erythromycin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM023	Fusidic Acid	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM024	Gatifloxacin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM025	Gentamicin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM026	Kanamycin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM027	Levofloxacin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM029	Linezolid	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM032	Minocycline	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM033	Moxifloxacin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM035	Nalidixic acid	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM037	Nitrofurantoin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM038	Norfloxacin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM039	Ofloxacin	Low risk	20/12/2012

ASS- Ezy MIC Strips	EM041	Piperacillin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM042	Piperacillin/Tazobactam	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM043	Polymixin B	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM044	Pristinomycin (Quinupristin/Dalfopristin)	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM045	Rifampicin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM046	Roxithromycin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM047	Sparfloxacin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM048	Streptomycin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM055	Teicoplanin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM055S	Teicoplanin	Low risk	04/07/2018
ASS- Ezy MIC Strips	EM056	Tetracycline	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM057	Ticarcillin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM058	Tobramycin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM059	Trimethoprim	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM060	Vancomycin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM060S	Vancomycin	Low risk	04/07/2018
ASS- Ezy MIC Strips	EM061	Gentamicin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM062	Penicillin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM063	Oxacillin - Vancomycin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM064	Cefotaxime	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM065	Oxacillin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM066	Ceftriaxone	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM066S	Ceftriaxone	Low risk	04/07/2018
ASS- Ezy MIC Strips	EM068	Ampicillin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM070	Cefepime	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM071	Amphotericin-B	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM072	Fluconazole	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM073	Itraconazole	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM074	Ketoconazole	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM076	Gemifloxacin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM077	Vancomycin -Cefoxitin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM078	Imipenem w&w/o EDTA	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM079A	Triple ESBL detection Strip	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM080	Meropenem	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM081A	ESBL & AmpC Detection Strip	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM082	Ciprofloxacin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM083	Co-Trimoxazole (1:19)	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM084	Penicillin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM085	Ertapenem	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM086	Voriconazole	Low risk	20/12/2012

ASS- Ezy MIC Strips	EM087	Mupirocin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM088	Daptomycin (Supplemented with Calcium ions)	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM089	Tigecycline	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM090	Doripenem	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM091	Faropenem	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM092	Meropenem with & without EDTA	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM093	Cefepime/Tazobactam (2:1)	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM094	Cefoperazone/Sulbactam (2:1)	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM095	Netilmicin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM097	Ceftriaxone/Sulbactam (2:1)	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM098	Ceftazidime / Ceftazidime+ Clavulanic acid	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM099	Cefotaxime / Cefotaxime + Clavulanic acid	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM100	Cefotaxime	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM101	Cefoxitin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM102	Cefuroxime	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM103	Doxycycline	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM104	Imipenem	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM105	Cefotetan	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM106	Cephalothin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM107	Cefaclor	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM108	Fosfomycin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM109	Ampicillin/Sulbactam	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM110	Cefixime	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM111	Vancomycin - Teicoplanin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM112	Cefoperazone	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM113	Cefonicid	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM114	Cefmetazole	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM115	Enrofloxacin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM116	Cefepime / cefepime + Clavulanic acid	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM117	Ceftriaxone / Ceftriaxone + Clavulanic acid	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM118	Flucytosine	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM119	Caspofungin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM120	Posaconazole	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM121	Micafungin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM122	Anidulafungin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM123	Ceftizoxime	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM124	Mecillinam	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM125	Ticarcillin/Clavulanic Acid	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM126	Bacitracin	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM127	Cefotetan / Cefotetan + Cloxacillin	Low risk	20/12/2012

ASS- Ezy MIC Strips	EM128	Metronidazole	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM129	Cefpodoxime	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM130	Cefprozil	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM131	Sulbactam	Low risk	20/12/2012
ASS- Ezy MIC Strips	EM132	Improved ESBL Detection Ezy MIC Strip (Mix+/Mix)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM133	Improved AmpC Detection Ezy MIC Strip (Mix+/Mix)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM134	MBL Plus ESBL Detection Ezy MIC Strip (ESBL+/ESBL)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM135	MBL Plus AmpC Detection Ezy MIC Strip (AmpC+/Amp)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM136	ESBL-AmpC Coexistence Detection Ezy MIC Kit	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM137	MBL-ESBL-AmpC Co-existence Detection Ezy MIC Kit	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM138	Cefpodoxime/Clavulanic Acid Ezy MIC Strip	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM139	Amoxyclav Ezy MIC Strip (AUG) (0.016-256 mcg/ml)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM140	Ampicillin/Sulbactam Ezy MIC Strip (SAM) (4 mcg/ml)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM141	Ertapenem/Ertapenem + Boronic acid Ezy MIC Strip (ETP+/ETP)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM142	Terbinafine Ezy MIC Strip(TRB) (0.002-32 mcg/ml)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM143	Griseofulvin EZY MIC Strip (GRI) (0.002-32 mcg/ml)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM144	Clotrimazole EZY MIC Strip (CLO) (0.002-32 mcg/ml)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM145	Terbinafine Ezy MIC Strip(TRB) (0.002-32 mcg/ml)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM146	Miconazole EZY MIC Strip (MIC) (0.002-32 mcg/ml)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM147	Flucloxacillin Ezy MIC Stripr (FLC) (0.016-256 mcg/ml)	Low risk	04/07/2018
ASS- Ezy MIC Strips	EM148	Cefepime/Clavulanic acid Ezy MIC Stripr (FIC) (0.016-256 mcg/ml)	Low risk	04/07/2018
ASS- Ezy MIC Strips	EM149	Ceftazidime /Tazobactum Ezy MIC Strip (CAT) (0.016-256 mcg/ml)	Low risk	04/07/2018
ASS- Ezy MIC Strips	EM150	Natamycin Ezy MIC Strip (NAT) (0.016-256 mcg/ml)	Low risk	22/04/2019
ASS- Ezy MIC Strips	EM151	Cefpirome/Sulbactam Ezy MIC™ Strip	Low risk	22/04/2019
ASS- Ezy MIC Strips	EM152	Ceftizoxime/Sulbactam Ezy MIC™ Strip	Low risk	10/11/2020
ASS- Ezy MIC Strips	EM153	Ceftazidime/Avibactam Ezy MIC™ Strip	Low risk	10/11/2020
ASS- Ezy MIC Strips	EM154	Faropenem/Clavulanic acid Ezy MIC™ strip (FAC)	Low risk	01/11/2020
ASS- Ezy MIC Strips	EM155	Cefuroxime/Clavulanic acid Ezy MIC™ strip (CXC)	Low risk	01/11/2020
ASS- Ezy MIC Strips	EM701	Xylomonas Ezy MIC Strip (0.016-256mcg/ml)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM702	Arbekacin Ezy MIC Strip (ABK) (0.016-256 mcg/ml)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM703	Garenoxacin EZY MIC Strip (0.002-32 mcg/ml)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM705	Biapenem EZY MIC Strip (BPM) (0.002-32 mcg/ml)	Low risk	25/08/2016
ASS- Ezy MIC Strips	EM706	Reinvexin EZY MIC Strip (PB) (0.016-256 mcg/ml)	Low risk	16/12/2017
ASS- Sensitivity Discs (Multi Discs)	HX001	Hexa G-plus 1	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX002	Hexa G-plus 2	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX003	Hexa G-plus 3	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX004	Hexa G-plus 4	Low risk	20/12/2012

ASS- Sensitivity Discs (Multi Discs)	HX005	Hexa G-plus 5	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX006	Hexa G-minus 1	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX007	Hexa G-minus 2	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX008	Hexa G-minus 3	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX009	Hexa G-minus 4	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX010	Hexa G-minus 5	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX011	Hexa Pseudo 1	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX012	Hexa Pseudo 2	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX013	Hexa Pseudo 3	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX014	Hexa UTI-1	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX015	Hexa UTI-2	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX016	Hexa Haemophilus 1	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX017	Hexa Haemophilus 2	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX018	Hexa Haemophilus 3	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX019	Hexa Pneumococci 1	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX020	Hexa Pneumococci 2	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX021	Hexa Anaerobic 1	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX022	Hexa G-plus 6	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX023	Hexa G-plus 7	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX024	Hexa G-plus 8	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX025	Hexa G-Minus 6	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX026	Hexa Pseudo 4	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX027	Hexa G-Plus 9	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX028	Hexa G-minus 7	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX029	Hexa Pseudo 5	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX030	Hexa G-Minus 8	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX031	Hexa G-Plus 10	Low risk	20/12/2012

ASS- Sensitivity Discs (Multi Discs)	HX032	Hexa Universal - 1	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX033	Hexa UTI 3	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX034	Hexa G-plus11	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX035	Hexa G-minus 9	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX036	Hexa G-minus 29	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX037	Hexa UTI 4	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX038	Hexa Universal-2	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX039	Hexa G-plus 12	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX040	Hexa G-plus 13	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX041	Hexa Pneumococci - 3	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX042	Hexa Pneumococci-4	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX043	Hexa Pneumococci - 5	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX044	Hexa Pneumococci - 6	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX045	Hexa Pneumococci-7	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX046	Hexa Pneumococci-8	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX047	Hexa G-plus 25	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX048	Hexa G-plus 26	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX049	Hexa G-plus 27	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX050	Hexa Pseudo 6	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX051	Hexa Pseudo 7	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX052	Hexa Pseudo 8	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX053	Hexa Pseudo 9	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX054	Hexa Pseudo 10	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX055	Hexa Pseudo 11	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX056	Hexa G-minus 26	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX057	Hexa G-minus 27	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX058	Hexa G-minus 28	Low risk	20/12/2012

ASS- Sensitivity Discs (Multi Discs)	HX059	Hexa G-minus 10	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX060	Hexa G-minus 11	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX061	Hexa G-Minus 12	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX062	Hexa G-minus 13	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX063	Hexa G-minus 14	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX064	Hexa G-minus 15	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX065	Hexa G-Minus 16	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX066	Hexa G-minus 17	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX067	Hexa G-minus 18	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX068	Hexa G-minus 19	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX069	Hexa G-minus 20	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX070	Hexa G-minus 21	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX071	Hexa G-Minus 22	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX072	Hexa UTI 4 (Modified)	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX073	Hexa UTI 5	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX074	Hexa UTI 6	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX075	Hexa UTI 7	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX076	Hexa UTI 8	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX077	Hexa UTI 9	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX078	Hexa UTI 10	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX079	Hexa UTI 11	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX080	Hexa G-plus 14	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX081	Hexa G-plus 15	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX082	Hexa G-Plus 16	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX083	Hexa G-plus 17	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX084	Hexa Haemophilus 4	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX085	Hexa Haemophilus 5	Low risk	25/08/2016

ASS- Sensitivity Discs (Multi Discs)	HX086	Hexa Haemophilus 6	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX087	Hexa Haemophilus 7	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX088	Hexa Haemophilus 8	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX089	Hexa Haemophilus 9	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX090	Hexa G-plus 18	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX091	Hexa G-plus 19	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX092	Hexa G-plus 20	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX093	Hexa G-plus 21	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX094	Hexa G-Plus 22	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX095	Hexa G-minus 23	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX096	Hexa G-minus 24	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX097	Hexa Universal-2	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX098	Hexa Universal-3	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX099	Hexa UTI 12	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX100	Hexa G-Plus 23	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX101	Hexa G-plus 24	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX102	Hexa G-minus 25	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX103	Hexa Pseudo 12	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX104	Hexa Antimyco-01	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	HX700	Hexa G-Plus 25	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX701	Hexa G-Minus 26	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX703	Hexa Pseudo-13	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX704	Hexa G-Minus 27	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX705	Hexa Anaerobic 2	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX706	Hexa UTI 14	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX707	Hexa G-Plus 26	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX708	Hexa G-Minus 28	Low risk	25/08/2016

ASS- Sensitivity Discs (Multi Discs)	HX709	Hexa Pseudo 14	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX710	Hexa UTI-15	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX711	Hexa G-Plus 27	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX712	Hexa Pseudo 15	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX713	Hexa Anaerobic-3	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX714	Hexa Combi 1	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX715	Hexa Universal 4	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX716	Hexa Universal 5	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX717	Hexa Combi 2	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX718	Hexa Combi 3	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX719	Hexa Combi 4	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX720	Hexa Combi 5	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX721	Hexa Combi 6	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX722	Hexa Combi 7	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX723	Hexa Combi 8	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	HX724	Hexa Combi 9	Low risk	28/04/2017
ASS- Sensitivity Discs (Multi Discs)	HX725	Hexa Combi 10	Low risk	28/04/2017
ASS- Sensitivity Discs (Multi Discs)	HX726	Hexa Combi 11	Low risk	28/04/2017
ASS- Sensitivity Discs (Multi Discs)	IC001	Icosa Universal - 1	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	IC002	Icosa G-I-Plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	IC003	Icosa G-I-Minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	IC004	Icosa UTI - 1	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	IC005	Icosa Pseudo - 1	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	IC006	Icosa Universal - 2	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	IC007	Icosa Pseudo - 2	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	IC008	Icosa G-II-Minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	IC701	Icosa Universal - 3	Low risk	25/08/2016

ASS- Sensitivity Discs (Multi Discs)	IC702	Icosa Universal - 4	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	IC703	Icosa Universal 5	Low risk	25/08/2016
ASS-HiComb MIC Strips	MD001	Amikacin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD002	Amoxycillin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD003	Amoxyclav (Amoxycillin/ Clavulanic acid)	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD004	Azithromycin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD005	Azlocillin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD006	Aztreonam	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD007	Carbenicillin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD008	Cefazolin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD009	Cefdinir	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD010	Cefepime	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD011	Cefpirome	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD012	Ceftazidime	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD013	Ceftriaxone	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD014	Cefalexin (Cephalexin)	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD015	Cefotaxime (Cephotaxime)	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD016	Chloramphenicol	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD017	Ciprofloxacin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD018	Clarithromycin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD019	Clindamycin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD020	Colistin (Methane Sulphonate)	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD021	Co-Trimoxazole (Sulpha/Trimethoprim)	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD022	Erythromycin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD023	Fusidic Acid	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD024	Gatifloxacin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD025	Gentamicin	Low risk	20/12/2012

ASS-HiComb MIC Strips	MD026	Kanamycin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD027	Levofloxacin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD028	Lincomycin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD029	Linezolid	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD030	Lomefloxacin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD031	Methicillin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD032	Minocycline	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD033	Moxifloxacin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD034	Mupirocin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD035	Nalidixic Acid	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD036	Neomycin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD037	Nitrofurantoin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD038	Norfloxacin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD039	Ofloxacin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD040	Pefloxacin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD041	Piperacillin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD042	Piperacillin/Tazobactam	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD043	Polymyxin-B	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD044	Pristinomycin (Quinupristin/Dalfopristin)	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD045	Rifampicin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD046	Roxithromycin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD047	Sparfloxacin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD048	Streptomycin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD049	Sulfasomidine	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD050	Sulphadiazine	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD051	Sulphafurazole (Sulfisoxazole)	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD052	Sulphamethizole	Low risk	20/12/2012

ASS-HiComb MIC Strips	MD053	Sulphamethoxypyridazine	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD054	Sulphaphenazole	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD055	Teicoplanin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD056	Tetracycline	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD057	Ticarcillin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD058	Tobramycin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD059	Trimethoprim	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD060	Vancomycin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD061	Gentamicin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD062	Benzyl Penicillin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD063	Vancomycin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD064	Cefotaxime (Cephotaxime)	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD065	Oxacillin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD066	Ceftriaxone	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD067	Amikacin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD068	Ampicillin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD069	Ceftazidime	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD070	Cefepime	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD071	Amphotericin B	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD072	Fluconazole	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD073	Itraconazole	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD074	Ketoconazole	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD076	Gemifloxacin	Low risk	20/12/2012
ASS-HiComb MIC Strips	MD701	Cefepime/Tazobactam	Low risk	25/08/2016
ASS-HiComb MIC Strips	MD702	Ceftazidime/Tazobactum	Low risk	25/08/2016
ASS-HiComb MIC Strips	MD704	Nadifloxacin	Low risk	25/08/2016
ASS-HiComb MIC Strips	MD706	Cefoperazone/Tazobactam CST	Low risk	25/08/2016

ASS-HiComb MIC Strips	MD707	Balofloxacin	Low risk	25/08/2016
ASS-HiComb MIC Strips	MD708	Cefuroxime CXM	Low risk	25/08/2016
ASS-HiComb MIC Strips	MD709	Cefpodaxime CPD	Low risk	25/08/2016
ASS-HiComb MIC Strips	MD710	Cefpodaxime / Clavulanic acid (2:1)	Low risk	25/08/2016
ASS-HiComb MIC Strips	MD711	Netilimicin NET	Low risk	25/08/2016
ASS-HiComb MIC Strips	MD712	Cefixime CFM	Low risk	25/08/2016
ASS-HiComb MIC Strips	MD713	Pazufloxacin	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD001	G-I-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD001R	G-I-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD002	G-II-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD002R	G-II-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD003	G-III-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD0032R	Combi I	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD003R	G-III-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD004	G-IV-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD004R	G-IV-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD005	G-I-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD005R	G-I-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD006	G-II-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD006R	G-II-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD007	G-III-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD007R	G-III-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD008	Pseudo	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD008R	Pseudo	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD009	UTI-I	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD009R	UTI-I	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD010	UTI-II	Low risk	20/12/2012

ASS- Sensitivity Discs (Multi Discs)	OD010R	UTI-II	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD011	G-X-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD011R	G-X-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD012	G-IX-plus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD012R	G-IX-plus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD014	G-IV-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD014R	G-IV-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD015	G-V-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD015R	G-V-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD016	UTI-IV	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD016R	UTI-IV	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD017	UTI-VI	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD017R	UTI-VI	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD018	UTI-VII	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD018R	UTI-VII	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD019	UTI-V	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD019R	UTI-V	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD020	Combi I	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD020R	Combi I	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD021	Combi II	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD021R	Combi II	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD022	Combi III	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD022R	Combi III	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD023	Combi IV	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD023R	Combi IV	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD024	Combi V	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD024R	Combi V	Low risk	25/08/2016

ASS- Sensitivity Discs (Multi Discs)	OD025	Combi VI	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD025R	Combi VI	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD026	Combi VII	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD026R	Combi VII	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD027	Combi VIII	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD027R	Combi VIII	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD028	Combi IX	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD028R	Combi IX	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD029	Combi X	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD029R	Combi X	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD030	Combi XI	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD030R	Combi XI	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD031	Combi XII	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD031R	Combi XII	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD032	Combi XIII	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD032R	Combi XIII	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD033	G-V-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD033R	G-V-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD034	G-VI-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD034R	G-VI-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD035	UTI III	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD035R	UTI III	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD036	Pseudo I	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD036R	Pseudo I	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD037	G-VII-plus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD037R	G-VII-plus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD038	G-VIII-plus	Low risk	20/12/2012

ASS- Sensitivity Discs (Multi Discs)	OD038R	G-VIII-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD039	G-XI-plus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD039R	G-XI-plus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD040	UTI-VIII	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD040R	UTI-VIII	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD041	G-XII-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD041R	G-XII-plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD042	G-VI-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD042R	G-VI-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD043	G-VII-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD043R	G-VII-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD044	G-VIII-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD044R	G-VIII-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD045	G-IX-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD045R	G-IX-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD046	G-X-minus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD046R	G-X-minus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD047	G-XI-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD047R	G-XI-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD048	UTI-IX	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD048R	UTI-IX	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD049	G-XIII- plus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD049R	G-XIII- plus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD050	G-XIV- plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD050R	G-XIV- plus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD051	UTI-X	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD051R	UTI-X	Low risk	20/12/2012

ASS- Sensitivity Discs (Multi Discs)	OD052	UTI-XI	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD052R	UTI-XI	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD053	G-XII-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD053R	G-XII-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD054	UTI-XII	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD054R	UTI-XII	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD055	G-XIII-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD055R	G-XIII-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD056	Combi 59	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD056R	Combi 59	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD057	G-XVIII-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD057R	G-XVIII-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD058	G-XIX-minus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD058R	G-XIX-minus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD059	G-XX-minus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD059R	G-XX-minus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD060	G-XXI-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD060R	G-XXI-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD061	G-XXII-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD061R	G-XXII-minus	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD062	G-XXIII-minus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD062R	G-XXIII-minus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD063	Pseudo V	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD063R	Pseudo V	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD064	Combi-XIV	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD064R	Combi XIV	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD065	UTI-XVII	Low risk	25/08/2016

ASS- Sensitivity Discs (Multi Discs)	OD065R	UTI-XVII	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD066	Combi 82	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD066R	Combi 82	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD067	Combi 83	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD067R	Combi 83	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD202	Comb XXI	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD209	Combi 28	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD211	Combi 30	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD211R	Combi 30	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD212	Combi 31	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD215	Combi 34	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD215R	Combi 34	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD216	Combi 35	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD216R	Combi 35	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD220	Combi 39	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD221	Combi 40	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD223	G XIV minus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD224	G XV plus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD225	UTI XIII	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD226	Combi 41	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD227	UTI-XIV	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD228	Pseudo II	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD229	G-XV-minus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD230	G-XVI-plus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD231	Combi -42	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD232	Combi 43	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD233	Combi 44	Low risk	25/08/2016

ASS- Sensitivity Discs (Multi Discs)	OD233R	Combi 44	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD234	Combi 45	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD234R	Combi 45	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD241	Combi 49	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD241R	Combi 49	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD243	G XVII minus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD244	G XIX plus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD248	Combi-53	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD249	Combi-54	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD250	Pseudo - III for Pseudomonas	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD251	GXX plus	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD253	Combi 56	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD256	Combi 59	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD256R	Combi 59	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD257	Combi 60	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD257R	Combi 60	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD258	Combi 61	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD258R	Combi 61	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD259	Combi 62	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD259R	Combi 62	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD260	UTI-XIII	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD261	UTI-XIV	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD262	UTI-E	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD263	UTI-XV	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD264	Pseudo II	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD265	Combi 63	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD266	Combi 64	Low risk	25/08/2016

ASS- Sensitivity Discs (Multi Discs)	OD267	Combi 65	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD268	Combi 66	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD269	Combi 67	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD269R	Combi 67	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD270	Combi 68	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD270R	Combi 68	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD271	Combi 69	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD271R	Combi 69	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD272	Combi 70	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD272R	Combi 70	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD273	Combi 71	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD273R	Combi 71	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD274	Combi 72	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD274R	Combi 72	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD275	Combi 73	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD275R	Combi 73	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD275RS	Combi 60	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD275S	Combi 60	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD276	Combi 84	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD276R	Combi 84	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD277	Combi 77	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD277R	Combi 77	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD278	Combi 78	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD278R	Combi 78	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD279	Combi 79	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD279R	Combi 79	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD280	Combi 80	Low risk	20/12/2012

ASS- Sensitivity Discs (Multi Discs)	OD280R	Combi 80	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD281	Combi 85	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD281R	Combi 85	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD282	Combi 505	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD282R	Combi 505	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD283	Combi 506	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD283R	Combi 506	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD284	Combi 508	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD284R	Combi 508	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD285	Combi 509	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD285R	Combi 509	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD286	Combi 510	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD286R	Combi 510	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD287	Combi 511	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD287R	Combi 511	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD288	Combi 512	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD288R	Combi 512	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD289	Combi 513	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD289R	Combi 513	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD290	Combi 514	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD290R	Combi 514	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD291	Combi 90	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD291R	Combi 90	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD292	Combi 91	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD292R	Combi 91	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD293	Combi 92	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD293R	Combi 92	Low risk	20/12/2012

ASS- Sensitivity Discs (Multi Discs)	OD294	Combi 93	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD294R	Combi 93	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD295	Combi 516	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD295R	Combi 516	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD296	Combi 517	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD296R	Combi 517	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD297	Combi 518	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD297R	Combi 518	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD298	Combi 94	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD298R	Combi 94	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD299	Combi 95	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD299R	Combi 95	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD300	Combi 96	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD300R	Combi 96	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD301	G minus-24	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD301R	G minus-24	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD302	G minus-25	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD302R	G minus-25	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD303	G Plus-15	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD303R	G Plus-15	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD304	G Plus-16	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD304R	G Plus-16	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD305	G Plus-17	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD305R	G Plus-17	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD306	UTI-18	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD306R	UTI-18	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD307	Pseudo VI	Low risk	20/12/2012

ASS- Sensitivity Discs (Multi Discs)	OD307R	Pseudo VI	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD308	Universal - 1	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD308R	Universal - 1	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD309	G Plus-18	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD309R	G Plus-18	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD310	G minus-26	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD310R	G minus-26	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD311	G minus-27	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD311R	G minus-27	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD312	G Minus - 28	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD312R	G Minus - 28	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD313	G Minus - 29	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD313R	G Minus - 29	Low risk	20/12/2012
ASS- Sensitivity Discs (Multi Discs)	OD704	Combi 77	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD705	Combi 78	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD706	Combi 79	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD707	Combi 80	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD708	Combi 81	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD709	Combi 85	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD710	Combi 86	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD711	Combi 501	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD712	Combi 502	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD713	Combi 503	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD714	Combi 504	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD715	Combi 505	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD716	Combi 506	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD717	Octodiscs-A	Low risk	25/08/2016

ASS- Sensitivity Discs (Multi Discs)	OD718	Octodiscs-B	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD719	Octodiscs-C	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD720	Octodiscs-D	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD721	Octodiscs-E	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD722	Octodiscs-F	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD723	Octodiscs-G	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD724	Combi 507	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD725	Combi 508	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD726	Combi 509	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD727	Combi 510	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD728	Combi 511	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD729	Combi 512	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD730	Combi 513	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD731	Combi 514	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD732	Combi 515	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD733	Combi 516	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD734	Combi 517	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD735	Combi 518	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD736R	Combi 519	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD737	Combi 520	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD737R	Combi 520	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD738	Combi 521	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD738R	Combi 521	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD739	Combi 522	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD739R	Combi 522	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD740	Combi 523	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD740R	Combi 523	Low risk	25/08/2016

ASS- Sensitivity Discs (Multi Discs)	OD741	Combi 524	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD741R	Combi 524	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD742	Combi 525	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD742R	Combi 525	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD743	Combi 526	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD743R	Combi 526	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD744	Combi 527	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD744R	Combi 527	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD745	Combi 528	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD745R	Combi 528	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD746	Combi 529	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD746R	Combi 529	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD747	Combi 530	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD747R	Combi 530	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD748	Combi 531	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD748R	Combi 531	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD749	Combi 532	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD749R	Combi 532	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD750	Combi 533	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD750R	Combi 533	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD751	Combi 534	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD751R	Combi 534	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD752	Combi 535	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD752R	Combi 535	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD753	Combi 536	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD753R	Combi 536	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD754	Combi 537	Low risk	25/08/2016

ASS- Sensitivity Discs (Multi Discs)	OD754R	Combi 537	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD755	Combi 538	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD755R	Combi 538	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD756	Combi 539	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD756R	Combi 539	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD757	Combi 540	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD757R	Combi 540	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD758	Combi 541	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD758R	Combi 541	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD759	Combi 542	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD759R	Combi 542	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD760	Combi 543	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD760R	Combi 543	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD761	Combi 544	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD761R	Combi 544	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD762	Combi 545	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD762R	Combi 545	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD763	Combi 546	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD763R	Combi 546	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD764	Combi 547	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD764R	Combi 547	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD765	Combi 548	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD765R	Combi 548	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD766	Combi 549	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD766R	Combi 549	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD767	Combi 550	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD767R	Combi 550	Low risk	25/08/2016

ASS- Sensitivity Discs (Multi Discs)	OD768	Combi 551	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD768R	Combi 551	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD769	Combi 552	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD769R	Combi 552	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD770	Combi 553	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD770R	Combi 553	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD771	Combi 554	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD771R	Combi 554	Low risk	25/08/2016
ASS- Sensitivity Discs (Multi Discs)	OD772	Combi 555	Low risk	16/12/2017
ASS- Sensitivity Discs (Multi Discs)	OD772R	Combi 555	Low risk	16/12/2017
ASS- Sensitivity Discs (Multi Discs)	OD773	Combi 556	Low risk	16/12/2017
ASS- Sensitivity Discs (Multi Discs)	OD773R	Combi 556	Low risk	16/12/2017
ASS- Sensitivity Discs (Multi Discs)	OD774	Combi 557	Low risk	16/12/2017
ASS- Sensitivity Discs (Multi Discs)	OD774R	Combi 557	Low risk	16/12/2017
ASS- Sensitivity Discs (Multi Discs)	OD775	Combi 558	Low risk	16/12/2017
ASS- Sensitivity Discs (Multi Discs)	OD775R	Combi 558	Low risk	16/12/2017
ASS- Sensitivity Discs (Multi Discs)	OD776	Combi 559	Low risk	04/07/2018
ASS- Sensitivity Discs (Multi Discs)	OD776R	Combi 559	Low risk	04/07/2018
ASS- Sensitivity Discs (Multi Discs)	OD777	Combi 560	Low risk	04/07/2018
ASS- Sensitivity Discs (Multi Discs)	OD777R	Combi 560	Low risk	04/07/2018
ASS- Sensitivity Discs (Multi Discs)	OD778	Combi 561	Low risk	04/07/2018
ASS- Sensitivity Discs (Multi Discs)	OD778R	Combi 561	Low risk	04/07/2018
ASS- Sensitivity Discs (Multi Discs)	OD779	Combi 562	Low risk	22/04/2019
ASS- Sensitivity Discs (Multi Discs)	OD779R	Combi 562	Low risk	22/04/2019
ASS- Sensitivity Discs (Multi Discs)	OD780	Combi 563	Low risk	10/11/2020
ASS- Sensitivity Discs (Multi Discs)	OD780R	Combi 563	Low risk	10/11/2020
ASS- Sensitivity Discs (Multi Discs)	OD781	Combi 564	Low risk	10/11/2020

ASS- Sensitivity Discs (Multi Discs)	OD781R	Combi 564	Low risk	10/11/2020
ASS- Sensitivity Discs (Multi Discs)	OD782	Combi 565	Low risk	10/11/2020
ASS- Sensitivity Discs (Multi Discs)	OD782R	Combi 565	Low risk	10/11/2020
ASS- Sensitivity Discs (Multi Discs)	OD783	Combi 566	Low risk	10/11/2020
ASS- Sensitivity Discs (Multi Discs)	OD783R	Combi 566	Low risk	10/11/2020
ASS- Sensitivity Discs (Multi Discs)	OD784	Combi 567	Low risk	10/11/2020
ASS- Sensitivity Discs (Multi Discs)	OD784R	Combi 567	Low risk	10/11/2020
ASS- Sensitivity Discs (Single Discs)	SD001	Amoxycillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD002	Ampicillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD002A	Ampicillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD003	Bacitracin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD004	Carbenicillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD005	Cefaloridine (Cephaloridine)	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD006	Chloramphenicol	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD006B	Chloramphenicol(2 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD007	Chlortetracycline	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD008	Cloxacillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD009	Colistin (Methane Sulphonate)	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD010	Co-Trimoxazole (Sulpha/Trimethoprim)	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD012	Doxycycline Hydrochloride	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD013	Erythromycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD014	Framycetin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD015	Furazolidone	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD016	Gentamicin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD017	Kanamycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD018	Lincomycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD019	Methicillin	Low risk	20/12/2012

ASS- Sensitivity Discs (Single Discs)	SD020	Metronidazole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD021	Nalidixic Acid	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD022	Neomycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD023	Nitrofurantoin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD023A	Nitrofurantoin	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD024	Nitrofurazone	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD025	Nystatin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD026	Oleandomycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD027	Oxytetracycline	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD028	Penicillin-G	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD029	Polymyxin-B	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD030	Rifampicin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD031	Streptomycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD032	Sulphafurazole (Sulfisoxazole)	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD033	Sulphamethizole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD034	Sulphadiazine	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD035	Amikacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD036	Sulphaphenazole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD037	Tetracycline	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD038	Triple Sulphas	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD039	Trimethoprim	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD040	Cefotaxime	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD040A	Cefotaxime	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD041	Cefoxitin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD042	Furoxone	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD043	Oxacillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD044	Tobramycin	Low risk	20/12/2012

ASS- Sensitivity Discs (Single Discs)	SD045	Vancomycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD046	Netillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD047	Cefazolin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD048	Cefalexin(Cephalexin)	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD049	Cycloserine	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD050	Cephalothin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD051	Clindamycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD052	Dicloxacillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD053	Novobiocin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD054	Spiramycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD055	Sulphamethoxypyridazine	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD056	Sulfasomidine	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD056A	Sulphamethoxazole	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD057	Norfloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD058	Co-Trimazine (Vet.)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD059	Sisomicin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD060	Ciprofloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD060A	Ciprofloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD061	Cefuroxime	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD062	Ceftazidime	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD062A	Ceftazidime	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD063	Amoxyclav (Amoxycillin/Clavulanic acid)	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD063A	Augmentine	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD064	Azlocillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD065	Ceftriaxone	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD066	Piperacillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD066A	Piperacillin	Low risk	20/12/2012

ASS- Sensitivity Discs (Single Discs)	SD067	Sterile Discs	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD068	Methanamine Mandalate	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD069	Ofloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD070	Pefloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD071	Co-Trimazine (Human)	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD072	Cefoperazone	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD073	Imipenem	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD074	Ticarcillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD075	Cloxacillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD076	Amoxycillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD077	Ampicillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD078	Amoxyclav	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD079	Cefaloridine	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD080	Ciprofloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD081	Chloramphenicol	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD082	Amikacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD083	Erythromycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD084	Lincomycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD085	Netillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD086	Nitrofurantoin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD087	Ofloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD088	Oxacillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD089	Penicillin-G	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD090	Nitrofurantoin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD091	Streptomycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD092	Sulphadiazine	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD093	Trimethoprim	Low risk	20/12/2012

ASS- Sensitivity Discs (Single Discs)	SD094	Azlocillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD096	Rifampicin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD097	Colistin (Methane Sulphonate)	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD098	Lincomycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD099	Metronidazole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD101	Spiramycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD102	Penicillin-G (1.5 units)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD103	Nitrofurantoin NIT	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD104	Neomycin N	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD105	Bacitracin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD106	Polymyxin-B	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD107	Metronidazole	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD108	Colistin (Methane Sulphonate)	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD109	Ceftriaxone	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD110	Ceftizoxime	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD111	Amphotericin-B	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD112	Ampicillin/Sulbactam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD113	Ampicillin/Cloxacillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD114	Fluconazole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD115	Clotrimazole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD116	Cefadroxil (Cephadroxil)	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD117	Bacitracin (0.1 units)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD118	Bacitracin (2 units)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD119	Bacitracin (1 unit)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD120	Doxycycline Hydrochloride	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD121	Novobiocin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD123	Tetracycline T	Low risk	25/08/2016

ASS- Sensitivity Discs (Single Discs)	SD124	Azithromycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD125	Lomefloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD126	Roxithromycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD127	Rifampicin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD128	Rifampicin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD129	Amoxycillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD130	Cephaloridine	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD131	Chloramphenicol	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD132	Piperacillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD133	Tetracycline	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD134	Tobramycin TB	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD135	Trimethoprim	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD136	Methicillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD137	Methicillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD138	Erythromycin	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD139	Polymyxin-B	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD140	Floxidin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD141	Floxidin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD142	Ciprofloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD143	Cloxacillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD144	Penicillin-G	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD145	Penicillin-G	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD147	Tetracycline	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD148	Trimethoprim	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD149	Trimethoprim	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD150	Enrofloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD152	Penicillin-G	Low risk	25/08/2016

ASS- Sensitivity Discs (Single Discs)	SD153	Chloramphenicol	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD154	Tobramycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD155	Vancomycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD156	Enrofloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD157	Cefaclor	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD158	Minocycline	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD159	Cephradine	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD160	Cefradine	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD161	Trimethoprim	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD162	Sparfloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD163	Vancomycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD164	Clindamycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD165	Cloxacillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD166	Gentamicin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD167	Penicillin-G	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD168	Ceftriaxone Ci	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD169	Fusidic Acid	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD170	Gentamicin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD171	Fusidic Acid	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD174	Polymyxin-B Pb	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD175	Pipemidic Acid	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD176	Mecillinam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD177	Mecillinam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD178	Pristinomycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD179	Fosfomycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD180	Oxolinic Acid (10 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD181	Spectinomycin	Low risk	20/12/2012

ASS- Sensitivity Discs (Single Discs)	SD182	Virginamycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD184	Norfloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD185	Pipemidic Acid	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD186	Oxolinic Acid (2 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD187	Flumequine (2 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD188	Dibekacine (10 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD189	Oxolinic Acid (5 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD190	Flumequine (5 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD191	Kanamycin (1 mcg) (K1)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD192	Clarithromycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD195	Gentamicin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD196	Nitroxoline	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD197	Furazolidone	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD198	Flumequine	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD199	Tylosine	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD200	Cefamandole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD201	Ticarcillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD203	Cefoperazone	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD204	Azithromycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD205	Fosfomycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD206	Lomefloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD207	Ceftazidime /Clavulanic acid	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD209	Cefprozil	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD210	Piperacillin/Tazobactam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD211	Cefixime	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD212	Aztreonam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD213	Teicoplanin	Low risk	20/12/2012

ASS- Sensitivity Discs (Single Discs)	SD214	Isepamicin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD215	Linezolid	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD216	Levofloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD217	Moxifloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD218	Cefdinir	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD219	Cefepime	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD220	Moxalactam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD221	Itraconazole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD222	Erythromycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD223	Kanamycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD224	Ketoconazole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD225	Mezlocillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD231	Cefoperazone :Sulbactum (30mcg:10mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD232	Fluconazole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD233	Amphotericin B	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD234	Cefepime	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD235	Cefpirome	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD236	Streptomycin For detection of HLAR Strains.	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD237	Enoxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD238	Kit I for ESBL Identification, Cefotaxime (Cephotaxime) Kit contains 6 cartridges (6CT): 3CT of SD040 Cefotaxime (Cephotaxime) 30 mcg, 3CT of SD724 Cefotaxime (Cephotaxime)/Clavulanic acid 30/10 mcg	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD239	Kit II for ESBL Identification, Cefepime Kit contains 6 cartridges (6CT): 3CT of SD219 Cefepime 30 mcg, 3CT of SD234 Cefepime /Clavulanic acid 30/10 mcg	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD240	Kit III for ESBL Identification, Ceftazidime Kit contains 6 cartridges (6CT): 3CT of SD062 Ceftazidime 30 mcg, 3CT of SD207 Ceftazidime /Clavulanic acid 30/10 mcg	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD241	Kit IV for ESBL Identification, Cefpirome Kit contains 6 cartridges (6CT): 3CT of SD738 Cefpirome 30 mcg, 3CT of SD235 Cefpirome /Clavulanic acid 30/7.5 mcg	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD242	Kit V for ESBL identif	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD243	Amoxyclav (Amoxycillin / Clavulanicacid)	Low risk	25/08/2016

ASS- Sensitivity Discs (Single Discs)	SD244	Cefmetazole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD245	Cinoxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD246	Nafcillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD247	Cefepime/Tazobactam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD248	Cefonicid	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD249	Cefotetan	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD250	Gemifloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD251	Ceftriaxone/Tazobactam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD252	Ceftazidime/Tazobactam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD253	Cefoperazone/Tazobactam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD254	Cefoperazone/	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD255	Cefpodoxime/ Clavulanic acid	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD256	Ceftriaxone/Tazobactam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD257	Cefepime/Tazobactam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD258	Nadifloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD259	Cefoperazone/Sulbactam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD260	Lomefloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD261	Ceftriaxone/ Sulbactam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD262	Cefepime	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD263	Aztreonam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD264	Amoxycillin/	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD265	Imipenem/Cilastin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD266	Cefixime/	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD267	Prulifloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD268	Prulifloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD269	Ceftazidime/Tazobactam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD270	Amphotericin B	Low risk	20/12/2012

ASS- Sensitivity Discs (Single Discs)	SD271	Nystatin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD272	Miconazole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD273	Miconazole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD274	Ketoconazole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD275	Ketoconazole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD276	Itraconazole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD277	Voriconazole	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD278	Tigecycline	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD279	Faropenem	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD280	Ertapenem	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD281	Amoxyclav	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD282	Imipenem-EDTA	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD283	Doripenem	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD284	Cloxacillin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD285	Cefoxitin-	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD286	Amoxycillin/Sulbactam	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD287	Ampicillin/Sulbactam	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD288	Cefotaxime CTX	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD289	Ceftriaxone CTR	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD290E	Ceftaroline	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD291E	Telithromycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD292E	Piperacillin / Tazobactam	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD293E	Mupirocin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD294E	Ceftibuten	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD295E	Cefotaxime CTX	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD296E	Linezolid LZ	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD297	Colistin Sulphate	Low risk	17/06/2021

ASS- Sensitivity Discs (Single Discs)	SD298	Caspofungin	Low risk	17/06/2021
ASS- Sensitivity Discs (Single Discs)	SD701	Carbenicilline	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD704	Cefradine	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD705	Amoxycillin (2 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD709	Novobiocin (5mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD712	Oleandomycin (5 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD715	Fluconazole (25 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD722	Penicillin-G (2mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD723	Ampicillin (20mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD724	Cefotaxime/Clavulanic acid (30/10 mcg)	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD725	Cefpodoxime	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD726	Ceftazimide/Clavulinic (3/10 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD727	Meropenem	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD730	Metronidazole (50 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD731	Neomycin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD732	Novobiocin (5mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD736	Bacitracin B 0.05 units /disc	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD737	Gatifloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD738	Cefpirome (Cfp) (30mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD740	Gatifloxacin	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD741	Cephotaxime/Sulbactam (30/15 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD744	Ofloxacin Of 30 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD745	Norfloxacin (30mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD746	Gentamicin (200mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD748	Mupirocin MU 5 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD751	Cefpodoxime/ Clavulanic acid (10/1 MCG)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD753	Gatifloxacin	Low risk	20/12/2012

ASS- Sensitivity Discs (Single Discs)	SD755	Ceftiofur (0.2mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD756	Ceftiaxone (30 mcg) / Sulbactam (15 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD761	Sparfloxacin Sc (10mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD764	Ceftriaxone/ Tazobactam (80/10 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD765	Gemifloxacin (GEM) 5mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD767	Ceftazidime-Tazobactam (CaT) (30/10 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD768	Cefoperazone-tazobactam (75/10mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD769	Cefoperazone-Sulbactam (Cfs) (75/10 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD770	Cefepime/Tazobactam (30/10 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD771	Cefpodoxime / Clavulanic acid (10/5 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD773	Piperacillin / Sulbactam (100/10 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD774	Faropenem (5 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD775	Ceftriaxone (30 mcg) / Tazobactam (10 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD776	Cefepime (80 mcg) / Tazobactam (10 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD777	Nadifloxacin (5 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD779	Cefoperazone / Sulbactam (50 / 50 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD780	Lomefloxacin Lo (15 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD781	Cefixime/Clavulanic acid Cmc (200/125 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD782	Cefepime Cpm (50 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD783	Aztreonam Ao (50 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD784	Amoxycillin/Sulbactam Ams (30/15 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD785	Imipenem/Cilastatin Ic (10/10 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD786	Cefixime / Clavulanic acid Cmc (5/10 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD787	Prulifloxacin Pr (10 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD788	Prulifloxacin Pr (5 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD789	Ceftriaxone / Sulbactam (500/250 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD790	Ceftriaxone / Sulbactam (1000/500 mcg)	Low risk	25/08/2016

ASS- Sensitivity Discs (Single Discs)	SD791	Piperacillin + Tazobactam (80:10 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD792	Pazufloxacin (PZ) (25 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD793	Cefditoren (10 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD794	Cefpodoxime/Clavulanic acid (10/6.25mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD795	Cefipime / Amikacin (30 / 7.5 mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD796	Cefepime / Sulbactam (30/15 mcg) CPS	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD797	Ceftazidime / Sulbactam (30/15 mcg) CAS	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD798	Ceftriaxone/Tobramycin (30/5.4 mcg) CTB	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD799	Ceftriaxone/Vancomycin (30/15 mcg) CVA	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD800	Cefpirome / Sulbactam (30/15 mcg) CRS	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD801	Cefaperazone/Sulbactum (70/35mcg)(CSB)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD802	Ceftazidime Tobramycin (30+3.6 mcg) CFT	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD803	Amoxycillin/Clavulanic acid AC 50/10 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD804	Cefpodoxime / Clavulanic acid (24:15mcg)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD805	Cefixime : Ofloxacin COF 5:5 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD806	Balofloxacin BF 5 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD807	Tigecycline TGC 20 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD808	Ampicillin / Cloxacillin 128/128µg Ax	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD809	Amoxycillin/Cloxacillin 128/128µg ACX	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD810	Gentamicin GEN 128µg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD811	Enrofloxacin EX 8µg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD812	Ciprofloxacin CIP 8µg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD813	Tetracyclin TE 128µg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD814	Chloramphenicol C 8 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD815	Streptomycin/Penicillin SPN 128/128mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD816	Ceftazidime/Tobramycin CFT 30/10mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD816V	Ceftazidime/Tobramycin CFT (30:10)	Low risk	25/08/2016

ASS- Sensitivity Discs (Single Discs)	SD817	Cefepime / Amikacin CPA 30/10mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD818	Balofloxacin BF 10mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD819	Oxacillin Ox 10mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD820	Cefixime	Low risk	20/12/2012
ASS- Sensitivity Discs (Single Discs)	SD821	Cefpodoxim CPD 30mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD822	Garenoxacin GRN 5 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD823	Sitafloxacin STX 5 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD824	Tosufloxacin TOS 5 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD825	Biapenem BPM 10 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD826	Cefepime Amikacin 58.8:14.6.mcg CPA	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD827	Florfenikol FLO 30mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD828	Cefpodoxime:Levofloxacin 10:5 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD829	Meropenem/Sulbactam MRS 10:5 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD830V	Ceftriazone Vancomycin CVA (30:30)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD831	Ampicillin/Sulbactum (A/S) 20:10	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD832	Cefixime : Azithromycin CFA 5:15 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD833	Cefquinome CEQ 30mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD834	Ceftriaxone CTR 128 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD835	Sulphatrimethoprim STM 128/128 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD836	Erythromycin E 60 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD837	Kanmycin K 1000 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD838	Quninupristin/Dalfopristin RP 15/15 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD839	Levofloxacin/Cefpodoxime LEC 250 : 200 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD840	Ampicillin/Sulbactam A/S 20/12.5 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD841	Garenoxacin GRN 1mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD842	Garenoxacin GRN 5mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD843	Mipenem (Meropenem) MIP 10 mcg	Low risk	25/08/2016

ASS- Sensitivity Discs (Single Discs)	SD844	Ranicef (Cefdinir) RNF 5 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD845	Clavamox (Amoxycillin / Clavulanic acid)	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD846	Ciprotab (Ciprofloxacin) CPT 5 mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD847	Ciprotab (Ciprofloxacin) CPT 10mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD848	Meropenem/Sulbactam MRS 2/200mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD849	Flucloxacillin FCO 30mcg	Low risk	25/08/2016
ASS- Sensitivity Discs (Single Discs)	SD850	Cefuroxime/Clavulanic acid CCV 30/7.5mcg	Low risk	28/04/2017
ASS- Sensitivity Discs (Single Discs)	SD851	Cefixime/Dicloxacillin CDC 5/12.5mcg	Low risk	28/04/2017
ASS- Sensitivity Discs (Single Discs)	SD852	Cefpodoxime / Clavulanic acid CCL 10/5mcg	Low risk	16/12/2017
ASS- Sensitivity Discs (Single Discs)	SD853	Nafithromycin NFT 15mcg	Low risk	30/10/2018
ASS- Sensitivity Discs (Single Discs)	SD854	Levonadifloxacin LND 10mcg	Low risk	30/10/2018
ASS- Sensitivity Discs (Single Discs)	SD855	Dicrysticin-S DCR 50mcg	Low risk	22/04/2019
ASS- Sensitivity Discs (Single Discs)	SD856	Garenoxacin GRN 10mcg	Low risk	22/04/2019
ASS- Sensitivity Discs (Single Discs)	SD857	Cefepime / sulbactam	Low risk	10/11/2020
ASS- Sensitivity Discs (Single Discs)	SD858	Cefotaxime / Sulbactam	Low risk	10/11/2020
ASS- Sensitivity Discs (Single Discs)	SD859	Ceftizoxime / Sulbactam	Low risk	10/11/2020
ASS- Sensitivity Discs (Single Discs)	SD860	Meropenem / EDTA	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM001	Amikacin HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM002	Amoxicillin HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM003	Amoxyclav HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM068	Ampicillin HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM109	Ampicillin /Sulbactam HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM070	Cefepime HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM064	Cefotaxime HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM101	Cefoxitin HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM012	Ceftazidime HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM066	Ceftriaxone HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM016	Chloramphenicol HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM017	Ciprofloxacin HiComb™ MIC Strip, Modified	Low risk	10/11/2020

ASS-HiComb™ MIC Strip, Modified	MDM020	Colistin HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM108	Fosfmycin HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM025	Gentamicin HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM080	Meropenem HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM065	Oxacillin HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM084	Penicillin HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM043	Polymyxin B HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM055	Teicoplanin HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM056	Tetracycline HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM089	Tigecycline HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM059	Trimethoprim HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM060	Vancomycin HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM071	Amphotericin B HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM072	Fluconazole HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiComb™ MIC Strip, Modified	MDM086	Voriconazole HiComb™ MIC Strip, Modified	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK001	Amikacin HiMIC™ Plate Kit (contains HMP001,LQ314II,PW1378,R-MPK001)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK068	Ampicillin HiMIC™ Plate Kit (contains HMP068,LQ314II,PW1378,R-MPK068)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK109	Ampicillin/Sulbactam HiMIC™ Plate Kit (contains HMP109,LQ314II,PW1378,R-MPK109)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK071	Amphotericin B HiMIC™ Plate Kit (contains HMP071,LQ314I,PW1378,R-MPK071)	Low risk	17/06/2021
ASS-HiMIC™ Plate Kit	MPK070	Cefepime HiMIC™ Plate Kit (contains HMP070,LQ314I,PW1378,R-MPK070)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK101	Cefoxitin HiMIC™ Plate Kit (contains HMP101,LQ314II,PW1378,R-MPK101)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK012	Ceftazidime HiMIC™ Plate Kit (contains HMP012,LQ314II,PW1378,R-MPK012)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK016	Chloramphenicol HiMIC™ Plate Kit (contains HMP016,LQ314II,PW1378,R-MPK016)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK017	Ciprofloxacin HiMIC™ Plate Kit (contains HMP017,LQ314II,PW1378,R-MPK017)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK019	Clindamycin HiMIC™ Plate Kit (contains HMP019,LQ314II,PW1378,R-MPK019)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK020	Colistin HiMIC™ Plate Kit (contains HMP020,LQ314II,PW1378,R-MPK020)	Low risk	10/11/2020

ASS-HiMIC™ Plate Kit	MPK085	Ertapenem HiMIC™ Plate Kit (contains HMP085,LQ314II,PW1378,R-MPK085)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK025	Gentamicin HiMIC™ Plate Kit (contains HMP025,LQ314II,PW1378,R-MPK025)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK104	Imipenem HiMIC™ Plate Kit (contains HMP104,LQ314II,PW1378,R-MPK104)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK156	Isavuconazole HiMIC™ Plate Kit (contains HMP156,LQ314I,PW1378,R-MPK156)	Low risk	17/06/2021
ASS-HiMIC™ Plate Kit	MPK073	Itraconazole HiMIC™ Plate Kit (contains HMP073,LQ314I,PW1378,R-MPK073)	Low risk	17/06/2021
ASS-HiMIC™ Plate Kit	MPK080	Meropenem HiMIC™ Plate Kit (contains HMP080,LQ314I,PW1378,R-MPK080)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK084	Penicillin HiMIC™ Plate Kit (contains HMP084,LQ314II,PW1378,R-MPK084)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK042	Piperacillin/Tazobactam HiMIC™ Plate Kit (contains HMP042,LQ314I,PW1378,R-MPK042)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK043	Polymyxin B HiMIC™ Plate Kit (contains HMP043,LQ314II,PW1378,R-MPK043)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK120	Posaconazole HiMIC™ Plate Kit (contains HMP120,LQ314II,PW1378,R-MPK120)	Low risk	17/06/2021
ASS-HiMIC™ Plate Kit	MPK055	Teicoplanin HiMIC™ Plate Kit (contains HMP055,LQ314II,PW1378,R-MPK055)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK089	Tigecycline HiMIC™ Plate Kit (contains HMP089,LQ314II,PW1378,R-MPK089)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK060	Vancomycin HiMIC™ Plate Kit (contains HMP060,LQ314II,PW1378,R-MPK060)	Low risk	10/11/2020
ASS-HiMIC™ Plate Kit	MPK086	Variconazole HiMIC™ Plate Kit (contains HMP086,LQ314II,PW1378,R-MPK086)	Low risk	17/06/2021

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Certificate of Analysis, Quality and Conformity

Material Code : DD001	**Material Name :** Arabinose	**Lot No :** 0000613377
Report No.: 40001404799	**Date of Release & Report :** 2023-10-18	**Expiry Date :** 2025-09

Appearance

Filter paper discs of 10 mm diameter bearing letters "Ar" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37 °C, of various bacteria with Arabinose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: Orangish yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: Orangish yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: Orangish yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: Orangish yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: Orangish yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

. ATCC is a registered trade mark of the American Type Culture Collection
. NCTC and National Collection of Type Culture are registered trade mark of the Health Protection Agency

Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
. HiMedia Laboratories Pvt Ltd is Certified for ISO 9001:2015, ISO 13485:2016 , WHO GMP

Storage & Shelf Life
Store between 10-30°C. Use before expiry date on the label.

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Material Code : DD001	**Material Name :** Arabinose	**Lot No :** 0000613377
Report No.: 40001404799	**Date of Release & Report :** 2023-10-18	**Expiry Date :** 2025-09

STATUS OF THE MATERIAL : APPROVED

This is to certify that this lot passes and it confirms to the above mentioned tests and specifications . The information given here is believed to be correct and accurate, however, both the information and products are offered without warranty for any particulars use, other than that specified in the current HiMedia manual or product sheets. The results reported were obtained at the time of release.

This document has been produced electronically and is valid

Gowri V	Ujwala M. Kokate	Dr. Santosh Kaul
Microbiologist/Sr.Executive Microbiologist	**Asst./Dy/QC Manager**	**Dy/QA Manager**

2023-10-18

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Certificate of Analysis, Quality and Conformity

Material Code : DD002	**Material Name :** Dextrose	**Lot No :** 0000604612
Report No.: 40001386017	**Date of Release & Report :** 2023-08-22	**Expiry Date :** 2025-07

Appearance

Filter paper discs of 10 mm diameter bearing letters "De" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Dextrose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Positive reaction: yellow colour	Negative reaction

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Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
. HiMedia Laboratories Pvt Ltd is Certified for ISO 9001:2015, ISO 13485:2016 , WHO GMP

Storage & Shelf Life
Store between 10-30°C. Use before expiry date on the label.

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Certificate of Analysis, Quality and Conformity

Material Code : DD002	**Material Name :** Dextrose	**Lot No :** 0000604612
Report No.: 40001386017	**Date of Release & Report :** 2023-08-22	**Expiry Date :** 2025-07

other than that specified in the current HiMedia manual or product sheets. The results reported were obtained at the time of release.

This document has been produced electronically and is valid

Gowri V	Ujwala M. Kokate	Dr. Santosh Kaul
Microbiologist/Sr.Executive Microbiologist	**Asst./Dy/QC Manager**	**Dy/QA Manager**

2023-08-22

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Certificate of Analysis, Quality and Conformity

Material Code : DD003	**Material Name :** Dulcitol	**Lot No :** 0000610244
Report No.: 40001398022	**Date of Release & Report :** 2023-09-30	**Expiry Date :** 2025-08

Appearance

Filter paper discs of 10 mm diameter bearing letters "Du" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37 °C, of various bacteria with Dulcitol Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Klebsiella aerogenes ATCC 13048	Luxuriant	Negative reaction: No colour Change	Negative reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: No colour change	Negative reaction
Salmonella paratyphi A ATCC 9150	Luxuriant	Positive reaction: yellow colour	Positive reaction
Salmonella enteritidis ATCC 13076	Luxuriant	Positive reaction: Yellow colour	Positive reaction

. ATCC is a registered trade mark of the American Type Culture Collection
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Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
. HiMedia Laboratories Pvt Ltd is Certified for ISO 9001:2015, ISO 13485:2016 , WHO GMP

Storage & Shelf Life
Store between 10-30°C. Use before expiry date on the label.

STATUS OF THE MATERIAL : APPROVED

This is to certify that this lot passes and it confirms to the above mentioned tests and specifications . The information given here is believed to be correct and accurate, however, both the information and products are offered without warranty for any particulars use, other than that specified in the current HiMedia manual or product sheets. The results reported were obtained at the time of release.

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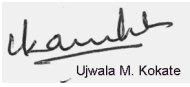
Certificate of Analysis, Quality and Conformity

Material Code : DD003	**Material Name :** Dulcitol	**Lot No :** 0000610244
Report No.: 40001398022	**Date of Release & Report :** 2023-09-30	**Expiry Date :** 2025-08

Microbiologist/Sr.Executive Microbiologist



Asst./Dy/QC Manager

Dy/QA Manager

2023-09-30

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Certificate of Analysis, Quality and Conformity

Material Code : DD004	**Material Name :** Lactose	**Lot No :** 0000610073
Report No.: 40001397562	**Date of Release & Report :** 2023-09-28	**Expiry Date :** 2025-08

Appearance

Filter paper discs of 10 mm diameter bearing letters "La" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37 °C, of various bacteria with Lactose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction, no colour change.	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Negative reaction, no colour change.	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction, no colour change.	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Negative reaction, no colour change.	Negative reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

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Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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Storage & Shelf Life
Store between 10-30°C. Use before expiry date on the label.

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Certificate of Analysis, Quality and Conformity

Material Code : DD004	**Material Name :** Lactose	**Lot No :** 0000610073
Report No.: 40001397562	**Date of Release & Report :** 2023-09-28	**Expiry Date :** 2025-08

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Ujwala M. Kokate
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Dr. Santosh Kaul
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2023-09-28

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Material Code : DD005	**Material Name :** Maltose	**Lot No :** 0000613378
Report No.: 40001404800	**Date of Release & Report :** 2023-10-18	**Expiry Date :** 2025-09

Appearance

Filter paper discs of 10 mm diameter bearing letters "Ma" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37 °C, of various bacteria with Maltose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

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Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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Material Code : DD005	**Material Name :** Maltose	**Lot No :** 0000613378
Report No.: 40001404800	**Date of Release & Report :** 2023-10-18	**Expiry Date :** 2025-09

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2023-10-18

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Certificate of Analysis, Quality and Conformity

Material Code : DD006	**Material Name :** Mannitol	**Lot No :** 0000612566
Report No.: 40001403132	**Date of Release & Report :** 2023-10-13	**Expiry Date :** 2025-09

Appearance

Filter paper discs of 10 mm diameter bearing letters "Mn" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Mannitol Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Positive reaction: yellow colour	Negative reaction

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Control Media :
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Material Code : DD006	**Material Name :** Mannitol	**Lot No :** 0000612566
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Certificate of Analysis, Quality and Conformity

Material Code : DD007	**Material Name :** Mannose	**Lot No :** 0000613379
Report No.: 40001404801	**Date of Release & Report :** 2023-10-18	**Expiry Date :** 2025-09

Appearance

Filter paper discs of 10 mm diameter bearing letters "Mo" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37 °C, of various bacteria with Mannose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Positive reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Positive reaction: yellow colour	Positive reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Negative reaction: no colour change	Negative reaction

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Control Media :
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Material Code : DD010	**Material Name :** Rhamnose	**Lot No :** 0000613380
Report No.: 40001404802	**Date of Release & Report :** 2023-10-18	**Expiry Date :** 2025-09

Appearance

Filter paper discs of 10 mm diameter bearing letters "Rh" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37 °C, of various bacteria with Rhamnose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Negative reaction: no colour change	Negative reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

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Control Media :
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. For Yeast & Mold : Sabouraud Dextrose Agar.

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Material Code : DD011	**Material Name :** Salicin	**Lot No :** 0000613381
Report No.: 40001404803	**Date of Release & Report :** 2023-10-18	**Expiry Date :** 2025-09

Appearance

Filter paper discs of 10 mm diameter bearing letters "Sa" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37 °C, of various bacteria with Salicin Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Negative reaction: no colour change	Negative reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Negative reaction : no colour change	Negative reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Positive reaction: yellow colour	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Negative reaction: no colour change	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

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Control Media :
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Material Code : DD012	**Material Name :** Sorbitol	**Lot No :** 0000613382
Report No.: 40001404804	**Date of Release & Report :** 2023-10-18	**Expiry Date :** 2025-09

Appearance

Filter paper discs of 10 mm diameter bearing letters "Sb" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37 °C, of various bacteria with Sorbitol Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Negative reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

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Control Media :
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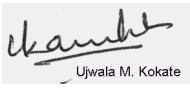
Microbiologist/Sr.Executive Microbiologist



Asst./Dy/QC Manager

Dy/QA Manager

2023-10-18

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Material Code : DD013	**Material Name :** Sucrose	**Lot No :** 0000608530
Report No.: 40001394157	**Date of Release & Report :** 2023-09-18	**Expiry Date :** 2025-08

Appearance

Filter paper discs of 10 mm diameter bearing letters "Su" in continuous printing style.

Cultural Response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Sucrose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural Response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Negative reaction: no colour change	Negative reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Positive reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Negative reaction: no colour change	Negative reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

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Control Media :
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Report No.: 40001394157	**Date of Release & Report :** 2023-09-18	**Expiry Date :** 2025-08

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2023-09-18

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Certificate of Analysis, Quality and Conformity

Material Code : DD014	**Material Name :** Xylose	**Lot No :** 0000612567
Report No.: 40001403133	**Date of Release & Report :** 2023-10-13	**Expiry Date :** 2025-09

Appearance

Filter paper discs of 10 mm diameter bearing letters "Xy" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Xylose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Positive reaction: yellow colour	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

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Control Media :
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Certificate of Analysis, Quality and Conformity

Material Code : DD014	**Material Name :** Xylose	**Lot No :** 0000612567
Report No.: 40001403133	**Date of Release & Report :** 2023-10-13	**Expiry Date :** 2025-09

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2023-10-13

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Certificate of Analysis, Quality and Conformity

Material Code : DD016	**Material Name :** Galactose	**Lot No :** 0000613383
Report No.: 40001404805	**Date of Release & Report :** 2023-10-18	**Expiry Date :** 2025-09

Appearance

Filter paper discs of 10 mm diameter bearing letters "Ga" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37 °C, of various bacteria with Galactose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Positive reaction: yellow colour	Negative reaction

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Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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Storage & Shelf Life
Store between 10-30°C. Use before expiry date on the label.

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Certificate of Analysis, Quality and Conformity

Material Code : DD016	**Material Name :** Galactose	**Lot No :** 0000613383
Report No.: 40001404805	**Date of Release & Report :** 2023-10-18	**Expiry Date :** 2025-09

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2023-10-18

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Certificate of Analysis, Quality and Conformity

Material Code : DD019	**Material Name :** *Kovac's Reagent Strips (25 Strips / vl)	**Lot No :** 0000611528
Report No.: 40001400851	**Date of Release & Report :** 2023-10-07	**Expiry Date :** 2024-10

Appearance
Filter paper strips of 70 mm x 5 mm.

Cultural Response
Cultural characteristics observed after an incubation at 35-37 °C for 18- 24 hours by inserting Kovac's Reagent Strips between the plug and inner wall of tube, above the inoculated Peptone Water (M028).

Organism	Growth	Indole
Cultural Response		
Escherichia coli ATCC 25922	luxuriant	positive reaction, pink colour at the lower portion of the strip.
Enterobacter aerogenes ATCC 13048	luxuriant	negative reaction, no colour change.

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Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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Storage & Shelf Life
Store between 2 - 8°C. Use before expiry date on the label.

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2023-10-07

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Certificate of Analysis, Quality and Conformity

Material Code : DD025	**Material Name :** Adonitol	**Lot No :** 0000613542
Report No.: 40001405167	**Date of Release & Report :** 2023-10-19	**Expiry Date :** 2025-09

Appearance

Filter paper discs of 10 mm diameter bearing letters "Ad" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Adonitol Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid.	Gas.
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Negative reaction: no colour change	Negative reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Negative reaction: no colour change	Negative reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Negative reaction: no colour change	Negative reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

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. NCTC and National Collection of Type Culture are registered trade mark of the Health Protection Agency

Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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Storage & Shelf Life
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Certificate of Analysis, Quality and Conformity

Material Code : DD025	**Material Name :** Adonitol	**Lot No :** 0000613542
Report No.: 40001405167	**Date of Release & Report :** 2023-10-19	**Expiry Date :** 2025-09

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2023-10-19

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Certificate of Analysis, Quality and Conformity

Material Code : DD026	**Material Name :** Inulin	**Lot No :** 0000613543
Report No.: 40001405168	**Date of Release & Report :** 2023-10-20	**Expiry Date :** 2025-09

Appearance

Filter paper discs of 10 mm diameter bearing letters "In" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37 °C, of various bacteria with Inulin Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Streptococcus pneumoniae ATCC 6303	Luxuriant	Positive reaction: yellow colour	Negative reaction
Streptococcus pyogenes ATCC 19615	Luxuriant	Negative reaction, no colour change	Negative reaction

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Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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Storage & Shelf Life
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Certificate of Analysis, Quality and Conformity

Material Code : DD027	**Material Name :** Inositol	**Lot No :** 0000611529
Report No.: 40001400852	**Date of Release & Report :** 2023-10-09	**Expiry Date :** 2025-09

Appearance

Filter paper discs of 10 mm diameter bearing letters "Is" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Inositol Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Negative reaction: no colour change	Negative reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Negative reaction: no colour change	Negative reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: Yellow colour	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

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Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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Storage & Shelf Life
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Material Code : DD027	**Material Name :** Inositol	**Lot No :** 0000611529
Report No.: 40001400852	**Date of Release & Report :** 2023-10-09	**Expiry Date :** 2025-09

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Material Code : DD028	**Material Name :** Cellobiose	**Lot No :** 0000609547
Report No.: 40001396279	**Date of Release & Report :** 2023-09-25	**Expiry Date :** 2025-08

Appearance

Filter paper discs of 10 mm diameter bearing letters "Ce" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Cellobiose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Negative reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Negative reaction: no colour change	Negative reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Negative reaction: no colour change	Negative reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

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Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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Storage & Shelf Life
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Certificate of Analysis, Quality and Conformity

Material Code : DD028	**Material Name :** Cellobiose	**Lot No** : 0000609547
Report No.: 40001396279	**Date of Release & Report :** 2023-09-25	**Expiry Date :** 2025-08

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2023-09-25

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Material Code : DD029	**Material Name :** Raffinose	**Lot No :** 0000613544
Report No.: 40001405169	**Date of Release & Report :** 2023-10-19	**Expiry Date :** 2025-09

Appearance

Filter paper discs of 10 mm diameter bearing letters "Rf" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Raffinose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Negative reaction: no colour change	Negative reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Negative reaction: no colour change	Negative reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Negative reaction: no colour change	Negative reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Negative reaction: no colour change	Negative reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

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Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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Storage & Shelf Life
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Certificate of Analysis, Quality and Conformity

Material Code : DD029	**Material Name :** Raffinose	**Lot No** : 0000613544
Report No.: 40001405169	**Date of Release & Report :** 2023-10-19	**Expiry Date :** 2025-09

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2023-10-19

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Certificate of Analysis, Quality and Conformity

Material Code : DD031	**Material Name :** Trehalose	**Lot No :** 0000605968
Report No.: 40001388829	**Date of Release & Report :** 2023-08-31	**Expiry Date :** 2025-07

Appearance

Filter paper discs of 10 mm diameter bearing letters "Te" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37 °C, of various bacteria with Trehalose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: Yellow colour	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Positive reaction: yellow colour	Negative reaction

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Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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Storage & Shelf Life
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Certificate of Analysis, Quality and Conformity

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Report No.: 40001388829	**Date of Release & Report :** 2023-08-31	**Expiry Date :** 2025-07

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2023-08-31

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Certificate of Analysis, Quality and Conformity

Material Code : DD049	**Material Name :** Lysine Hydrochloride	**Lot No :** 0000603404
Report No.: 40001383936	**Date of Release & Report :** 2023-08-14	**Expiry Date :** 2025-07

Appearance

Filter paper discs of 10 mm diameter

Cultural Response

Cultural characteristics observed in Moeller Decarboxylase Broth Base (M393) with added Lysine Hydrochloride discs (DD049) after an incubation at 35-37°C upto 4 days (Inoculated tubes are overlaid with sterile mineral oil) .

Organism	Inoculum (CFU)	Lysine decarboxylation
Cultural Response		
Citrobacter freundii ATCC 8090	50-100	negative reaction, yellow colour
Enterobacter aerogenes ATCC 13048	50-100	positive reaction, purple colour
Escherichia coli ATCC 25922	50-100	variable reaction
Klebsiella pneumoniae ATCC 13883	50-100	positive reaction, purple colour
Proteus mirabilis ATCC 25933	50-100	negative reaction, yellow colour
Proteus vulgaris ATCC 13315	50-100	negative reaction, yellow colour
Pseudomonas aeruginosa ATCC 9027	50-100	negative reaction, yellow colour
Salmonella Paratyphi A ATCC 9150	50-100	negative reaction, yellow colour
Salmonella Typhi ATCC 6539	50-100	positive reaction, purple colour
Serratia marcescens ATCC 8100	50-100	positive reaction, purple colour
Shigella dysenteriae ATCC 13313	50-100	negative reaction, yellow colour
Shigella flexneri ATCC 12022	50-100	negative reaction, yellow colour
Shigella sonnei ATCC 25931	50-100	negative reaction, yellow colour

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Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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Storage & Shelf Life
Store the discs between 10-30°C. Use before expiry date on the label.

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Certificate of Analysis, Quality and Conformity

Material Code : DD049	**Material Name :** Lysine Hydrochloride	**Lot No :** 0000603404
Report No.: 40001383936	**Date of Release & Report :** 2023-08-14	**Expiry Date :** 2025-07

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2023-08-14

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Certificate of Analysis, Quality and Conformity

Material Code : DD050	**Material Name :** Arginine Hydrochloride	**Lot No :** 0000601703
Report No.: 40001380733	**Date of Release & Report :** 2023-08-04	**Expiry Date :** 2025-07

Appearance

Filter paper discs of 10 mm diameter

Cultural Response

Cultural characteristics observed in Moeller Decarboxylase Broth Base (M393) with added Arginine Hydrochloride discs (DD050) after an incubation at 35-37°C up to 4 days (Inoculated tubes are overlaid with sterile mineral oil) .

Organism	Inoculum (CFU)	Arginine decarboxylation
Cultural Response		
Citrobacter freundii ATCC 8090	50-100	variable reaction
Enterobacter aerogenes ATCC 13048	50-100	negative reaction, yellow colour
Escherichia coli ATCC 25922	50-100	variable reaction
Klebsiella pneumoniae ATCC 13883	50-100	negative reaction, yellow colour
Proteus mirabilis ATCC 25933	50-100	negative reaction, yellow colour
Proteus vulgaris ATCC 13315	50-100	negative reaction, yellow colour
Pseudomonas aeruginosa ATCC 9027	50-100	positive reaction, purple colour
Salmonella Paratyphi A ATCC 9150	50-100	delayed positive reaction/positive reaction, purple colour
Salmonella Typhi ATCC 6539	50-100	delayed positive reaction /negative reaction, yellow colour
Serratia marcescens ATCC 8100	50-100	negative reaction, yellow colour
Shigella dysenteriae ATCC 13313	50-100	delayed positive reaction/negative reaction, yellow colour
Shigella flexneri ATCC 12022	50-100	delayed positive reaction/ negative reaction, yellow colour
Shigella sonnei ATCC 25931	50-100	variable reaction

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Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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Storage & Shelf Life
Store the discs between 10-30°C. Use before expiry date on the label.

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Certificate of Analysis, Quality and Conformity

Material Code : DD050	**Material Name :** Arginine Hydrochloride	**Lot No :** 0000601703
Report No.: 40001380733	**Date of Release & Report :** 2023-08-04	**Expiry Date :** 2025-07

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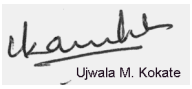
Microbiologist/Sr.Executive Microbiologist



Asst./Dy/QC Manager

Dy/QA Manager

2023-08-04

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Certificate of Analysis, Quality and Conformity

Material Code : DD051	**Material Name :** Ornithine Hydrochloride	**Lot No :** 0000613545
Report No.: 40001405170	**Date of Release & Report :** 2023-10-19	**Expiry Date :** 2025-09

Appearance

Filter paper discs of 10 mm diameter

Cultural Response

Cultural characteristics observed in Moeller Decarboxylase Broth Base (M393) with added Ornithine Hydrochloride discs (DD051) after an incubation at 35-37°C up to 4 days (Inoculated tubes are overlaid with sterile mineral oil) .

Organism	Inoculum (CFU)	Ornithine decarboxylation
Cultural Response		
Citrobacter freundii ATCC 8090	50-100	variable reaction
Enterobacter aerogenes ATCC 13048	50-100	positive reaction, purple colour
Escherichia coli ATCC 25922	50-100	variable reaction
Klebsiella pneumoniae ATCC 13883	50-100	negative reaction, yellow colour
Proteus mirabilis ATCC 25933	50-100	positive reaction, purple colour
Proteus vulgaris ATCC 13315	50-100	negative reaction, yellow colour
Pseudomonas aeruginosa ATCC 9027	50-100	negative reaction, yellow colour
Salmonella Paratyphi A ATCC 9150	50-100	positive reaction, purple colour
Salmonella Typhi ATCC 6539	50-100	negative reaction, yellow colour
Serratia marcescens ATCC 8100	50-100	positive reaction,purple colour
Shigella dysenteriae ATCC 13313	50-100	negative reaction, yellow colour
Shigella flexneri ATCC 12022	50-100	negative reaction, yellow colour
Shigella sonnei ATCC 25931	50-100	positive reaction, purple colour

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. NCTC and National Collection of Type Culture are registered trade mark of the Health Protection Agency

Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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Storage & Shelf Life
Store the discs between 10-30°C. Use before expiry date on the label.

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Certificate of Analysis, Quality and Conformity

Material Code : DD051	**Material Name :** Ornithine Hydrochloride	**Lot No :** 0000613545
Report No.: 40001405170	**Date of Release & Report :** 2023-10-19	**Expiry Date :** 2025-09

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Microbiologist/Sr.Executive Microbiologist	**Asst./Dy/QC Manager**	**Dy/QA Manager**

2023-10-19

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Certificate of Analysis , Quality and Conformity

Material Code : GRM026	**Material Name :** Agar powder, Bacteriological grade	**Lot No :** 0000580529
AR No.: 10000541779	**Date of Report :** 2023-03-24	**Exp. Date :** 2027-03

TEST	SPECIFICATIONS	RESULTS
Appearance		
1 Appearance	Cream coloured powder.	Complies
2 Nature	homogenous	Complies
3 Consistency	free flowing powder	Complies
Solubility		
1 Solubility	Freely soluble in hot water at temperatures above 85°C. Insoluble in cold water.	Complies
Clarity		
1 Clarity	A firm solid, clear to slightly opalescent gel is formed at a concentration of 1.5% at 38-40°C.	Complies
Dye Diffusion		
1 Dye Diffusion	Agar dye diffusion :- 18-20mm	Complies
pH		
1 pH of 1.5% w/v aqueous solution at 25°C	6.50 - 7.50	7.45
Identification test		
Identification test	As per method specified in USP 2022	.
1 Test A	Infrared absorption	Complies
2 Test B	Iodine TS colours some of the fragments of the Agar bluish black, with some areas reddish to violet.	Complies
3 Test C	Agar forms a clear liquid that congeals at 30-39 ° C to form a firm resilient gel, which does not liquefy below 80°C.	Complies
Microbial Load		
1 Total aerobic microbial count (cfu/gm)	By plate method, when incubated at 30-35ºC for not less than 3 days.	-
2 total aerobic microbial count (cfu/gm)	≤ 1000	30
3 Total yeast and mold count (cfu/gm)	By plate method, when incubated at 20-25ºC for not less than 5 days.	-
4 total yeast and mold count (cfu/gm)	≤ 100	7

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Material Code : GRM026	**Material Name :** Agar powder, Bacteriological grade	**Lot No** : 0000580529
AR No.: 10000541779	**Date of Report :** 2023-03-24	**Exp. Date :** 2027-03

TEST	SPECIFICATIONS	RESULTS
Test for pathogens		
1 Test for pathogens	1. Escherichia coli- Absent/gram of sample 2. Salmonella species- Absent/10 gram of sample 3. Pseudomonas aeruginosa- Absent/gram of sample 4. Staphylococcus aureus- Absent/gram of sample 5. Candida albicans- Absent/gram of sample 6. Clostridia- Absent/gram of sample	Absent
Test for Water absorption		
1 Test for Water absorption	As per method specified in USP 2022	.
2 Water absorption capacity	NMT 75 ml of water is absorbed by 5.0 g of agar	Complies
Limit of Gelatin		
1 Limit of Gelatin	As per method specified in USP 2022	.
2 Gelatin	No yellow precipitate is formed.	Complies
Limit of Foreign Starch		
1 Limit of Foreign Starch	As per method specified in USP 2022	.
2 Starch	The sample solution does not ,upon cooling ,produce a blue colour upon the addition of iodine TS.	Complies
Growth Promotion Test		
1 Growth Promotion Test	As per method specified in USP 2022	Complies
Cultural response		
1 Cultural response	Cultural response observed after an incubation at 35-37°C for 18-24 hours by preparing Nutrient Agar (M001) using Agar Powder, Bacteriological as an ingredient.	.
Escherichia coli ATCC 25922 (WDCM00013)		
1 Growth	Luxuriant	Complies
Pseudomonas aeruginosa ATCC 27853 (WDCM 00025)		
1 Growth	Luxuriant	Complies

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Material Code : GRM026	Material Name : Agar powder, Bacteriological grade	Lot No : 0000580529
AR No.: 10000541779	Date of Report : 2023-03-24	Exp. Date : 2027-03

TEST	SPECIFICATIONS	RESULTS
Staphylococcus aureus subsp.aureus ATCC 25923(WDCM 00034)		
1 Growth	Luxuriant	Complies
Salmonella enterica subsp. enterica Typhi ATCC 6539		
1 Growth	Luxuriant	Complies
Streptococcus pyogenes ATCC 19615		
1 Growth	Luxuriant	Complies
Salmonella enterica subsp.enterica Enteritidis ATCC 13076 (WDCM 00030)		
1 Growth	Luxuriant	Complies
Salmonella enterica subsp.enterica Typhimurium ATCC 14028 (WDCM 00031)		
1 Growth	Luxuriant	Complies
Yersinia enterocolitica subsp. enterocolitica ATCC 9610 (WDCM 00038)		
1 Growth	Luxuriant	Complies
Yersinia enterocolitica subsp. enterocolitica ATCC 23715 (WDCM 00160)		
1 Growth	Luxuriant	Complies
Chemical Analysis		
1 Gelling temperature	38-40°C	Complies
2 Melting Range	≥ 85°C	Complies
3 Water (KF)	≤ 20%	Complies
4 Calcium (Ca)	≤ 0.1%	Complies
5 Arsenic (As)	≤ 3ppm	Complies
6 Lead(Pb)	≤ 10ppm	Complies

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Material Code : GRM026	**Material Name :** Agar powder, Bacteriological grade	**Lot No : 0000580529**
AR No.: 10000541779	**Date of Report : 2023-03-24**	**Exp. Date : 2027-03**

TEST	SPECIFICATIONS	RESULTS
7 Acid- Insoluble Ash (On dry-Weight basis	≤ 0.5%	Complies
8 Total Ash (On dry-weight basis)	≤ 6.5%	Complies
9 Foreign organic matter	≤ 1.0%	Complies
10 Limit of Foreign insoluble matter	≤ 15 mg in 7.5 gm of Agar	Complies
11 Gelling Strength	≥ 800g/cm^2	Complies

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Kashmira Kulkarni	Ujwala M. Kokate	Dr. Santosh Kaul
Microbiologist/Sr.Executive Microbiologist	Asst./Dy/QC Manager	Dy/QA Manager

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Certificate of Analysis

Material Name: HiIndicator pH Paper, Range : pH 5 to 7.5

Material Code : LA318
Lot Number : 23-1058 **Report No :** 90000053283

TEST	SPECIFICATIONS	RESULTS
Appearance	Greenish yellow coloured strip of filter paper booklet describing pH ran ge 5 to 7.5	Complies
Result	At pH 5.0 colour of filter paper strip changes to Greenish yellow and at pH 7.5 colour changes to blue.	Complies

STATUS : APPROVED

QC Release Date : 2023-11-08
Expiry Date : 2025-11-01

Madhuri Sharma
Quality Control Chemist
Chemical Division

Atul Palve
Manager, Quality Control
Chemical Division

Hemant Malankar
Manager, Quality Assurance
Chemical Divison

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Certificate of Analysis, Quality and Conformity

Material Code : M054	**Material Name :** Phenol Red Broth Base	**Lot No : 0000579826**
Report No.: 40001341622	**Date of Release & Report : 2023-03-27**	**Expiry Date : 2028-02**

Appearance
Light yellow to pink coloured homogeneous free flowing powder. Observed : Light pink

Colour and Clarity of prepared medium
Red coloured clear solution without any precipitate

Reaction
Reaction of 1.6% w/v aqueous solution at 25°C.

pH
pH Range :7.20-7.60 Observed : 7.46

Cultural Response
Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 24 hours.

Organism	Inoculum (CFU)	Growth	without carbohydrate, (Acid)	without carbohydrate, (Gas)	with dextrose,(Acid)	with dextrose,(Gas)
Cultural Response						
Citrobacter freundii ATCC 8090	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction
Escherichia coli ATCC 25922 (WDCM 00013)	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048 (WDCM 00175)	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883 (WDCM 00097)	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction
Proteus hauseri ATCC 13315	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction
Salmonella enterica serovar Typhi ATCC 6539	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction
Salmonella enterica serovar Typhimurium ATCC 14028 (WDCM 00031)	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction

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Material Code : M054	**Material Name :** Phenol Red Broth Base	**Lot No : 0000579826**
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Serratia marcescens ATCC 8100	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction
Shigella flexneri ATCC 12022 (WDCM 00126)	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Negative reaction

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. **All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter**
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. Information for BSE/TSE Risk The material was subjected to pH <= 7.0 and/or a temperature in excess of 75ºC for no less than 2 hours during the manufacturing process. The bovine raw material for this product was collected entirely from Indian Origin animals in a licensed based establishment. The animals are inspected under a Govt. approved veterinarian's supervision and were apparently free from infectious and contagious diseases. BSE (Bovine Spongiform Encephalopathy)/ TSE (Transmissible Spongiform Encephalopathy) and dioxine are not known to exist in India. This material does not contain, nor is derived from the specific risks material as defined in The Maharashtra Animal Preservation Act Govt. of Maharashtra, India.

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Ujwala M. Kokate
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Dr. Santosh Kaul
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2023-03-27

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Certificate of Analysis, Quality and Conformity

Material Code : M070S	**Material Name :** MR-VP Medium (Glucose Phosphate Broth)	**Lot No : 0000627919**
Report No.: 40001438431	**Date of Release & Report : 2024-02-05**	**Expiry Date : 2026-12**

Appearance
Cream to yellow coloured homogeneous free flowing powder. **Observed : Light yellow**

Colour and Clarity of prepared medium
Light yellow coloured clear solution without any precipitate.

Reaction
Reaction of 1.5% w/v aqueous solution at 25°C.

pH
pH Range :7.40-7.60 Observed : 7.51

Cultural Response
Cultural characteristics observed after an incubation at 30°C for 48 hours .

Organism	Inoculum (CFU)	Growth	MR Test	VP Test
Cultural Response				
Bacillus cereus ATCC 10876	50-100	luxuriant	Negative reaction, yellow colour	Positive reaction, eosin pink / red colour within 2-5 minutes
Enterobacter aerogenes ATCC 13048 (WDCM 00175)	50-100	luxuriant	Negative reaction, yellow colour	Positive reaction, eosin pink / red colour within 2-5 minutes
Escherichia coli ATCC 25922 (WDCM 00013)	50-100	luxuriant	Positive reaction , bright red colour	Negative reaction, no colour change
Klebsiella pneumoniae ATCC 23357	50-100	luxuriant	Negative reaction, yellow colour	Positive reaction, eosin pink / red colour within 2-5 minutes
Salmonella enterica serovar Typhi ATCC 6539	50-100	luxuriant	Positive reaction , bright red colour	Negative reaction, no colour change
Vibrio parahaemolyticus ATCC 17802 (WDCM 00037)	50-100	poor	Negative reaction, yellow colour	Negative reaction, no colour change

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Certificate of Analysis, Quality and Conformity

Material Code : M070S	**Material Name :** MR-VP Medium (Glucose Phosphate Broth)	**Lot No : 0000627919**
Report No.: 40001438431	**Date of Release & Report : 2024-02-05**	**Expiry Date : 2026-12**

. Information for BSE/TSE Risk: The material was subjected to pH <= 7.0 and/or a temperature in excess of 75ºC for no less than 2 hours during the manufacturing process. The bovine raw material for this product was collected entirely from Indian Origin animals in a licensed based establishment. The animals are inspected under a Govt. approved veterinarian's supervision and were apparently free from infectious and contagious diseases. BSE (Bovine Spongiform Encephalopathy)/ TSE (Transmissible Spongiform Encephalopathy) and dioxine are not known to exist in India. This material does not contain, nor is derived from the specific risks material as defined in The Maharashtra Animal Preservation Act Govt. of Maharashtra, India.

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2024-02-05

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Certificate of Analysis, Quality and Conformity

Material Code : M121I	**Material Name :** Brilliant Green Bile Broth	**Lot No : 0000524160**
Report No.: 40001215663	**Date of Release & Report : 2022-03-11**	**Expiry Date : 2027-02**

Appearance
Cream to pale green homogeneous free flowing powder . Observed : Pale green

Colour and Clarity of prepared medium
Emerald green coloured, clear solution without any precipitate.

Reaction
Reaction of 4.0% w/v aqueous solution at 25°C.

pH
pH Range :7.00-7.40 Observed : 7.35

Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18- 48 hours.

Organism	Inoculum (CFU)	Growth	Gas
Cultural Response			
Bacillus cereus ATCC 10876	>=10^4	inhibited	-
Escherichia coli ATCC 25922 (WDCM 00013)	50-100	good-luxuriant	positive reaction
Enterobacter aerogenes ATCC 13048 (WDCM 00175)	50-100	good-luxuriant	positive reaction
Enterococcus faecalis ATCC 29212 (WDCM 00087)	50-100	none-poor	negative reaction
Staphylococcus aureus ATCC 25923 (WDCM 00034)	>=10^4	inhibited	-
Enterococcus faecalis ATCC 19433 (WDCM 00009)	50-100	none-poor	negative reaction
Escherichia coli ATCC 8739 (WDCM 00012)	50-100	good-luxuriant	positive reaction
Citrobacter freundii ATCC 43864	50-100	good-luxuriant	positive reaction

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Certificate of Analysis, Quality and Conformity

Material Code : M121I	**Material Name :** Brilliant Green Bile Broth	**Lot No** : 0000524160
Report No.: 40001215663	**Date of Release & Report :** 2022-03-11	**Expiry Date :** 2027-02

. Information for BSE/TSE Risk: The material was subjected to pH <= 7.0 and/or a temperature in excess of 75ºC for no less than 2 hours during the manufacturing process. The bovine raw material for this product was collected entirely from Indian Origin animals in a licensed based establishment. The animals are inspected under a Govt. approved veterinarian's supervision and were apparently free from infectious and contagious diseases. BSE (Bovine Spongiform Encephalopathy)/ TSE (Transmissible Spongiform Encephalopathy) and dioxine are not known to exist in India. This material does not contain, nor is derived from the specific risks material as defined in The Maharashtra Animal Preservation Act Govt. of Maharashtra, India.

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2022-03-11

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Certificate of Analysis, Quality and Conformity

Material Code : M281	**Material Name :** Phenylalanine Agar	**Lot No :** 0000569426
Report No.: 40001313565	**Date of Release & Report :** 2022-12-30	**Expiry Date :** 2027-11

Appearance
Cream to yellow homogeneous free flowing powder. Observed : Light yellow

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Light amber coloured slightly opalescent gel forms in tubes as slants

Reaction
Reaction of 2.6% w/v aqueous solution at 25°C.

pH
pH Range :7.10-7.50 Observed : 7.36

Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 12-16 hours

Organism	Inoculum (CFU)	Growth	Phenylalanine deaminase
Cultural Response			
Enterobacter aerogenes ATCC 13048 (WDCM 00175)	50-100	luxuriant	negative reaction
Escherichia coli ATCC 25922 (WDCM 00013)	50-100	luxuriant	negative reaction
Proteus mirabilis ATCC 25933	50-100	luxuriant	positive reaction, green colouration after addition of 10% ferric chlori de
Proteus hauseri ATCC 13315	50-100	luxuriant	positive reaction, green colouration after addition of 10% ferric chlori de
Providencia alcalifaciens ATCC 9886	50-100	luxuriant	positive reaction, green colouration after addition of 10% ferric chlori de

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Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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Material Code : M281	**Material Name :** Phenylalanine Agar	**Lot No** : 0000569426
Report No.: 40001313565	**Date of Release & Report :** 2022-12-30	**Expiry Date :** 2027-11

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2022-12-30

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Certificate of Analysis, Quality and Conformity

Material Code : M339	**Material Name :** Acetate Differential Agar	**Lot No :** 0000589405
Report No.: 40001356091	**Date of Release & Report :** 2023-05-15	**Expiry Date :** 2028-04

Appearance
Cream to light green homogeneous free flowing powder. Observed : Yellow

Gelling
Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared medium
Emerald green coloured clear to slightly opalescent gel forms in tubes as slants

Reaction
Reaction of 2.92% w/v aqueous solution at 25°C.

pH
pH Range :6.50-6.90 Observed : 6.85

Cultural Response
Cultural characteristics observed after an incubation at 25-30°C for upto 1-7 days.

Organism	Inoculum (CFU)	Growth	Acetate utilization
Cultural Response			
Citrobacter freundii ATCC 8090	50-100	good-luxuriant	positive reaction, blue colour
Enterobacter cloacae ATCC 23355 (WDCM 00082)	50-100	good-luxuriant	positive reaction, blue colour
Escherichia coli ATCC 25922 (WDCM 00013)	50-100	good-luxuriant	positive reaction, blue colour
Klebsiella pneumoniae ATCC 13883 (WDCM 00097)	50-100	good-luxuriant	positive reaction, blue colour
Proteus hauseri ATCC 13315	>=10^4	inhibited	-
Salmonella enterica subsp. arizonae ATCC 13314	50-100	good-luxuriant	positive reaction, blue colour
Salmonella enterica serovar Typhi ATCC 19430	50-100	poor	negative reaction green colour
Shigella sonnei ATCC 25931	50-100	none-poor	negative reaction, no change, medium remains green

. ATCC is a registered trade mark of the American Type Culture Collection
. NCTC and National Collection of Type Culture are registered trade mark of the Health Protection Agency

Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

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Report No.: 40001356091	**Date of Release & Report :** 2023-05-15	**Expiry Date :** 2028-04

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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2023-05-15

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Certificate of Analysis, Quality and Conformity

Material Code : M456	**Material Name :** Yeast Extract Agar	**Lot No : 0000575261**
Report No.: 40001326275	**Date of Release & Report : 2023-02-09**	**Expiry Date : 2028-01**

Appearance
Cream to yellow homogeneous free flowing powder . Observed : Light yellow

Gelling
Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium
Yellow coloured clear to slightly opalescent gel forms in Petri plates.

Reaction
Reaction of 2.3% w/v aqueous solution at 25°C.

pH
pH Range :7.00-7.40 Observed : 7.39

Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18- 24 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Cultural Response			
Enterobacter aerogenes ATCC 13048 (WDCM 00175)	50-100	luxuriant	>=70%
Escherichia coli ATCC 25922 (WDCM 00013)	50-100	luxuriant	>=70%
Pseudomonas aeruginosa ATCC 27853 (WDCM 00025)	50-100	luxuriant	>=70%
Staphylococcus aureus ATCC 25923 (WDCM 00034)	50-100	luxuriant	>=70%

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Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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. Information for BSE/TSE Risk : The material was subjected to pH <= 7.0 and/or a temperature in excess of 75ºC for no less than 2 hours during the manufacturing process. The bovine raw material for this product was collected entirely from Indian Origin animals in a licensed based establishment. The animals are inspected under a Govt. approved veterinarian's supervision and were apparently free from infectious and contagious diseases. BSE (Bovine Spongiform Encephalopathy)/ TSE (Transmissible Spongiform Encephalopathy) and dioxine are not known to exist in India. This material does not contain, nor is derived from the

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Certificate of Analysis, Quality and Conformity

Material Code : M456	**Material Name :** Yeast Extract Agar	**Lot No : 0000575261**
Report No.: 40001326275	**Date of Release & Report : 2023-02-09**	**Expiry Date : 2028-01**

specific risks material as defined in The Maharashtra Animal Preservation Act Govt. of Maharashtra, India.

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2023-02-09

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Certificate of Analysis, Quality and Conformity

Material Code : M584	**Material Name :** Giolitti-Cantoni Broth Base	**Lot No : 0000503063**
Report No.: 40001169699	**Date of Release & Report : 2021-10-18**	**Expiry Date : 2026-09**

Appearance
Light yellow to brownish yellow homogeneous free flowing powder . Observed : Light yellow

Colour and Clarity of prepared medium
Medium amber coloured, clear solution without any precipitate

Reaction
Reaction of 5.42% w/v aqueous solution at 25°C.

pH
pH Range :6.70-7.10 Observed : 6.97

Cultural Response
Cultural characteristics observed with added 3.5% Potassium Tellurite Solution (FD047), after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Tellurite reduction
Cultural Response			
Staphylococcus aureus ATCC 25923 (WDCM 00034)	50-100	good-luxuriant	positive, blackening at the bottom of the tubes or general blackening of the medium
Escherichia coli ATCC 25922 (WDCM 00013)	>=10^4	inhibited	-
Micrococcus luteus ATCC 10240	>=10^4	inhibited	-
Staphylococcus aureus ATCC 6538 (WDCM 00032)	50-100	good-luxuriant	positive, blackening at the bottom of the tubes or general blackening of the medium
Bacillus cereus ATCC 11778 (WDCM 00001)	>=10^4	inhibited	-
Pseudomonas aeruginosa ATCC 27853 (WDCM 00025)	>=10^4	inhibited	-
Staphylococcus epidermidis ATCC 12228 (WDCM 00036)	50-100	poor-fair	variable reaction

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Report No.: 40001169699	**Date of Release & Report :** 2021-10-18	**Expiry Date :** 2026-09

. Information for BSE/TSE Risk: The material was subjected to pH <= 7.0 and/or a temperature in excess of 75ºC for no less than 2 hours during the manufacturing process. The bovine raw material for this product was collected entirely from Indian Origin animals in a licensed based establishment. The animals are inspected under a Govt. approved veterinarian's supervision and were apparently free from infectious and contagious diseases. BSE (Bovine Spongiform Encephalopathy)/ TSE (Transmissible Spongiform Encephalopathy) and dioxine are not known to exist in India. This material does not contain, nor is derived from the specific risks material as defined in The Maharashtra Animal Preservation Act Govt. of Maharashtra, India.

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2021-10-18

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Certificate of Analysis, Quality and Conformity

Material Code : M612	**Material Name :** Slanetz and Bartley Medium	**Lot No : 0000595939**
Report No.: 40001370497	**Date of Release & Report : 2023-06-29**	**Expiry Date : 2028-05**

Appearance
Cream to yellow homogeneous free flowing powder. Observed : Light yellow

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Light yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 4.65% w/v aqueous solution at 25°C.

pH
pH Range :7.00-7.40 Observed : 7.27

Cultural Response
Cultural characteristics observed after an incubation at 44-45°C for 44- 48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Cultural Response				
Enterococcus faecalis ATCC 29212 (WDCM 00087)	50-100	good-luxuriant	>=50%	red or maroon
Escherichia coli ATCC 25922 (WDCM 00013)	>=10^4	inhibited	0%	-

. ATCC is a registered trade mark of the American Type Culture Collection
. NCTC and National Collection of Type Culture are registered trade mark of the Health Protection Agency

Control Media :
. For Bacteria : Soyabean Casein Digest Agar / Columbia Blood Agar base enriched with 5% v/v Sheep/Horse blood.
. For Yeast & Mold : Sabouraud Dextrose Agar.

. All ISO 11133 : 2014/Amd.1:2018(E) control strains are included in the Quality parameter
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. Information for BSE/TSE Risk: The material was subjected to pH <= 7.0 and/or a temperature in excess of 75ºC for no less than 2 hours during the manufacturing process. The bovine raw material for this product was collected entirely from Indian Origin animals in a licensed based establishment. The animals are inspected under a Govt. approved veterinarian's supervision and were apparently free from infectious and contagious diseases. BSE (Bovine Spongiform Encephalopathy)/ TSE (Transmissible Spongiform Encephalopathy) and dioxine are not known to exist in India. This material does not contain, nor is derived from the specific risks material as defined in The Maharashtra Animal Preservation Act Govt. of Maharashtra, India.

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Material Code : M612	**Material Name :** Slanetz and Bartley Medium	**Lot No** : 0000595939
Report No.: 40001370497	**Date of Release & Report :** 2023-06-29	**Expiry Date :** 2028-05

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Certificate of Analysis, Quality and Conformity

Material Code : M1852I	**Material Name :** Iron Sulphite Agar Modified	**Lot No :** 0000552583
Report No.: 40001274989	**Date of Release & Report :** 2022-09-12	**Expiry Date :** 2027-08

Appearance
Light yellow to brownish yellow homogeneous free flowing powder. Observed : Light yellow

Gelling
Firm,comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Yellow coloured, slightly opalescent gel forms in Petri plates

Reaction
Reaction of 2.6% w/v aqueous solution at 25°C.

pH
pH Range :7.40-7.80 Observed : 7.79

Cultural Response
Cultural characteristics observed under anaerobic conditions, after an incubation at 36-38°C for 24-48 hours.(* incubated at 49-51°C for 24-48 hours)

Organism	Inoculum	Growth	Recovery	Colour of colony
Cultural Response				
Clostridium butyricum ATCC 13732	50-100	luxuriant	>=50%	black
Clostridium sporogenes NCIMB 532 (WDCM 00008)	50-100	luxuriant	>=50%	black
**Desulfotomaculum nigrificans ATCC 19998*	50-100	luxuriant	>=50%	black
Escherichia coli ATCC 25922 (WDCM 00013)	50-100	good	40-50%	no blackening
Escherichia coli ATCC 8739 (WDCM 00012)	50-100	luxuriant	>=50%	no blackning
Clostridium perfringens ATCC 13124 (WDCM 00007)	50-100	luxuriant	>=50%	black
Clostridium perfringens ATCC 12916	50-100	luxuriant	>=50%	black

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Control Media :
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. Information for BSE/TSE Risk: The material was subjected to pH <= 7.0 and/or a temperature in excess of 75ºC for no less than 2 hours during the manufacturing process. The bovine raw material for this product was collected entirely from Indian Origin animals in a licensed based establishment. The animals are inspected under a Govt. approved veterinarian's supervision and were apparently free from infectious and contagious diseases. BSE (Bovine Spongiform Encephalopathy)/ TSE (Transmissible Spongiform Encephalopathy) and dioxine are not known to exist in India. This material does not contain, nor is derived from the specific risks material as defined in The Maharashtra Animal Preservation Act Govt. of Maharashtra, India.

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Certificate of Analysis , Quality and Conformity

Material Code : RM1892	**Material Name :** Fermentative Peptone	**Lot No :** 0000516633
AR No.: 40001199172	**Date of Report :** 2022-01-19	**Exp. Date :** 2026-12

TEST	SPECIFICATIONS	RESULTS
Appearance		
1 Colour of powder	Light yellow to brownish yellow	Yellow
2 Nature	Homogenous	Complies
3 Consistancy	Free flowing powder	Complies
4 Odour	Characteristic odour but not putrescent	Complies
Solubility		
1 Solubility	Freely soluble in distilled/purified water, insoluble in alcohol.	Complies
Clarity		
1 Clarity	1% w/v aqueous solution remains clear without haziness after autoclaving at 15 lbs pressure (121ºC) for 15 minutes.	Complies
Reaction		
1 Reaction	Reaction of 2% w/v aqueous solution at 25ºC.	-
pH	6.20 - 7.20	6.72
Microbial Load		
1 Total aerobic microbial count (cfu/gm)	By plate method, when incubated at 30-35ºC for not less than 3 days.	-
2 total aerobic microbial count (cfu/gm)	<= 2000	10
3 Total yeast and mold count (cfu/gm)	By plate method, when incubated at 20-25ºC for not less than 5 days.	-
4 total yeast and mold count (cfu/gm)	<= 100	7
Test for Pathogens		
1 Test for pathogens	1. E.coli-Negative in 10 gms of sample 2. Salmonella species-Negative in 10 gms of sample 3. Pseudomonas aeruginosa-Negative in 10 gms of sample 4. Staphylococcus aureus- Negative in 10 gms of sample 5. C.albicans- Negative in 10 gms of sample 6. Clostridia- Negative in 10 gms of sample	Absent

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Material Code : RM1892	Material Name : Fermentative Peptone	Lot No : 0000516633
AR No.: 40001199172	Date of Report : 2022-01-19	Exp. Date : 2026-12

TEST	SPECIFICATIONS	RESULTS
Indole test		
1 Indole	Tryptophan content: Passes	Complies
Cultural response		
1 Cultural response	Cultural response observed after an incubation at 35-37ºC for 18-24 hours by preparing Nutrient Agar (M001) using Fermentative Peptone as an ingredient.	.
Escherichia coli ATCC 25922 (WDCM00013)		
1 Growth	Luxuriant	Complies
Pseudomonas aeruginosa ATCC 27853 (WDCM 00025)		
1 Growth	Luxuriant	Complies
Staphylococcus aureus subsp.aureus ATCC 25923(WDCM 00034)		
1 Growth	Luxuriant	Complies
Salmonella enterica serovar Typhi ATCC 6539		
1 Growth	Luxuriant	Complies
Streptococcus pyogenes ATCC 19615		
1 Growth	Luxuriant	Complies
Salmonella enterica serovar Enteritidis ATCC 13076 (WDCM 00030)		
1 Growth	Luxuriant	Complies
Salmonella enterica serovar Typhimurium ATCC 14028 (WDCM00031)		
1 Growth	Luxuriant	Complies

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Material Code : RM1892	Material Name : Fermentative Peptone	Lot No : 0000516633
AR No.: 40001199172	Date of Report : 2022-01-19	Exp. Date : 2026-12

TEST	SPECIFICATIONS	RESULTS
Yersinia enterocolitica ATCC 9610 (WDCM 00038)		
1 Growth	Luxuriant	Complies
Yersinia enterocolitica ATCC 23715 (WDCM 00160)		
1 Growth	Luxuriant	Complies
Chemical Analysis		
1 Total nitrogen	>= 14%	14.76%
2 Amino nitrogen	>= 2.50%	2.92%
3 Sodium chloride	<= 6%	3.65%
4 Loss on drying	<= 7%	3.14%
5 Residue on ignition	<= 14%	9.19%

Information for BSE/TSE Risk The material was subjected to pH <= 7.0 and/or a temperature in excess of 75ºC for no less than 2 hours during the manufacturing process. The bovine raw material for this product was collected entirely from Indian Origin animals in a licensed based establishment. The animals are inspected under a Govt. approved veterinarian's supervision and were apparently free from infectious and contagious diseases. BSE (Bovine Spongiform Encephalopathy)/ TSE (Transmissible Spongiform Encephalopathy) and dioxine are not known to exist in India. This material does not contain, nor is derived from the specific risks material as defined in The Maharashtra Animal Preservation Act Govt. of Maharashtra, India.

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Technical Datasheet

Minimum Essential Medium Eagle (MEM)

With Earle's salts, L-Glutamine, 2.2 gms per liter Sodium bicarbonate
Without NEAA

Product Code: AL020A

Product Description:

Minimum Essential Medium (MEM) is a modification of Basal Medium Eagle (BME). It was developed by Harry Eagle to meet the specific nutritional requirements of certain subtypes of HeLa cells and normal mammalian fibroblasts. MEM includes higher concentration of amino acids so as to closely approximate the protein composition of cultured mammalian cells. MEM can be used either with Earle's salts or Hank's salts and can also be additionally supplemented with Non-essential Amino Acids (NEAA). This medium can be further modified by eliminating calcium to facilitate growth of cells in suspension cultures.

AL020A is Minimum Essential Medium Eagle with Earle's salts, L-glutamine and sodium bicarbonate. It does not contain non-essential amino acids. Users are advised to review the literature for recommendations regarding medium supplementation and physiological growth requirements specific for different cell lines.

Composition:

Ingredients	mg/L
INORGANIC SALTS	
Calcium chloride dihydrate	265.000
Magnesium sulphate anhydrous	97.720
Potassium chloride	400.000
Sodium bicarbonate	2200.000
Sodium chloride	6800.000
Sodium dihydrogen phosphate anhydrous	122.000
AMINO ACIDS	
L-Arginine hydrochloride	126.000
L-Cystine dihydrochloride	31.300
L-Glutamine	292.000
L-Histidine hydrochloride monohydrate	42.000
L-Isoleucine	52.000
L-Leucine	52.000
L-Lysine hydrochloride	72.500
L-Methionine	15.000
L-Phenylalanine	32.000
L-Threonine	48.000
L-Tryptophan	10.000
L-Tyrosine disodium salt dihydrate	51.900
L-Valine	46.000
VITAMINS	
Choline chloride	1.000
D-Ca-Pantothenate	1.000
Folic acid	1.000
Nicotinamide	1.000
Pyridoxal hydrochloride	1.000
Riboflavin	0.100
Thiamine hydrochloride	1.000
i-Inositol	2.000
OTHERS	
D-Glucose	1000.000
Phenol red sodium salt	11.000

Quality Control:

Appearance
Orangish red colored, clear solution.

pH
7.00 -7.60

Osmolality in mOsm/Kg H_2O
290.00 -330.00

Sterility
No bacterial or fungal growth is observed after 14 days of incubation, as per USP specification.

Cultural Response
The growth promotion capacity of the medium is assessed qualitatively by analyzing the cells for the morphology and quantitatively by estimating the cell counts.

Endotoxin content
NMT 1EU/ml

Storage and Shelf Life:

Store at 2-8°C away from bright light.
Shelf life is 12 months.
Use before expiry date given on the product label.

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Technical Datasheet

Dulbecco's Modified Eagle Medium (DMEM) High glucose

With 4.5gm Glucose per litre, L-Glutamine, 25mM HEPES buffer, Sodium pyruvate and Sodium bicarbonate

Product Code: AL151A

Product Description:

Dulbecco's Modified Eagle Medium (DMEM) is one of the most widely used modification of Eagle's medium. DMEM is a modification of Basal Medium Eagle (BME) that contains four fold concentration of amino acids and vitamins. Additionally, the formulation also includes glycine, serine and ferric nitrate. The original formulation contains 1000mgs/L of Glucose and was originally used to culture embryonic mouse cells.

DMEM high glucose is a further modification of original DMEM and contains 4500mg/L of glucose. The additional glucose has proved to be useful in cultivating various other cell lines including primary cultures of mouse and chicken cells as well as various normal and transformed cell lines.

AL151A is Dulbecco's Modified Eagle Medium with L-Glutamine, 4.5gms Glucose per litre, 25mM HEPES buffer, Sodium bicarbonate and Sodium pyruvate. HEPES, a zwitterionic buffer having a pKa of 7.3 at 37ºC prevents the initial rise in pH that tends to occur at the initiation of a culture and increases the buffering capacity of the medium. Users are advised to review the literature for recommendations regarding medium supplementation and physiological growth requirements specific for different cell lines.

Composition:

Ingredients	mg/L
INORGANIC SALTS	
Calcium chloride dihydrate	265.000
Ferric nitrate nonahydrate	0.100
Magnesium sulphate anhydrous	97.720
Potassium chloride	400.000
Sodium bicarbonate	3700.000
Sodium chloride	6400.000
Sodium phosphate monobasic anhydrous	109.000
AMINO ACIDS	
Glycine	30.000
L-Arginine hydrochloride	84.000
L-Cystine dihydrochloride	62.570
L-Glutamine	584.000
L-Histidine hydrochloride monohydrate	42.000
L-Isoleucine	105.000
L-Leucine	105.000
L-Lysine hydrochloride	146.000
L-Methionine	30.000
L-Phenylalanine	66.000
L-Serine	42.000
L-Threonine	95.000
L-Tryptophan	16.000
L-Tyrosine disodium salt	103.790
L-Valine	94.000
VITAMINS	
Choline chloride	4.000
D-Ca-Pantothenate	4.000
Folic acid	4.000
Nicotinamide	4.000
Pyridoxal hydrochloride	4.000
Riboflavin	0.400
Thiamine hydrochloride	4.000
i-Inositol	7.200
OTHERS	
D-Glucose	4500.000
HEPES buffer	5958.000
Phenol red sodium salt	15.900
Sodium pyruvate	110.000

Quality Control:

Appearance

Orangish red colored, clear solution.

pH

7.00 -7.60

Osmolality in mOsm/Kg H_2O
320.00 -360.00
Sterility
No bacterial or fungal growth is observed after 14 days of incubation, as per USP specification.

Cultural Response
The growth promotion capacity of the medium is assessed qualitatively by analyzing the cells for the morphology and quantitatively by estimating the cell counts.

Endotoxin Content
NMT 1EU/ml

Storage and Shelf Life:
Store at 2-8°C away from bright light.
Shelf life is 12 months.
Use before expiry date given on the product label.

Arabinose Ar

DD001

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

Direction for use

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium-liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on

the surface of the plate at sufficient distance (2 cm) from each other. Incubation is carried out at 36 ± 1.0°C for 18 - 48 hours and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualised by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2, 3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "Ar" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Arabinose Differentiation discs were tested using Phenol Red Broth Base (M054).

Cultural Response

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: Orangish yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: Orangish yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: Orangish yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: Orangish yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: Orangish yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.
2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Dextrose De

DD002

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualised by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2, 3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "De" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Dextrose Differentiation discs were tested using Phenol Red Broth Base (M054).

Cultural Response

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Positive reaction: yellow colour	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.

2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3. Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Dulcitol Du DD003

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualized by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2,3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "Du" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Dulcitol Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Cultural Response			
Citrobacter freundii ATCC 8090	Luxuriant	Negative reaction: no colour change	Negative reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Negative reaction: no colour changer	Negative reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Negative reaction: no colour change	Negative reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.

2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Lactose La

DD004

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium-liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50oC a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2 cm) from each other. Incubation is carried out at 36 ± 1.0oC for 18 - 48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualised by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2, 3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone Water (M885) / Andrade HiVeg Peptone Water (MV885) and produce acid due to fermentation of the added carbohydrate and changes the colour of the indicator from light straw coloured to pink (1).

Quality Control

Appearance
Filter paper discs of 10 mm diameter bearing letters "La" in continuous printing style.

Cultural response
The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Lactose Differentiation discs were tested using Phenol Red Broth Base (M054).

Cultural Response

Organism	Growth	Acid	Gas
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction, no colour change.	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Negative reaction, no colour change.	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction, no colour change.	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Negative reaction, no colour change.	Negative reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.
2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Maltose Ma

DD005

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualised by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2, 3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone Water (M885) /Andrade HiVeg Peptone Water (MV885) and produce acid due to fermentation of the added carbohydrate and changes the colour of the indicator from light straw coloured to pink (1).

Quality Control

Appearance
Filter paper discs of 10 mm diameter bearing letters "Ma" in continuous printing style.

Cultural response
The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Maltose Differentiation discs were tested using Phenol Red Broth Base (M054).

Cultural Response

Organism	Growth	Acid	Gas
Cultural Response			
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.
2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3. Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Mannitol Mn

DD006

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualised by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2, 3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone Water (M885) / Andrade HiVeg Peptone Water (MV885) and produce acid due to fermentation of the added carbohydrate and changes the colour of the indicator from light straw coloured to pink (1).

Quality Control

Appearance
Filter paper discs of 10 mm diameter bearing letters "Mn" in continuous printing style.

Cultural response
The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Mannitol Differentiation discs were tested using Phenol Red Broth Base (M054).

Cultural Response

Organism	Growth	Acid	Gas
Cultural Response			
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Positive reaction: yellow colour	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.
2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Mannose DD007

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualized by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2,3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "Mo" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Mannose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Positive reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Positive reaction: yellow colour	Positive reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Negative reaction: no colour change	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.

2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

ONPG Discs

DD008

ONPG Discs are used for the rapid detection of b-galactosidase activity in microorganisms, specially to identify late lactose fermenters quickly.

Directions

Place one ONPG disc in a sterile test tube. Add 0.1 ml of sterile 0.85% w/v sodium chloride solution (physiological saline). Pick up the colony under test with a sterile loop and emulsify it in physiological saline in the tube containing the disc. Incubate at 35-37°C. To detect active lactose fermenters observe the tube at an interval of one hour, for upto 6 hours. To detect late lactose fermenters, incubate the tubes for upto 24 hours.

Precautions

The reaction speed depends upon the size of inoculum. Use known positive and negative beta-galactosidase producing organisms to monitor the disc reactions.

Principle And Interpretation

ONPG (Ortho-nitrophenyl beta-D-galactopyranoside) is a synthetic colourless compound (galactoside) structurally similar to lactose (1).

beta-galactosidase cleaves ONPG to galactose and o-nitrophenyl, a yellow compound. The ONPG test is specially useful in the rapid identification of cryptic lactose fermenters (late fermenters). Since members of family *Enterobacteriaceae* are routinely grouped according to their lactose fermenting ability the ONPG test is significant here.

ONPG discs are sterile filter paper discs impregnated with ONPG. ONPG is similar in structure to lactose. The presence of two enzymes is required to demonstrate lactose fermentation in a conventional test. The first enzyme permease, facilitates the entry of lactose molecules into the bacterial cell while the second enzyme, beta-galactosidase, hydrolyzes the lactose to yield glucose and galactose. True non-lactose fermenters lack both enzymes; however some organisms lack permease but posses beta-galactosidase. These organisms are late lactose fermenters.

Quality Control

Appearance

Filter paper discs of 6 mm diameter bearing letters "On" in continuous printing style.

Cultural response

ONPG reaction observed in 0.85% sodium chloride solution of following culture containing ONPG (DD008) disc after an incubation of upto 4 hours at 35-37°C.

Organism	ONPG
Citrobacter freundii ATCC 8090	Positive reaction: yellow colour
Enterobacter aerogenes ATCC 13048	Positive reaction: yellow colour
Escherichia coli ATCC 25922	Positive reaction: yellow colour
Salmonella Choleraesuis ATCC 12011	Positive reaction: yellow colour

Proteus vulgaris ATCC 13315	Negative reaction: no colour change
Salmonella Typhimurium ATCC 14028	Negative reaction: no colour change

Storage and Shelf Life

Store at 2-8°C. Use before expiry date on the label.

Reference

1.Lowe G.H., 1962., J. Med. Lab. Technol., 19:21

Revision : 1 / 2011

Rhamnose Rh DD010

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualized by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2,3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "Rh" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Rhamnose Differentiation discs were tested using Phenol Red Broth Base (M054).

Cultural Response

Organism	Growth	Acid	Gas
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Negative reaction: no colour change	Negative reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.

2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Salicin DD011

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualized by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2,3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "Sa" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Salicin Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Citrobacter freundii ATCC 8090	Luxuriant	Negative reaction: no colour change	Negative reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Negative reaction : no colour change	Negative reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Positive reaction: yellow colour	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Negative reaction: no colour change	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.

2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Sorbitol DD012

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualized by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2,3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "Sb" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Sorbitol Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Negative reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.

2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Sucrose DD013

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualized by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2,3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "Su" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Sucrose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Negative reaction: no colour change	Negative reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Positive reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Negative reaction: no colour change	Negative reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.

2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Xylose DD014

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualized by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2,3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "Xy" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Xylose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Positive reaction: yellow colour	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.

2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Galactose DD016

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualized by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2,3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "Ga" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Galactose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Positive reaction: yellow colour	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.

2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Oxidase Discs

DD018

Oxidase Discs are used for detection of oxidase production by microorganisms like Neisseria, Alcaligenes, Aeromonas, Vibrio's, Campylobacter and Pseudomonas, which give positive reactions and for excluding Enterobacteriaceae, which give negative reactions.

Directions

Oxidase reaction is carried out by touching and spreading a well isolated colony on the oxidase disc. The reaction is observed within 5-10 seconds at 25-30°C. A change later than 10 seconds or no change at all is considered negative reaction.

Precautions

1. ,,Do not use stainless steel or nichrome inoculating wires, as false positive reaction may result from surface oxidation products formed during flame sterilization.

2. ,,Growth from media containing dyes is not suitable for testing.

3. ,,Timing is critical (5-10 sec) for interpretation of results.

4. ,,Perform oxidase test on all gram-negative bacilli.

5. ,,Cytochrome oxidase production may be inhibited byacid production. False negative reactions may be exhibited by Vibrio, Aeromonas and Plesiomonas species when grown on a medium containing fermentable carbohydrate e.g. MacConkey Agar (M081). Colonies taken from media containing nitrate may give unreliable results. The loss of activity of the oxidase reagent is caused by auto-oxidation which may be avoided by adding 0.1% ascorbic acid (3).

Principle And Interpretation

Certain bacteria posses either cytochrome oxidase or indophenol oxidase (an iron-containing haemoprotein), which catalyzes the transport of electrons from donor compounds (NADH) to electron acceptors (usually oxygen). In the oxidase test, a colourless dye such as N, N-dimethy-p-phenylenediamine serves as an artificial electron acceptor for the enzyme oxidase. The dye is oxidized to form indophenol blue, a coloured compound. The test is useful in the initial characterization of aerobic gram-negative bacteria of the genera Aeromonas, Plesiomonas, Pseudomonas, Campylobacter and Pasteurella.

Oxidase discs are sterile filter paper discs impregnated with N, N-dimethyl-p-phenylenediamine oxalate, ascorbic acid and a-naphthol. These discs overcome the neccessity of daily preparation of fresh reagent. Gordon and McLeod (1) introduced oxidase test for identifying gonococci based upon the ability of certain bacteria to produce indophenol blue from the oxidation of dimethyl-p-phenylenediamine and a-naphthol. Gaby and Hadley (2) introduced a more sensitive method by using N, N-dimethyl-p-phenylenediamine oxalate where all staphylococci were oxidase negative. In a positive reaction the enzyme cytochrome oxidase combines with N,N-dimethyl-p-phenylenediamine oxalate and a-naphthol to form the dye, indophenol blue.

Quality Control

Appearance

Filter paper discs of 10 mm diameter

Cultural response

Typical oxidase reaction given by 18-48 hour culture observed within 5-10 seconds at 25-30°C.

Organism	Reaction Observed
Pseudomonas aeruginosa ATCC 27853	positive : deep purplish blue colouration of disc

Neisseria gonorrhoeae ATCC 19424	positive : deep purplish blue colouration of disc
Escherichia coli ATCC 25922	negative : purplish blue colouration after 10 sec/ no colour change
Staphylococcus aureus ATCC 25923	negative : no colour change

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Reference

1.Gordon J. and Mcleod J.W., 1928, J. Path. Bact., 31:185
2.Gaby W.L and Hadley C., 1957. J. Bact., 74:356
3.Steel. K.J. 1962. J. Appl. Bact. 25:445

Revision : 1 / 2011

Kovac's Reagent Strip

DD019

Kovac's Reagent Strips are used to detect indole producing bacteria.

Directions

Indole production by organisms is observed by inserting the Kovac's reagent strip between the plug and inner wall of the tube, above the inoculated Peptone Water (M028) and incubating at 35-37°C for 18-24 hours.

Preparation of Kovac's reagent

Kovac's reagent is prepared by dissolving 10 gm of p-dimethyl aminobenzaldehyde in 150 ml of isoamyl alcohol and then slowly adding 50 ml of concentrated hydrochloric acid.

Principle And Interpretation

The various enzymes involved in the degradation of tryptophan to indole are collectively called as tryptophanase, a general term used to denote the complete system of enzymes (2). The presence of indole is detected by the Kovac's reagent strip which turns pink in the presence of indole.

Kovac's Reagent Strips are sterile filter paper strips impregnated with Kovac's reagent. Peptone is used in the preparation of Peptone Water because of its high tryptophan content. When tryptophan is degraded by bacteria, indole is produced. Tryptone Water (M463) can also be used to detect indole production in the identification of members of coliform group (1).

Quality Control

Appearance

Filter paper strips of 70 mm x 5 mm.

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours by inserting Kovac's Reagent Strips between the plug and inner wall of tube,above the inoculated Peptone Water (M028).

Organism	Growth	Indole
Escherichia coli ATCC 25922	luxuriant	positive reaction, pink colour at the lower portion of the strip.
Enterobacter aerogenes ATCC 13048	luxuriant	negative reaction, no colour change.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Reference

1.Eaton A.D, Clesceri L.S., Greenberg. A.E, Rice E. W.(Eds) 2005, Standard Methods for the Examination of Water and wastewater, 21st ed., APHA, Washington DC.
2.MacFaddin J. F., 2000, Biochemical Tests for Identification of Medical Bacteria, 3rd ed., Philadelphia: Lippincott. Williams and Wilkins.

Revision : 1 / 2011

X Factor discs

DD020

Used for the presumptive identification of *Haemophilus* species on the basis of their requirements for X or V factors or both.

Directions

Inoculate the surface of a Blood Agar (M073) plate or Brain Heart Infusion Agar (M211) plate with the test organisms by either streaking or surface spreading. Aseptically place the X (DD020), V (DD021) and X+V (DD022) factor discs on the plate, in the following positions:

Disc Position on the Agar plate

X factor disc 12 O' clock

V factor disc 4 O' clock

X+V factor disc 8 O' clock

Incubate the plates at 35 - 37°C for 24 - 48 hours. Observe for the growth in the neighbourhood of the discs.

Principle And Interpretation

Both X and V factors are growth factors that are essential for certain organisms like *Haemophilus* species and also enhance growth of organisms like *Neisseria* species.

X-factor discs are the sterile filter paper discs impregnated with growth factor X which are used for differentiating *Haemophilus* species in conjuction of V factor & X+V factor discs. *Bordetella* and *Haemophilus* species can also be identified on the basis of the requirement of X and V growth factors in the basal medium.

The X factor (hemin) and V factor (Coenzyme- Nicotinamide adenine dinucleotide NAD+) are impregnated on the sterile filter paper discs of diameter 6 mm.

The test organism requiring X factor alone, grows only in the vicinities of X and X+V factor discs. Those which require V factor alone grow in the vicinities of V and X+V factor discs. If both X and V factors are required, then the organism will grow only in the vicinity of the X+V factor discs. This satellite growth is seen around the disc promoting growth (1).

Quality Control

Appearance

Filter paper discs of 6 mm diameter bearing letters "X" in continuous printing style.

Cultural response

Cultural characteristics observed on Brain Heart Infusion Agar (M211)or Blood Agar Base (M073) after an incubation of 24-48 hours at 35-37°C.

Cultural Response

Organism	**Growth with X factor**	**Growth without growth factor**
Cultural response		
Bordetella pertussis ATCC 8467	Positive(initial isolation on Bordet Gengou Agar (M175))	Positive(initial isolation on Bordet Gengou Agar (M175))
Haemophilus influenzae ATCC 35056	Negative	Negative
Haemophilus parainfluenzae ATCC 7901	Negative	Negative

Haemophilus haemoglobinophilus ATCC19416	Positive	Negative
Haemophilus ducreyi	Positive	Negative

Storage and Shelf Life

Store between 2-8°C. For prolonged use store at -20°C. Use before the expiry date on the label.

Reference

1.Murray PR, Baron EJ, Jorgensen J.H., Pfaller M A, Yolken R.H(Eds.),8th ed, 2003, Manual of Clinical Microbiology, ASM, Washington D.C.

Note:
Use known strains of *Haemophilus influenzae* to monitor the performance of the differentiation discs and the medium.
Do not use too heavy suspension of the test organisms as X or V factor carryover from the primary growth medium may take place

Revision : 1 / 2011

V Factor Discs

DD021

Used for the presumptive identification of *Haemophilus* species on the basis of their requirements for X or V factors or both.

Directions

Inoculate the surface of a Blood Agar (M073) plate or Brain Heart Infusion Agar (M211) plate with the test organisms by either streaking or surface spreading. Aseptically place the X (DD020), V (DD021) and X+V (DD022) factor discs on the plate, in the following positions:

Disc Position on the Agar plate

X factor disc 12 O' clock

V factor disc 4 O' clock

X+V factor disc 8 O' clock

Incubate the plates at 35 - 37°C for 24 - 48 hours. Observe for the growth in the neighbourhood of the discs.

Principle And Interpretation

Both X and V factors are growth factors that are essential for certain organisms like *Haemophilus* species and also enhance growth of organisms like *Neisseria* species.

V-factor discs are the sterile filter paper discs impregnated with growth factor V which are used for differentiating *Haemophilus* species in conjuction of X factor & X+V factor discs. *Bordetella* and *Haemophilus* species can also be identified on the basis of the requirement of X and V growth factors in the basal medium.

The X factor (hemin) and V factor (Coenzyme- Nicotinamide adenine dinucleotide NAD+) are impregnated on the sterile filter paper discs of diameter 6 mm.

The test organism requiring X factor alone, grows only in the vicinities of X and X+V factor discs. Those which require V factor alone grow in the vicinities of V and X+V factor discs. If both X and V factors are required, then the organism will grow only in the vicinity of the X+V factor discs. This satellite growth is seen around the disc promoting growth (1).

Quality Control

Appearance

Filter paper discs of 6 mm diameter bearing letters "V" in continuous printing style.

Cultural response

Cultural characteristics observed on Brain Heart Infusion Agar (M211)or Blood Agar Base (M073) after an incubation of 24-48 hours at 35-37°C.

Organism	Growth with V factor	Growth without growth factor
Bordetella pertussis ATCC 8467	Positive(initial isolation on Bordet Gengou Agar (M175))	Positive(initial isolation on Bordet Gengou Agar (M175))
Haemophilus influenzae ATCC 35056	Negative	Negative
Haemophilus parainfluenzae ATCC 7901	Positive	Negative

Haemophilus haemoglobinophilus ATCC19416	Negative	Negative
Haemophilus ducreyi	Negative	Negative

Storage and Shelf Life

Store below -10°C. Use before the expiry date on the label.

Reference

1.Murray PR, Baron EJ, Jorgensen J.H., Pfaller M A, Yolken R.H(Eds.),8th ed, 2003, Manual of Clinical Microbiology, ASM, Washington D.C.

Note:
Use known strains of *Haemophilus influenzae* to monitor the performance of the differentiation discs and the medium.
Do not use too heavy suspension of the test organisms as X or V factor carryover from the primary growth medium may take place

Revision : 1 / 2011

X+V Factor discs

DD022

Used for the presumptive identification of *Haemophilus* species on the basis of their requirements for X or V factors or both.

Directions

Inoculate the surface of a Blood Agar (M073) plate or Brain Heart Infusion Agar (M211) plate with the test organisms by either streaking or surface spreading. Aseptically place the X (DD020), V (DD021) and X+V (DD022) factor discs on the plate, in the following positions:

Disc Position on the Agar plate

X factor disc 12 O' clock

V factor disc 4 O' clock

X+V factor disc 8 O' clock

Incubate the plates at 35 - 37°C for 24 - 48 hours. Observe for the growth in the neighbourhood of the discs.

Principle And Interpretation

Both X and V factors are growth factors that are essential for certain organisms like *Haemophilus* species and also enhance growth of organisms like *Neisseria* species.

X+V factor discs are the sterile filter paper discs impregnated with growth factors x <(>&<)> V which are used for differentiating *Haemophilus* species in conjuction of X factor & V factor discs. *Bordetella* and *Haemophilus* species can also be identified on the basis of the requirement of X and V growth factors in the basal medium.

The X factor (hemin) and V factor (Coenzyme- Nicotinamide adenine dinucleotide NAD+) are impregnated on the sterile filter paper discs of diameter 6 mm.

The test organism requiring X factor alone, grows only in the vicinities of X and X+V factor discs. Those which require V factor alone grow in the vicinities of V and X+V factor discs. If both X and V factors are required, then the organism will grow only in the vicinity of the X+V factor discs. This satellite growth is seen around the disc promoting growth (1).

Quality Control

Appearance

Filter paper discs of 6 mm diameter bearing letters "X+V" in continuous printing style.

Cultural response

Cultural characteristics observed on Brain Heart Infusion Agar (M211)or Blood Agar Base (M073) after an incubation of 24-48 hours at 35-37°C.

Organism	Growth with X +V factor	Growth without growth factor
Bordetella pertussis ATCC 8467	Positive(initial isolation on Bordet Gengou Agar (M175))	Positive(initial isolation on Bordet Gengou Agar (M175))
Haemophilus influenzae ATCC 35056	Positive	Negative
Haemophilus parainfluenzae ATCC 7901	Positive	Negative

Haemophilus haemoglobinophilus ATCC19416	Positive	Negative
Haemophilus ducreyi	Positive	Negative

Storage and Shelf Life

Store below -10°C. Use before the expiry date on the label.

Reference

1.Murray PR, Baron EJ, Jorgensen J.H., Pfaller M A, Yolken R.H(Eds.),8th ed, 2003, Manual of Clinical Microbiology, ASM, Washington D.C.

Note:
Use known strains of *Haemophilus influenzae* to monitor the performance of the differentiation discs and the medium.
Do not use too heavy suspension of the test organisms as X or V factor carryover from the primary growth medium may take place

Revision : 1 / 2011

Bile Esculin Discs

DD024

Bile Esculin Discs are used for detection of esculin hydrolysis in the presence of bile, for differentiating Group D streptococci from other Streptococcal groups.

Directions

Esculin impregnated disc is placed on the seeded Bile Esculin Agar Base (M340) plate and is incubated at 35-37°C for 18-24 hours.

Principle And Interpretation

Group D streptococci hydrolyze esculin to esculetin and dextrose. Esculetin reacts with an iron salt such as ferric citrate to form a blackish brown coloured complex (4).

Rochaix found that esculin hydrolysis is an important criteria in the identification of enterococci (1). Meyer and Schonfeld (2) observed that when bile was added to esculin medium, around 60% enterococci were able to grow and split the esculin while other streptococci could not. When a comparative study was performed by Facklam and Moody (3) for presumptive identification of Group D streptococci, they found the bile esculin test as a reliable means of identifying Group D streptococci and differentiating them from other streptococci groups.

Quality Control

Appearance

Plain filter paper discs of 6mm diameter

Cultural response

Cultural response observed by placing Bile Esculin disc (DD024) on seeded Bile Esculin Agar Base(M340) plate, incubated at 35-37°C for 18-24 hours.

Organism	Growth	Esculin hydrolysis
Enterococcus faecalis ATCC 29212	luxuriant	positive: blackening of media around the disc.
Streptococcus agalactiae ATCC 13813	luxuriant	negative: no blackening
Listeria monocytogenes ATCC 19118	luxuriant	positive: blackening of media around the disc.
Streptococcus pyogenes ATCC 19615	luxuriant	negative: no blackening

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Reference

1. Rochaix, 1924, C. R. Soc. Biol., 90:771.
2. Meyer and Schonfeld, 1926, Zentralbl. Bacteriol. Parasitenkd. Infectionskr. Hyg. Abt. I Orig., 99:402.
3. Facklam and Moody, 1970, Appl. Microbiol., 20:245.
4.MacFaddin J. F., 2000, Biochemical Tests for Identification of Medical Bacteria, 3rd ed., Philadelphia: Lippincott. Williams and Wilkins.

Revision : 1 / 2011

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Adonitol DD025

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualized by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2,3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "Ad" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Adonitol Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid.	Gas.
Citrobacter freundii ATCC 8090	Luxuriant	Negative reaction: no colour change	Negative reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Negative reaction: no colour change	Negative reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Negative reaction: no colour change	Negative reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.

2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Inulin DD026

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualized by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2,3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "In" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Inulin Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Streptococcus pneumoniae ATCC 6303	Luxuriant	Positive reaction: yellow colour	Negative reaction
Streptococcus pyogenes ATCC 19615	Luxuriant	Negative reaction, no colour change	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.
2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Inositol Is DD027

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualized by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2,3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "Is" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Inositol Differentiation discs were tested using Phenol Red Broth Base (M054).

Cultural Response

Organism	Growth	Acid	Gas
Cultural response			
Citrobacter freundii ATCC 8090	Luxuriant	Negative reaction: no colour change	Negative reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Negative reaction: no colour change	Negative reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: Yellow colour	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.

2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Cellobiose DD028

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualized by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2,3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "Ce" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Cellobiose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Negative reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Negative reaction: no colour change	Negative reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Serratia marcescens ATCC 8100	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Negative reaction: no colour change	Negative reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.

2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Raffinose DD029

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualized by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2,3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "Rf" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Raffinose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Citrobacter freundii ATCC 8090	Luxuriant	Negative reaction: no colour change	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Negative reaction: no colour change	Negative reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Negative reaction: no colour change	Negative reaction
Proteus vulgaris ATCC 13315	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Negative reaction: no colour change	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Negative reaction: no colour change	Negative reaction
Shigella flexneri ATCC 12022	Luxuriant	Negative reaction: no colour change	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.

2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Trehalose DD031

Carbohydrate Differentiation Discs are used to differentiate bacteria on the basis of carbohydrate fermentation abilities.

Directions

A Sugar free medium base is prepared as desired, dispensed and sterilized. Following media are recommended for this test.

Liquid Media

M885 Andrade Peptone Water

MV885 Andrade HiVeg Peptone Water

M909 Andrade Peptone Water with Meat Extract

MV909 Andrade Peptone Water w/ HiVeg Extract No. 1

M054 Phenol Red Broth Base

MV054 Phenol Red HiVeg Broth Base

M279 Phenol Red Broth Base w/ Meat Extract

MV279 Phenol Red Broth Base w/ HiVeg Extract No. 1

M284 Purple Broth Base

MV284 Purple HiVeg Broth Base

M676 Yeast Fermentation Broth

MV676 Yeast Fermentation HiVeg Broth Base

Semisolid Media

M159 Cystine Tryptone Agar

MV159 Cystine Tryptone Agar, HiVeg

M395 OF Basal Medium

MV395 OF Basal HiVeg Medium

M319 Tryptone Agar Base

MV319 Tryptone Agar Base, HiVeg

Solid Media

M053 Phenol Red Agar Base

MV053 Phenol Red HiVeg Agar Base

M098 Purple Agar Base

MV098 Purple HiVeg Agar Base

Any medium- liquid, semisolid or solid can be used as per choice. Liquid and semisolid media are dispensed in 5 ml amounts in test tubes and sterilized. On cooling to 45 - 50°C a single Carbohydrate disc is added to each tube aseptically and inoculated with the test organisms. In semisolid medium the disc is pushed in the medium along with the inoculum just below the surface of the medium, so that the medium at the bottom can serve as control while fermentation can be detected at the surface level. Using solid media it is possible to detect fermentation of number of sugars on the same plate. Sterile plates containing the agar medium of choice are surface seeded with test organism(s) and required Carbohydrate discs are placed and pressed gently on the surface of the plate at sufficient distance (2cm) from each other. Incubation is carried out at 36 ± 1.0ºC for 18-48 hours

and results are recorded at 18 - 24 hours and again at 48 hours. The results should be frequently observed since reversal of fermentation reaction can take place. In case of liquid medium gas produced during fermentation is collected in the inverted Durham's tube while acid produced changes colour of the medium. In semisolid media gas produced is trapped and seen as bubbles. On agar plates fermentation is visualized by change in colour around the disc.

Principle And Interpretation

Ability of an organism to ferment a specific carbohydrate added in the basal medium, results in the production of acid or acid and gas. This ability has been used to characterize a specific species of bacteria which helps in differentiation of species as well (2,3). When carbohydrate impregnated disc is added to a culture medium the carbohydrate diffuses through the medium. When a carbohydrate is fermented by a microorganism, the acid (or acid and gas) produced lowers the pH of the medium and the indicator in the basal medium thus changes colour (e.g. phenol red changes from red to orange to yellow).

Bacteria capable of fermentation grow in Andrade Peptone and produce acid due to fermentation of the added carbohydrate and change the colour of the indicator from light straw colored to pink(1).

Quality Control

Appearance

Filter paper discs of 10 mm diameter bearing letters "Te" in continuous printing style.

Cultural response

The carbohydrate fermentation reactions after an incubation of 18-48 hours at 35-37°C, of various bacteria with Trehalose Differentiation discs were tested using Phenol Red Broth Base (M054).

Organism	Growth	Acid	Gas
Citrobacter freundii ATCC 8090	Luxuriant	Positive reaction: yellow colour	Positive reaction
Enterobacter aerogenes ATCC 13048	Luxuriant	Positive reaction: yellow colour	Positive reaction
Escherichia coli ATCC 25922	Luxuriant	Positive reaction: yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883	Luxuriant	Positive reaction: yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	Luxuriant	Positive reaction: yellow colour	Positive reaction
Serratia marcescens ATCC 8100	Luxuriant	Positive reaction: Yellow colour	Negative reaction
Salmonella Typhi ATCC 6539	Luxuriant	Positive reaction: yellow colour	Negative reaction
Salmonella Typhimurium ATCC 14028	Luxuriant	Positive reaction: yellow colour	Positive reaction
Shigella flexneri ATCC 12022	Luxuriant	Positive reaction: yellow colour	Negative reaction

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

1.Maxted W. R., 1953, J. Clin. Path., 6:234.

2.Eaton A.D, Clesceri L.S. Greenberg. A.W, 2005, Standard Methods for the Examination of Water and wastewater, 21st edn, APHA. Washington. DC.
3.Mackie and McCartney, 1996, Practical Medical Microbiology, 14th ed., Vol. 2, Collee, Duguid, Fraser and Marmion (Eds.), Churchill Livingstone, Edinburgh.

Revision : 1 / 2011

Lysine Hydrochloride discs

DD049

Lysine Hydrochloride discs are used for lysine decarboxylation test.

Directions

To determine lysine decarboxylation, the Lysine disc (DD049) is added in the Decarboxyalse Broth Base, Moeller (M393) which is used as a negative control for studying decarboxylation or as a base for the addition of amino acids. The test organism is inoculated into the broth containing the Lysine disc (DD049). The inoculated tubes are overlaid with sterile mineral oil and incubated at 35-37°C for up to 4 days. A purple colour indicates the lysine decarboxylation.

Principle And Interpretation

Amino acid discs are used to differentiate the microorganisms on the basis of their ability to decarboxylate the amino acids. Lysine is an essential amino acid. Moeller introduced the Decarboxylase Broth for detecting the production of lysine and ornithine decarboxylase and arginine dihydrolase (1). Prior to Moellers work, bacterial amino acid decarboxylases were studied by Gale (2), Gale and Epps (3). Moeller Decarboxylase Broth Base (M393) contains dextrose which is the fermentable carbohydrate and pyridoxal is the co-factor for the decarboxylase enzyme. Bromo cresol purple and cresol red are the pH indicators in this medium. When the medium is inoculated with the dextrose fermenting bacteria, the pH is lowered due to acid production, which changes the colour of the indicator from purple to yellow. Acid produced stimulates decarboxylase enzyme. Decarboxylation of lysine yields cadaverine. Formation of this amine increases the pH of the medium, changing the colour of the indicator from yellow to purple. If the organisms do not produce the appropriate enzyme, the medium remains acidic, yellow in colour. Inoculated tubes must be protected from air with a layer of sterile mineral oil. Exposure to air may cause alkalinization at the surface of the medium which makes the test invalid.

Positive Test: Colour of the medium changes from yellow to purple

Negative Test: Colour of the medium changes to yellow or there is no change

Quality Control

Appearance

Filter paper discs of 10 mm diameter

Cultural Response

Cultural characteristics observed in Moeller Decarboxylase Broth Base (M393) with added Lysine Hydrochloride discs (DD049) after an incubation at 35-37°C upto 4 days (Inoculated tubes are overlaid with sterile mineral oil) .

Cultural Response

Organism	Inoculum (CFU)	Lysine decarboxylation
Cultural Response		
Citrobacter freundii ATCC 8090	50-100	negative reaction, yellow colour
Enterobacter aerogenes ATCC 13048	50-100	positive reaction, purple colour
Escherichia coli ATCC 25922	50-100	variable reaction
Klebsiella pneumoniae ATCC 13883	50-100	positive reaction, purple colour
Proteus mirabilis ATCC 25933	50-100	negative reaction, yellow colour

Proteus vulgaris ATCC 13315	50-100	negative reaction, yellow colour
Pseudomonas aeruginosa ATCC 9027	50-100	negative reaction, yellow colour
Salmonella Paratyphi A ATCC 9150	50-100	negative reaction, yellow colour
Salmonella Typhi ATCC 6539	50-100	positive reaction, purple colour
Serratia marcescens ATCC 8100	50-100	positive reaction, purple colour
Shigella dysenteriae ATCC 13313	50-100	negative reaction, yellow colour
Shigella flexneri ATCC 12022	50-100	negative reaction, yellow colour
Shigella sonnei ATCC 25931	50-100	negative reaction, yellow colour

Storage and Shelf Life

Store the discs at 10-30°C. Use before expiry date on the label.

Reference

1. Moeller V., 1955, Acta Pathol. Microbiol. Scand. 36:158.
2. Gale G. F., 1940, Biochem. J., 34:392.
3. Gale and Epps, 1943,Nature, 152:327.

Revision : 1 / 2011

Arginine Hydrochloride discs

DD050

Arginine hydrochloride discs are used for Arginine hyrolysation test.

Directions

To determine Arginine hydrolysation, the Arginine disc (DD050) is added in the Decarboxyalse Broth Base, Moeller (M393) which is used as a negative control for studying hydrolysation or as a base for the addition of amino acids. The test organism is inoculated into the broth containing the Arginine disc (DD050). The inoculated tubes are overlaid with sterile mineral oil and incubated at 35-37°C for up to 4 days. A purple colour indicates the Arginine hydrolysation.

Principle And Interpretation

Amino acid discs are used to differentiate the microorganisms on the basis of their ability to decarboxylate the amino acids. Arginine is an non essential amino acid. Moeller introduced the Decarboxylase Broth for detecting the production of lysine and ornithine decarboxylase and arginine dihydrolase (1). Prior to Moellers work, bacterial amino acid decarboxylases were studied by Gale (2), Gale and Epps (3). Moeller Decarboxylase Broth Base (M393) contains dextrose which is the fermentable carbohydrate and pyridoxal is the co-factor for the decarboxylase/ dihydrolase enzyme. Bromo cresol purple and cresol red are the pH indicators in this medium. When the medium is inoculated with the dextrose fermenting bacteria, the pH is lowered due to acid production, which changes the colour of the indicator from purple to yellow. Acid produced stimulates dihydrolase enzyme. Hydrolysation of arginine yields putrescine. Formation of this amine increases the pH of the medium, changing the colour of the indicator from yellow to purple. If the organisms do not produce the appropriate enzyme, the medium remains acidic, yellow in colour. Inoculated tubes must be protected from air with a layer of sterile mineral oil. Exposure to air may cause alkalinization at the surface of the medium which makes the test invalid.

Positive Test: Colour of the medium changes from yellow to purple.

Negative Test: Colour of the medium changes to yellow or there is no change

Quality Control

Appearance

Filter paper discs of 10 mm diameter

Cultural Response

Cultural characteristics observed in Moeller Decarboxylase Broth Base (M393) with added Arginine Hydrochloride discs (DD050) after an incubation at 35-37°C up to 4 days (Inoculated tubes are overlaid with sterile mineral oil) .

Cultural Response

Organism	Inoculum (CFU)	Arginine decarboxylation
Cultural Response		
Citrobacter freundii ATCC 8090	50-100	variable reaction
Enterobacter aerogenes ATCC 13048	50-100	negative reaction, yellow colour
Escherichia coli ATCC 25922	50-100	variable reaction
Klebsiella pneumoniae ATCC 13883	50-100	negative reaction, yellow colour
Proteus mirabilis ATCC 25933	50-100	negative reaction, yellow colour

Proteus vulgaris ATCC 13315	50-100	negative reaction, yellow colour
Pseudomonas aeruginosa ATCC 9027	50-100	positive reaction, purple colour
Salmonella Paratyphi A ATCC 9150	50-100	delayed positive reaction/ positive reaction, purple colour
Salmonella Typhi ATCC 6539	50-100	delayed positive reaction / negative reaction, yellow colour
Serratia marcescens ATCC 8100	50-100	negative reaction, yellow colour
Shigella dysenteriae ATCC 13313	50-100	delayed positive reaction/ negative reaction, yellow colour
Shigella flexneri ATCC 12022	50-100	delayed positive reaction/ negative reaction, yellow colour
Shigella sonnei ATCC 25931	50-100	variable reaction

Storage and Shelf Life

Store the discs at 10-30°C. Use before expiry date on the label.

Reference

1. Moeller V., 1955, Acta Pathol. Microbiol. Scand. 36:158.
2. Gale G. F., 1940, Biochem. J., 34:392.
3. Gale and Epps, 1943,Nature, 152:327.

Revision : 1 / 2011

Ornithine Hydrochloride Discs

DD051

Ornithine Hydrochloride discs are used for Ornithine decarboxylation test.

Directions

To determine ornithine decarboxylation, the Ornithine disc (DD051) is added in the Decarboxyalse Broth Base, Moeller (M393) which is used as a negative control for studying decarboxylation or as a base for the addition of amino acids. The test organism is inoculated into the broth containing the Ornithine disc (DD051). The inoculated tubes are overlaid with sterile mineral oil and incubated at 35-37°C for up to 4 days. A purple colour indicates the Ornithine decarboxylation.

Principle And Interpretation

Amino acid discs are used to differentiate the microorganisms on the basis of their ability to decarboxylate the amino acids. Ornithine is an essential amino acid. Moeller introduced the Decarboxylase Broth for detecting the production of lysine and ornithine decarboxylase and arginine dihydrolase (1). Prior to Moellers work, bacterial amino acid decarboxylases were studied by Gale (2), Gale and Epps (3). Moeller Decarboxylase Broth Base (M393) contains dextrose which is the fermentable carbohydrate and pyridoxal is the co-factor for the decarboxylase enzyme. Bromo cresol purple and cresol red are the pH indicators in this medium. When the medium is inoculated with the dextrose fermenting bacteria, the pH is lowered due to acid production, which changes the colour of the indicator from purple to yellow. Acid produced stimulates decarboxylase enzyme. Ornithine decarboxylation yields putrescine. Formation of this amine increases the pH of the medium, changing the colour of the indicator from yellow to purple. If the organisms do not produce the appropriate enzyme, the medium remains acidic, yellow in colour. Inoculated tubes must be protected from air with a layer of sterile mineral oil. Exposure to air may cause alkalinization at the surface of the medium which makes the test invalid.

Positive Test: Colour of the medium changes from yellow to purple

Negative Test: Colour of the medium changes to yellow or there is no change

Quality Control

Appearance

Filter paper discs of 10 mm diameter

Cultural Response

Cultural characteristics observed in Moeller Decarboxylase Broth Base (M393) with added Ornithine Hydrochloride discs (DD051) after an incubation at 35-37°C up to 4 days (Inoculated tubes are overlaid with sterile mineral oil) .

Cultural Response

Organism	Inoculum (CFU)	Ornithine decarboxylation
Cultural Response		
Citrobacter freundii ATCC 8090	50-100	variable reaction
Enterobacter aerogenes ATCC 13048	50-100	positive reaction, purple colour
Escherichia coli ATCC 25922	50-100	variable reaction
Klebsiella pneumoniae ATCC 13883	50-100	negative reaction, yellow colour
Proteus mirabilis ATCC 25933	50-100	positive reaction, purple colour

Proteus vulgaris ATCC 13315	50-100	negative reaction, yellow colour
Pseudomonas aeruginosa ATCC 9027	50-100	negative reaction, yellow colour
Salmonella Paratyphi A ATCC 9150	50-100	positive reaction, purple colour
Salmonella Typhi ATCC 6539	50-100	negative reaction, yellow colour
Serratia marcescens ATCC 8100	50-100	positive reaction,purple colour
Shigella dysenteriae ATCC 13313	50-100	negative reaction, yellow colour
Shigella flexneri ATCC 12022	50-100	negative reaction, yellow colour
Shigella sonnei ATCC 25931	50-100	positive reaction, purple colour

Storage and Shelf Life

Store the discs at 10-30°C. Use before expiry date on the label.

Reference

1. Moeller V., 1955, Acta Pathol. Microbiol. Scand. 36:158.
2. Gale G. F., 1940, Biochem. J., 34:392.
3. Gale and Epps, 1943,Nature, 152:327.

Revision : 1 / 2011

PolyB Selective Supplement

FD003

An antibiotic supplement recommended for the selective isolation of various microorganisms.

Composition

Per vial sufficient for 500/ 1000 ml medium

*Ingredients	Concentration
Polymyxin B sulphate	50000Unit

Directions:

Rehydrate the contents of one vial aseptically with 2 ml sterile distilled water. Mix well and aseptically add it to 475 ml of sterile, molten Bacillus Cereus Agar Base M833 /Bacillus Cereus HiVeg™ Agar Base MV833 /Bacillus Cereus HiCynth™ Agar Base MCD833 or to 450 ml of KG Agar Base M658 /KG HiVeg™ Agar Base MV658 /MYP Agar Base M636 / M636S / MYP HiVeg™ Agar Base MV636/ MYP Agar Base, Granulated (Phenol Red Egg Yolk Polymyxin Agar Base, Granulated) GM636/MYP HiCynth™ Agar Base (Phenol Red Egg Yolk Polymyxin HiCynth™ Agar Base) MCD636 / MYP Agar Base M636F. Modified MYP Agar Base M1139 /Modified MYP HiVeg™ Agar Base MV1139 /Bacillus cereus Selective Agar Base (MYP) ISO 7932 M1139I along with 25 ml/50 ml Egg Yolk Emulsion FD045 to make a total volume of 500 ml or to 500 ml of SDS Agar M1155 /SDS HiVeg™ Agar MV1155 /Salt Polymyxin Broth Base M821/M821I/Salt Polymyxin HiVeg™ Broth Base MV821/HiCrome™ Staph Agar Base, Modified M1837/ Soyabean Casein Digest Medium Base M011F. Mix well and pour into sterile petri plates / tubes.

Type of specimen

Clinical- Faeces, abscess, wound samples etc; Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2). For food samples, follow appropriate techniques for sample collection and processing as per guidelines (3). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg (Ed.),2004, Clinical Microbiology Procedures Handbook, Vol.3, American Society for Microbiology, Washington. D.C.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology,11th Edition. Vol. 1.
3. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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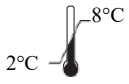

Storage temperature

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Technical Data

Bos Selective Supplement FD004

An antibiotic supplement for the selective isolation of *Bordetella pertussis*.

Composition

Per vial sufficient for 500 ml/ 1000 ml medium

Ingredients	Concentration
Cephalexin	20mg

Directions:

Rehydrate the content of 1 vial aseptically with 2 ml of sterile distilled water. Mix well and aseptically add it to 500 ml of sterile, molten, cooled (45-50°C) Bordet Gengou Agar Base M175/ M175A/ Bordet Gengou HiVeg™ Agar Base MV175 / MV175A or 1000 ml of sterile, molten Charcoal Agar Base w/Niacin M1053/ Charcoal HiVeg™ Agar Base w/Niacin MV1053 together with 10% v/v defibrinated horse blood. Mix well and pour into sterile petri plates. The vial content may be added to 500 ml of sterile half strength Charcoal Agar Base M344/ Charcoal HiVeg™ Agar Base MV344 with 10% v/ v defibrinated horse blood for use as a transport medium for *Bordetella pertussis*.

Type of specimen

Clinical samples -Pharyngeal extracts, nasopharyngeal secretions and pre-nasal swabs.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

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IVD ***In vitro* diagnostic medical device**

CE **CE Marking**

2°C – 8°C **Storage temperature**

Do not use if package is damaged

CC Selective Supplement I

FD010

An antibiotic supplement recommended for the selective isolation of *Clostridium difficile*.

Composition

Per vial sufficient for 500 ml medium

*Ingredients	Concentration
D-Cycloserine	250mg
Cefoxitin	8mg

Directions:

Rehydrate the contents of one vial aseptically with 2 ml sterile distilled water. Mix well and aseptically add along with 7% v/v defibrinated horse blood to 500 ml sterile, molten, cooled (45-50°C) Clostridium Difficile Agar Base M836 / Clostridium Difficile HiVeg™ Agar Base MV836 / Clostridium Brazier Agar Base M1803. Mix well and pour into sterile petri plates. Sheep blood may be used in place of horse blood but some strains of the organism will show a slightly reduced growth.

Type of specimen

Clinical samples : stool, abscess, etc.; Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2). For Food samples follow appropriate techniques for handling specimens as per established guidelines (3). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

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Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

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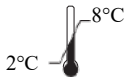

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Technical Data

T.S.C. Supplement

FD014

An antibiotic supplement, recommended for the selective isolation of *Clostridium perfringens*.

Composition

Per vial sufficient for 500 ml medium

*Ingredients	Concentration
D-Cycloserine	200mg

Directions:

Rehydrate the contents of 1 vial aseptically with 2 ml sterile distilled water. Mix well and aseptically add to 475 ml of sterile, molten, cooled (45-50ºC) Perfringens Agar Base (T.S.C./S.F.P.)M837/Perfringens HiVeg™ Agar Base (T.S.C. / S.F.P.) MV837/Perfringens Agar Base, Granulated (Tryptose Sulphite Cycloserine Agar Base, Granulated) (T.S.C./S.F.P. Agar Base, Granulated)GM837/Perfringens HiCynth™ Agar Base (T.S.C/S.F.P HiCynth™ Agar Base) MCD837 alongwith 25 ml of Egg Yolk Emulsion FD045 or 500 ml of sterile, molten, cooled (45-50ºC) Perfringens Agar Base M837I or Tryptose Cycloserine Dextrose Agar Base M1233 /Tryptose Cycloserine Dextrose HiVeg™ Agar Base MV1233 or Tryptose Cycloserine Azide Agar Base M1279 or Tryptone Yeast Sodium sulphite Agar Base M2046I or S.F.P. Agar Base M1005F. Mix well and pour into sterile petri plates.

Type of specimen

Clinical- stool, abscess, etc.; Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
For food samples, follow appropriate techniques for sample collection and processing as per guidelines (3).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

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Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

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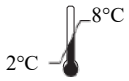

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GC Selective Supplement

FD021

An antibiotic and enrichment supplement recommended for the selective isolation of pathogenic *Neisseria*.

Composition

Per vial sufficient for 500 ml medium

*Ingredients	Concentration
Yeast autolysate	5g
Colistin methane sulphonate	3.750mg
Dextrose	0.750g
Trimethoprim	2.500mg
Sodium bicarbonate	0.075g
Nystatin	6250Units
Vancomycin	1.500mg

Directions:

Rehydrate the contents of 1 vial aseptically with 15 ml of sterile distilled water. Mix well and add aseptically to 500 ml of sterile, molten, cooled (45-50°C) GC Agar Base M434 / GC HiVeg™ Agar Base MV434 / Thayer Martin Medium Base M413 / Thayer Martin HiVeg™ Medium MV413 along with separately prepared FO Growth Supplement FD022 Base. Mix well and pour into sterile petri plates.

Type of specimen

Clinical samples : urine, respiratory exudates etc.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

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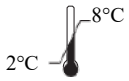

Storage temperature

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Technical Data

FO Growth Supplement

FD022

An enrichment supplement recommended for isolation of *Neisseria*.

Composition

Per bottle

Ingredients	Concentration
Haemoglobin powder	50G / 100G

Directions:

A specially prepared powder whose 2% w/v aqueous solution is autoclavable. The aqueous solution is chocolate brown, opaque and contains flocculent dispersible precipitate. It is used for 500 ml medium preparation of GC Agar Base M434 - 5 gms / GC HiVeg™ Agar Base MV434 - 5 gms / Thayer Martin Medium Base M413 - 5 gms / Thayer Martin HiVeg™ Medium Base MV413 - 5 gms / Chocolate No. 2 Agar Base M1548 - 5 gms / Chocolate No. 2 HiVeg™ Agar Base MV1548 - 5 gms / Tellurite Blood Agar Base M1260 - 10 gms / Chocolate Agar Base M103 - 10 gms / Chocolate HiVeg™ Agar Base MV103 - 10 gms / Modified Protease Agar M1606 - 10 gms / Transgrow Medium Base M1149 - 2 gms.

Type of specimen

Clinical samples - Stool, urine, respiratory exudates, etc.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use only. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

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CE Marking

2°C – 8°C **Storage temperature**

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Technical Data

V.C.N. Supplement

FD023

An antibiotic supplement, recommended for the selective isolation of *Neisseria gonorrhoeae* and *Neisseria meningitidis*.

Composition

Per vial sufficient for 500 ml medium

*Ingredients	Concentration
Vancomycin	1.500mg
Colistin methane sulphonate	3.750mg
Nystatin	6250Units

Directions:

Rehydrate the contents of 1 vial aseptically with 2 ml sterile distilled water. Mix well and aseptically add it to Thayer Martin Medium Base M413 / Thayer Martin HiVeg™ Medium Base MV413- for 440 ml of medium aseptically add 50ml sterile lysed blood and one vial of V.C.N. Supplement FD023 along with one vial of Vitamino Growth Supplement FD025. FO Growth Supplement (250ml) FD022 can be used instead of sterile lysed blood in 250ml of medium. In GC Agar Base M434/ GC HiVeg™ Agar Base MV434 for 250 ml of can be used instead of sterile lysed blood in 250 ml of FO Growth Supplement FD022 and GC Selective Supplement FD021, one vial of GC Selective Supplement FD021 for additional selectivity. If desired V.C.N. Supplement FD023 can be used along with GC Selective Supplement FD021 for additional selectivity.

In Transgrow Medium Base M1149 for 440 ml of medium aseptically add 50 ml of sterile FO Growth Supplement FD022 and one vial of V.C.N. Supplement FD023 along with one vial of Vitamino Growth Supplement FD025.

Type of specimen

Clinical samples - Stool, urine, respiratory exudates, etc.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use only. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2-8°C. Use before expiry date on the label.

Disposal

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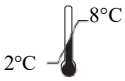

Storage temperature

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Vitamino Growth Supplement (Twin Pack)

FD025

A chemically defined growth supplement recommended for cultivation of a wide variety of microorganisms.

Composition

Per vial sufficient for 500 ml medium

Ingredients	Concentration
Part I	"
Vitamin B12	0.100mg
L-Glutamine	100mg
Adenine sulphate	10mg
Guaninine hydrochloride	0.300mg
p-Aminobenzoic acid (PABA)	0.130mg
L-Cystine	11mg
NAD (Coenzyme I)	2.500mg
Cocarboxylase	1mg
Ferric nitrate	0.200mg
Thiamine hydrochloride	0.030mg
Cysteine hydrochloride	259mg
Part II (Rehydrating fluid)	"
Dextrose	1g
Distilled water	10ml

Directions:

Dissolve the contents of Part I in 10 ml of Part II Rehydrating fluid. Aseptically add this to 240 ml of sterile, molten, cooled (45-50ºC) G.C. Agar Base M434 / G.C. HiVeg™ Agar Base MV434 / Thayer Martin Medium Base M413 / Thayer Martin HiVeg™ Medium Base MV413 / Chocolate Agar Base M103 / Chocolate HiVeg™ Agar Base MV103 along with 250 ml of sterile 2% haemoglobin solution or to 500 ml of sterile, molten, cooled (45-50ºC) Modified Proteose Agar M1606 / Transgrow Medium Base M1149 / Mycoplasma Urogenital Broth Base M1374 Martin Lewis Agar Base M2085 or to 1000 ml sterile, molten, cooled (45-50ºC) Tellurite Blood Agar Base M1260 . Mix gently and pour into sterile petri plates.

Type of specimen

Clinical samples - Stool, urine, nasopharyngeal and oropharyngeal swabs, etc.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

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Storage and Shelf Life

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Disposal

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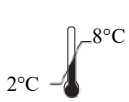
CE **CE Marking**



Storage temperature

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Cetrinix Selective Supplement

FD029

An antibiotic supplement recommended for the selective isolation of *Pseudomonas* species.

Composition

Per vial sufficient for 500 ml medium

*Ingredients	Concentration
Cetrimide	100mg
Nalidixic acid	7.500mg

Directions:

Rehydrate the contents of 1 vial aseptically with 2 ml of sterile distilled water. Mix well and aseptically add it to 500 ml of sterile, molten, cooled (45-50°C) Pseudomonas Agar Base M085 / Pseudomonas HiVeg™ Agar Base MV085. Pseudomonas Agar Base, Granulated GM085. Mix well and pour into sterile petri plates.

Type of specimen

Clinical samples - pus, urine, body fluids, etc; Water samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
For water samples follow appropriate techniques for handling specimens as per established guidelines (3).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg (Ed.),2004, Clinical Microbiology Procedures Handbook, Vol.3, American Society for Microbiology, Washington. D.C.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology,11th Edition. Vol. 1.
3. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.

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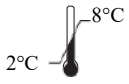

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CTN Selective Supplement

FD034

An antibiotic supplement recommended for the selective isolation of *Yersinia enterocolitica*.

Composition

Per vial sufficient for 500 ml medium

*Ingredients	Concentration
Cefsulodin	7.500mg
Triclosan(Irgasan)	2mg
Novobiocin	1.250mg

Directions:

Rehydrate the contents of 1 vial aseptically with 2 ml of sterile distilled water and 1 ml of ethanol. Mix gently to dissolve the contents completely and aseptically add to 500 ml of sterile, molten, cooled (45-50ºC) Yersinia Selective Agar Base M843/Yersinia Selective HiVeg™ Agar Base MV843.Yersinia Selective Agar Base, w/1.2% Agar M843F. HiCrome™ Yersinia Agar Base M2025. Mix well and pour into sterile petri plates.

Type of specimen

Clinical samples - faeces, urine, etc.; Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
For food samples follow appropriate techniques for handling specimens as per established guidelines (3).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

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1. Isenberg (Ed.),2004, Clinical Microbiology Procedures Handbook, Vol.3, American Society for Microbiology, Washington. D.C.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology,11th Edition. Vol. 1.
3. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, American Public Health Association, Washington, D.C.

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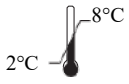

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Egg Yolk Emulsion (50 ml/100 ml per vial)

FD045

Sterile stabilized emulsion of egg yolk recommended for use in various culture media.

Composition

Ingredients	Concentration (100 ml per vial)	Concentration (50 ml per vial)
Egg yolk	30ml	15ml
Sterile saline	70ml	35ml

Directions:

Warm up the refrigerated egg yolk emulsion to room temperature. Shake well to attain uniform emulsion. (Since on refrigeration emulsion has a tendency to form layers or small lumps). Aseptically add 50 ml emulsion in 950 ml of sterile, molten, cooled (45-50°C) Baird Parker Agar Base M043/ Baird Parker Agar Base M043S/ Baird Parker HiVeg™ Agar Base MV043/ Baird Parker HiCynth™ Agar MCD043/ Baird Parker Agar (Agar Medium O) ME043/ Baird Parker Agar (Agar Medium O) M043B/ Baird Parker Agar Base, Granulated GM043I/ Baird Parker Agar Base, Granulated GM043/ Baird Parker Agar Medium (In accordance with IP 1996) MM043/ Baird Parker Agar Medium MU043/ Baird Parker Agar Base M043I / Mannitol Salt Agar Base M118/Mannitol Salt Agar Base, Granulated GM118/Mannitol Salt HiCynth™ Agar Base MCD118 / Mannitol Salt HiVeg™ Agar Base MV118/ Baird Parker Agar Base w/Sulpha M1140.

Aseptically add in 475 ml of sterile, molten, cooled (45-50°C) Bacillus Cereus Agar Base M833/ Bacillus Cereus HiVeg™ Agar Base MV833/ Bacillus Cereus HiCynth™ Agar Base MCD833

OR

Aseptically add 100 ml emulsion in 900 ml of sterile, molten, cooled (45-50°C) McClung Toabe Agar Base M387/ McClung Toabe HiVeg™ Agar Base MV387/K.R.A.N.E.P. Agar Base M583/K.R.A.N.E.P. HiVeg™ Agar Base MV583 / MYP Agar Base (Phenol Red Egg Yolk Polymyxin Agar Base) M636/ M636S/ MYP HiVeg™ Agar Base (Phenol Red Egg Yolk Polymyxin HiVeg™ Agar Base MV636/ MYP Agar Base, Granulated (Phenol Red Egg Yolk Polymyxin Agar Base, Granulated) GM636 / MYP HiCynth™Agar Base (Phenol Red Egg Yolk Polymyxin HiCynth™ Agar Base) MCD636/ KG Agar Base M658/KG HiVeg™ Agar Base MV658/ L.D. Egg Yolk Agar Base M744/ Egg Yolk Agar Base M808 / Egg Yolk Agar Base, HiVeg™ MV808/ Egg Yolk Agar Base, Modified M1043 / Modified MYP Agar Base M1139/ Bacillus cereus Selective Agar Base (MYP) ISO 7932 M1139I /Modified MYP HiVeg™ Agar Base MV1139. Aseptically add in 890 ml of sterile, molten, cooled (45-50°C) TPEY Agar Base M402/ TPEY HiVeg™ Agar Base MV402.

Aseptically add 450 ml of sterile, molten, cooled (45-50°C) in C. botulinum Isolation Agar Base M911/ C. botulinum Isolation HiVeg™ Agar Base MV911

OR

Aseptically add 25 ml emulsion in 475 ml of sterile, molten, cooled (45-50°C) Perfringens Agar Base T.S.C./S.F.P.AgarBase) M837/ Perfringens Agar Base, Granulated (Tryptose Sulphite Cycloserine Agar Base, Granulated) (T.S.C./S.F.P. Agar Base, Granulated) GM837/ Perfringens HiCynth™ Agar Base (T.S.C/S.F.P HiCynth™ Agar Base) MCD837/ Perfringens HiVeg™ Agar Base (T.S.C. / S.F.P. HiVeg™ Agar Base) MV837/ S.F.P. Agar Base M1005/ S.F.P. HiVegTM Agar Base MV1005.

OR

Aseptically add 80 ml emulsion in 920 ml of sterile, molten, cooled (45-50°C) Anaerobic Egg Agar Base M902 / Anaerobic Egg HiVeg™ Agar Base MV902.

OR

Aseptically add 20 ml emulsion in 90 ml of sterile, molten, cooled (45-50°C) Polymyxin Pyruvate Egg Yolk Mannitol Bromothymol Blue Agar Base (PEMBA) M1484.

OR

Aseptically add 15 ml emulsion in 420 ml of sterile, molten, cooled (45-50°C) Willis and Hobb's Medium Base M1375.

OR

Aseptically add 7ml of Emulsion in 93ml of sterile, molten, cooled (45-50°C) Lipovitellin Salt Mannitol Agar Base M627.

OR

Aseptically add 2 vials of Clostridium Difficile Supplement (FD010), 40 ml of Egg Yolk Emulsion (FD045) together with 10 ml lysed horse blood in 1000 ml of sterile, molten, cooled (45-50°C) Clostridium Brazier Agar Base M1803

OR

Aseptically add 50ml of concetrated Egg yolk emulsion (FD045) and rehydrated contents of 1 vial of LM Selective Supplement (FD330) in 950 ml of sterile, molten, cooled (45-50°C) L.mono Selective Agar Base (LM Selective Agar Base) M1994.

Mix well and pour into sterile petri plates.

Type of specimen

Clinical samples - faeces, urine etc. ; Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
For Food samples follow appropriate techniques for handling specimens as per established guidelines (3).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg (Ed.),2004, Clinical Microbiology Procedures Handbook, Vol.3, American Society for Microbiology, Washington. D.C.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology,11th Edition. Vol. 1.
3. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, American Public Health Association, Washington, D.C.

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2°C 8°C **Storage temperature**

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Egg Yolk Tel Emulsion (50 ml per vial)

FD046L

Sterile stabilized tellurite emulsion of egg yolk recommended for identification of *Staphylococcus* species.

Composition

Ingredients	Concentration
Egg yolk	15ml
Sterile saline	32ml
Sterile 3.5%potassium tellurite solution	3ml
Final pH (at 25°C)	7.6±0.2

Directions:

Warm up the refrigerated Egg Yolk Tel Emulsion to 40-45°C. Shake well to attain uniform emulsion (since on refrigeration emulsion has a tendency to form layers or small lumps). Aseptically add 50 ml in 950 ml of sterile, molten, cooled (45-50°C) Baird Parker Agar Base M043 /M043S/Baird Parker Agar Base, Granulated GM043 /Baird Parker HiCynth™ Agar Base MCD043 /Baird Parker HiVeg™ Agar Base MV043/ Baird Parker Agar Base w/Sulpha M1140/ HiCrome™ Aureus Agar Base M1468. Aseptically add 100 ml in 900 ml of sterile, molten, cooled (45-50°C) Clostridium Perfringens Agar Base M2070. Mix well and pour into sterile petri plates.

Type of specimen

Clinical samples - Skin scrapping, wounds, faeces, etc. ; Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
For Food samples follow appropriate techniques for handling specimens as per established guidelines (3).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

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1. Isenberg (Ed.),2004, Clinical Microbiology Procedures Handbook, Vol.3, American Society for Microbiology, Washington. D.C.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology,11th Edition. Vol. 1.
3. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, American Public Health Association, Washington, D.C.

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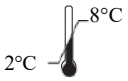

Storage temperature

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PTe 3.5% Selective Supplement (1 ml per vial) FD047

Recommended for the selective isolation of Staphylococci and Corynebacteria.

Composition

Per vial sufficient for medium as specified in direction.

Ingredients	Concentration
Potassium tellurite	0.350g
Distilled water	1ml

Directions:

Warm up the refrigerated contents of one vial to 45-50ºC. Add aseptically 9 ml sterile distilled water, mix well and add 3 ml in 950 ml sterile, molten, cooled (45-50ºC) Baird Parker Agar Base M043 / M043S / Baird Parker Agar Base, Granulated GM043/ Baird Parker HiCynth™ Agar Base MCD043/ Baird Parker HiVeg™ Agar Base MV043 / Baird Parker Agar Base w/ Sulpha M1140 along with 50 ml Concentrated Egg Yolk Emulsion FD045 or 10 ml in 1000 ml Hoyle Medium Base M015 / Hoyle HiVeg™ Medium Base MV015 alongwith 50 ml of laked blood / Giolitti-Cantoni Broth Base M584/ Giolitti-Cantoni Broth Base, Granulated GM584. Mix well and pour into sterile petri plates.

Type of specimen

Clinical samples - Throat swab, nasal swab, wound swab, pus, etc.; Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
For food samples follow appropriate techniques for handling specimens as per established guidelines (3).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

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Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg (Ed.),2004, Clinical Microbiology Procedures Handbook, Vol.3, American Society for Microbiology, Washington. D.C.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology,11th Edition. Vol. 1.
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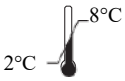

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U40 Supplement (5 ml per vial)

FD048

Filter sterilized urea solution recommended for detection of urease activity.

Composition

Per vial sufficient for 100 ml medium

Ingredients	Concentration
Urea	2g
Distilled water	5ml
Final pH (at 25°C)	8.0±0.2

Directions:

Warm up the refrigerated Urea Solution to room temperature and aseptically add 5 ml in 95 ml sterile, molten, cooled (45-50ºC) Urea Broth Base M111 / Urea Agar Base (Christensen) M112 / M112S / M112I / Urea HiVeg™ Agar Base (Christensen) MV112 / MIU Medium Base M1076 / Hemmes Medium Base M775 or 25 ml in 975 ml Kohn Two Tube Medium No. 1 Base M142 / Kohn Two Tube HiVeg™ Medium No.1 Base MV142 or to Yersinia Identification Broth Base M1221 as desired. Mix well and dispense in sterile tubes.

Type of specimen

Isolated microorganism from clinical, food and water samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2). For food samples, follow appropriate techniques for sample collection and processing as per guidelines (3). For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards(4). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

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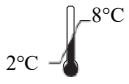

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PTe 1% Selective Supplement (1 ml per vial)

FD052

(Final concentration after addition of 8.9 ml sterile distilled water = 1%)

Recommended for the selective isolation of *Staphylococci* and *Corynebacteria*.

Composition

To achieve 1% solution dilute the contents in 8.9 ml sterile distilled water.

Ingredients	Concentration
Potassium tellurite Concentrate	1.100ml

Directions:

Warm up the refrigerated contents of one vial to room temperature. Add aseptically 8.9 ml sterile distilled water, mix well and add in sterile, molten, cooled (45-50°C) Baird Parker Agar Base M043B/ MM043 / MU043/ ME043/ Vogel Johnson Agar Base w/o Tellurite M023/ MM023/MU023/ Vogel Johnson HiVeg™ Agar Base w/o Tellurite MV023/ Vogel Johnson Agar w/1.5% Agar M023F/ Vogel Johnson HiCynth™ Agar Base w/o Tellurite (V.J. HiCynth™ Agar) MCD023/ Mycoplasma Broth Base w/ CV M268/ Mycoplasma HiVeg™ Broth Base w/CV MV268/ TPEY Agar Base M402/ TPEY HiVeg™ Agar Base MV402/ Tellurite Glycine Agar Base M448/ Cholera Medium Base M558/ Cholera HiVeg™ Medium Base MV558/ Giolitti-Cantoni Broth Base M584I / Dextrose Proteose Peptone Agar Base M734/ Dextrose Proteose Peptone HiVeg™ Agar Base MV734/ Cystine Tellurite Agar Base M881 / Diphtheria Virulence Agar Base M882 / Diphtheria Virulence HiVeg™ Agar Base MV882 / Tryptone Tellurite Agar Base M1056/ Baird Staphylococcus Enrichment Broth Base M1091/ Baird Staphylococcus Enrichment Broth Base, Granulated GM1091/ Tellurite Blood Agar Base M1260/ Mitis Salivarius Agar Base M259/ Mitis Salivarius HiVeg™ Agar Base MV259/ Monsur Medium Base M474/ HiCrome™ ECO157:H7 Agar, Modified M1574A / as desired. Mix well and dispense in sterile Petri plates or tubes.

Type of specimen

Clinical samples- Throat swab, nasal swab, wound swab, pus, etc.; Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
For food samples follow appropriate techniques for handling specimens as per established guidelines (3).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg (Ed.),2004, Clinical Microbiology Procedures Handbook, Vol.3, American Society for Microbiology, Washington. D.C.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology,11th Edition. Vol. 1.
3. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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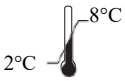
IVD ***In vitro* diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
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CE Marking

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PALCAM Selective Supplement

FD061

An antimicrobial supplement recommended for the selective isolation and identification of *Listeria monocytogenes*.

Composition

Per vial sufficient for 500 ml medium

*Ingredients	Concentration
Polymyxin B sulphate	5000IU
Ceftazidime	10mg
Acriflavine hydrochloride	2.500mg

Directions:

Rehydrate the contents of one vial aseptically with 5 ml sterile distilled water and aseptically add to 500 ml sterile, molten, cooled (45-50ºC) Listeria Identification Agar Base (PALCAM) M1064 / Listeria Identification Agar Base (PALCAM), Granulated GM1064 / Listeria Identification HiVeg™ Agar Base (PALCAM) MV1064, Listeria Identification Broth Base (PALCAM) M1090/ Listeria Identification HiVeg™ Broth Base (PALCAM) MV1090 / Listeria Identification Broth Base (PALCAM), Granulated GM1090. Mix well and dispense as desired.

Type of specimen

Clinical samples - Stool, urine, etc; Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
For food samples follow appropriate techniques for handling specimens as per established guidelines (3).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg (Ed.),2004, Clinical Microbiology Procedures Handbook, Vol.3, American Society for Microbiology, Washington. D.C.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology,11th Edition. Vol. 1.
3. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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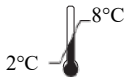

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Technical Data

KL Virulence Enrichment (20 ml per vial)

FD072

Recommended for cultivation and in vitro toxicity testing of *Corynebacterium diphtheria*.

Composition

Per vial sufficient for 100 ml medium

Ingredients	Concentration
Acicase™#	10.00g
Glycerol	10.0ml
Polysorbate 80	10.0ml

Equivalent to Casein acid hydrolysate

Directions:

Warm up the refrigerated contents of 1 vial to 50°C and aseptically add 2 ml in 100 mm sterile petri plate along with 0.5 ml of 1% PTe Selective Supplement FD052. Quickly add 10 ml sterile molten, cooled (45-50°C) Diphtheria Virulence Agar Base M882/ Diphtheria Virulence HiVeg™ Agar Base MV882 . Mix well and pour into sterile Petri plate.

Type of specimen

Clinical samples- Throat swab, nasal swab, wound swab, pus, etc.; Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
For food samples follow appropriate techniques for handling specimens as per established guidelines (3).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg (Ed.),2004, Clinical Microbiology Procedures Handbook, Vol.3, American Society for Microbiology, Washington. D.C.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology,11th Edition. Vol. 1.
3. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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Revision : 04/2024

Technical Data

Tinsdale Selective Supplement (Part A & Part B) FD073

A selective supplement recommended for the isolation and presumptive identification of *Corynebacterium diphtheriae*.

Composition

Per vial sufficient for 1000 ml medium

Ingredients	Concentration
Part A	
Horse serum	100ml
Part B	
Potassium tellurite	1ml

Directions:

Warm up the refrigerated contents of Part B vial and aseptically add 29 ml sterile distilled water. Mix thoroughly. Aseptically add warmed up (to 50°C) contents of Part A and B vials to sterile, molten, cooled (45-50°C) Tinsdale Agar Base M314 / Tinsdale HiVeg™ Agar Base MV314 as required. Mix well and pour into sterile petri plates.

For 10 ml of M314 : 1.0 ml of Part A and 0.3 ml of Part B, is recommended.

Type of specimen

Clinical samples- Throat swab, nasal swab, wound swab, pus, etc.; Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
For food samples follow appropriate techniques for handling specimens as per established guidelines (3).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

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IVD ***In vitro* diagnostic medical device**

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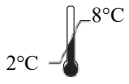

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Technical Data

NO 15 Selective Supplement

FD101

An antibiotic supplement, recommended for the rapid presumptive detection of *Salmonella* species in foods and feed materials.

Composition

Per vial sufficient for 1000 ml medium

*Ingredients	Concentration
Novobiocin	15mg

Directions:

Rehydrate the content of 1 vial aseptically with 5 ml of sterile distilled water and aseptically add to 1000 ml of sterile, cooled Lysine Iron Cystine Broth Base M845 / Lysine Iron Cystine HiVeg™ Broth Base MV845/ Double Modified Lysine Iron Agar Base M1909. Mix well and dispense as desired.

Type of specimen

Food samples; Water samples

Specimen Collection and Handling

For food samples follow appropriate techniques for handling specimens as per established guidelines (1).

For water samples follow appropriate techniques for handling specimens as per established guidelines (2).

After use, contaminated materials must be sterili ed by autoclaving before discarding.

Warning & Precautions

For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, American Public Health Association, Washington, D.C.

2. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater 23rd ed., APHA, Washington, D.C.

3. Isenberg (Ed.),2004, Clinical Microbiology Procedures Handbook, Vol.3, American Society for Microbiology, Washington. D.C.

4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology,11th Edition. Vol. 1.

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Revision :02/2023

Mup Selective Supplement

FD250

A selective supplement recommended for the selective isolation of *Bifidobacterium* species by colony count technique from milk products.

Composition

Per vial sufficient for 500 ml medium

*Ingredients	Concentration
Mupirocin	25mg
Sterile Distilled Water	5ml

Directions:

Warm up the refrigerated solution to room temperature and aseptically add 5 ml in 500 ml sterile, molten cooled (45-50°C) Bifidobacteria Selective Count Agar Base (BSC Propionate Agar Base) M1734/ Bifidobacterium Selective Count Agar Base, Granulated (BSC Propionate Agar Base, Granulated) GM1734. Mix well and pour into sterile Petri plates.

Type of specimen

Dairy samples

Specimen Collection and Handling

For dairy samples follow appropriate techniques for handling specimens as per established guidelines (1,2). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
2. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
3. Isenberg (Ed.),2004, Clinical Microbiology Procedures Handbook, Vol.3, American Society for Microbiology, Washington. D.C.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology,11th Edition. Vol. 1.

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Revision : 02/2022

NoCef Selective Supplement

FD274

Recommended for selective isolation & differentiation of *Salmonella* species.

Composition

Per vial sufficient for 1000 ml medium

*Ingredients	Concentration
Novobiocin	10mg
Cefsulodin	24mg

Directions:

Rehydrate the contents of 1 vial aseptically with 5 ml of sterile distilled water. Mix gently to dissolve the contents completely. Aseptically add the rehydrated contents to 1000 ml of sterile, cooled (45-50°C) HiCrome™ Selective Salmonella Agar Base M1842/ HiCrome™ Selective Salmonella HiCynth™ Agar Base MCD1842. Mix well and pour into sterile Petri plates.

Type of specimen

Clinical samples - Stool, urine, etc. Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
For Food samples follow appropriate techniques for handling specimens as per established guidelines (3).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg (Ed.),2004, Clinical Microbiology Procedures Handbook, Vol.3, American Society for Microbiology, Washington. D.C.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology,11th Edition. Vol. 1.
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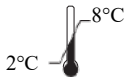

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Ch250 Selective Supplement

FD283R

An antibiotic supplement recommended for the selective isolation of *Candida* species.

Composition

Per vial sufficient for 500 ml medium

*Ingredients	Concentration
Chloramphenicol	250mg

Directions:

Rehydrate the contents of 1 vial aseptically with 2 ml of 95% queoua ethanol. Mix well and aseptically add to 500 ml of sterile, molten cooled (45-50ºC) HiCrome™ Candida Differential Agar Base M1297AR. Mix well and pour into sterile Petri plates.

Type of specimen

Clinical samples - Blood; Food and dairy samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2). For food and dairy samples follow appropriate techniques for handling specimens as per established guidelines (3,4). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning & Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Storage and Shelf Life

Store at 2 - 8°C. Use before expiry date on the label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1.Isenberg (Ed.),2004, Clinical Microbiology Procedures Handbook, Vol.3, American Society for Microbiology, Washington. D.C.

2.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology,11th Edition. Vol. 1.

3.American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.

4.Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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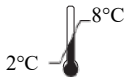
IVD ***In vitro* diagnostic medical device**

CE Marking



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Sabouraud Dextrose Broth, Granulated (Sabouraud Liquid Medium, Granulated)

GM033

Intended Use:

For cultivation of yeasts, moulds and aciduric microorganisms from clinical and non-clinical samples.

Composition**

Ingredients	Gms / Litre
Dextrose (Glucose)	20.000
Peptone, special	10.000
Final pH (at 25°C)	5.6±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 30.0 grams in 1000 ml purified/ distilled water. Heat if necessary to dissolve the medium completely. Mix well and dispense in tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Sabouraud Dextrose Agar is Carliers modifications (1) of the formulation described by Sabouraud (2) for the cultivation of fungi, particularly those associated with skin infections. The medium is also recommended by APHA (3). Sabouraud Dextrose Broth is also a modification by Sabouraud (4) and serves the same purpose as Sabouraud Dextrose Agar Medium 3.

Sabouraud dextrose media are peptone media supplemented with dextrose to support the growth of fungi. Peptone special provides carbon and nitrogen source, vitamins, minerals, amino acids and growth factors. Dextrose provides an energy source for the growth of microorganisms. The low pH favors fungal growth and inhibits contaminating bacteria from clinical specimens (5). The acid reaction of the final medium is inhibitory to a large number of bacteria making it particularly useful for cultivating fungi and aciduric microorganisms. For isolation of fungi from contaminated specimens, a selective medium should be inoculated simultaneously. Incubate cultures for 4 to 6 weeks before reporting as negative.

Type of specimen

Clinical : skin scrapings; Food and dairy samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (6,7).

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (3,8). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Since it is a general purpose medium, bacterial cultures will also grow.
2. Further isolation and biochemical tests should be carried out for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow colored granular medium

Colour and Clarity of prepared medium

Light amber coloured clear solution in tubes

Reaction

pH of 3.0% w/v aqueous solution at 25°C. pH : 5.6±0.2

pH

5.40-5.80

Cultural Response

Cultural characteristics was observed after an incubation at 20-25°C for 3-5 days.

Organism	Inoculum (CFU)	Growth
Candida albicans ATCC 10231 (00054*)	50 -100	luxuriant
Candida albicans ATCC 2091 (00055*)	50 -100	luxuriant
Aspergillus brasiliensis ATCC 16404 (00053*)	50 -100	luxuriant
Saccharomyces cerevisiae ATCC 9763 (00058*)	50 -100	luxuriant
Saccharomyces cerevisiae ATCC 2601	50 -100	good-luxuriant
Escherichia coli ATCC 8739 (00012*)	50 -100	Luxuriant (inhibited on media with low pH)
Escherichia coli ATCC 25922 (00013*)	50 -100	good-luxuriant
Escherichia coli NCTC 9002	50 -100	Luxuriant (inhibited on media with low pH)
Lactobacillus casei ATCC 334	50 -100	luxuriant

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (6,7).

Reference

1. Carlier G. I. M., 1984, Brit. J. Derm. Syph., 60:61
2. Sabouraud R., Les Teignes, Paris: Masson et Cie, 1910, p 553
3. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
4. Sabouraud R., 1892, Ann. Dermatol. Syphil. 3 : 1061.
5. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
6. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
7. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
8. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.

Revision :03/2023

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Thane (W) -400604, MS, India

IVD ***In vitro* diagnostic medical device**

10°C – 30°C **Storage temperature**

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE Marking

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Sabouraud Dextrose Agar, Granulated

GM063

Intended Use:

Recommended for the cultivation of yeasts, moulds and aciduric microorganisms from clinical and non-clinical samples.

Composition**

Ingredients	Gms / Litre
Dextrose (Glucose)	40.000
Mycological, peptone	10.000
Agar	15.000
Final pH (at 25°C)	5.6±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 65.0 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Sabouraud Dextrose Agar is Carlier's modification (1) of the formulation described by is a modification of Sabouraud Dextrose Agar which is described by Sabouraud (2) for the cultivation of fungi (yeasts, moulds), particularly useful for the fungi associated with skin infections. This medium is also employed to determine microbial contamination in food, cosmetics, and clinical specimens (3). Mycological Peptone provides nitrogenous compounds. Dextrose provides an energy source. High dextrose concentration and low pH favors fungal growth and inhibits contaminating bacteria from test samples (4).

Type of specimen

Food and dairy samples ; Clinical samples: skin scrapings

Specimen Collection and Handling

For food and dairy samples follow appropriate techniques for handling specimens as per established guidelines (5,6,7).
For clinical samples, follow appropriate techniques for sample collection and processing as per guidelines (8,9). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions:

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. For heavily contaminated samples, the plate must be supplemented with inhibitory agents for inhibiting bacterial growth with lower pH.
2. Some pathogenic fungi may produce infective spores which are easily dispersed in air, so examination should be carried out in safety cabinet
3. Further biochemical tests should be carried out for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to yellow coloured granular media.
Gelling
Firm, comparable with 1.5% Agar gel.
Colour and Clarity of prepared medium
Light yellow to amber coloured clear to slightly opalescent gel forms in Petri plates.

Reaction
Reaction of 6.5% w/v aqueous solution at 25°C (after sterilization). pH : 5.6±0.2
pH
5.40-5.80
Cultural Response
Cultural response was observed after an incubation at 20-25°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Candida albicans ATCC 10231 (00054*)	50 -100	Luxuriant (white colonies)	>=70 %
#*Aspergillus brasiliensis* ATCC 16404 (00053*)	50 -100	luxuriant	>=70 %
Candida albicans ATCC 2091 (00055*)	50 -100	luxuriant	>=70 %
Saccharomyces cerevisiae ATCC 9763 (00058*)	50 -100	luxuriant	>=70 %
Escherichia coli ATCC 8739 (00012*)	50 -100	luxuriant	>=70 %
Escherichia coli ATCC 25922 (00013*)	50 -100	luxuriant	>=70 %
Escherichia coli NCTC 9002	50 -100	luxuriant	>=70 %
Lactobacillus casei ATCC 334	50 -100	luxuriant	>=70 %
Trichophyton rubrum ATCC 28191		luxuriant	

Key : (*) - Corresponding WDCM numbers. (#) - Formerly known as *Aspergillus niger*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (8,9).

Reference

1.Carlier G. I. M., 1948, Brit. J. Derm. Syph., 60:61.
2.Sabouraud K., 1892, Ann. Dermatol. Syphilol, 3:1061.
3.Bacteriological Analytical Manual, 8th Edition, Revision A, 1998. AOAC, Washington D.C.
4. Murray PR, Baren EJ, Jorgensen JH, Pfaller MA, Yolken RH (editors) 2003, Manual of clinical Microbiology, 8th ed., ASM, Washington, D.C.
5. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
6.Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
7. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.8.
8.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
9.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Revision : 04/2022

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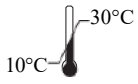
IVD ***In vitro*** **diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE **CE Marking**

Do not use if package is damaged

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Lactobacillus MRS Broth, Granulated (MRS Broth, Granulated) GM369

Intended Use

Recommended for cultivation of all Lactobacilli from clinical and non clinical samples.

Composition**

Ingredients	Gms / Litre
Proteose peptone	10.000
HM Peptone B#	10.000
Yeast extract	5.000
Dextrose(Glucose)	20.000
Polysorbate 80 (Tween 80)	1.000
Ammonium citrate	2.000
Sodium acetate	5.000
Magnesium sulphate	0.100
Manganese sulphate	0.050
Dipotassium hydrogen phosphate	2.000
Final pH (at 25°C)	6.5±0.2

**Formula adjusted, standardized to suit performance parameters
Equivalent to Beef Extract

Directions

Suspend 55.15 grams in 1000 ml purified/distilled water. Heat if necessary to dissolve the medium completely. Distribute in tubes, bottles or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Lactobacilli MRS media are based on the formulation of deMan, Rogosa and Sharpe (1) with slight modification. It supports luxuriant growth of all Lactobacilli from oral cavity (1), dairy products (2), foods (3), faeces (4,5) and other sources (6).

Proteose peptone and HM peptone B supply nitrogenous and carbonaceous compounds. Yeast extract provides vitamin B complex and dextrose is the fermentable carbohydrate and energy source. Polysorbate 80 supplies fatty acids required for the metabolism of Lactobacilli. Sodium acetate and ammonium citrate inhibit Streptococci, moulds and many other microorganisms.

Type of specimen

Clinical samples - faeces,swab from oral cavity; Food and dairy samples

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5). For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (2,7,8). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Due to nutritional variation, some strains may show poor growth.
2. Further biochemical and serological tests must be carried out for complete identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within theexpiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow colored granular medium

Colour and Clarity of prepared medium

Light amber coloured, clear to slightly opalescent solution in tubes

Reaction

Reaction of 5.51% w/v aqueous solution at 25°C. pH : 6.5±0.2

pH

6.30-6.70

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours or longer (with 5% CO_2)

Organism	Inoculum (CFU)	Growth
Lactobacillus fermentum ATCC 9338	50-100	luxuriant
Lactobacillus leichmannii ATCC 7830	50-100	luxuriant
Lactobacillus plantarum ATCC 8014	50-100	luxuriant
Lactobacillus casei ATCC 9595	50-100	luxuriant
Lactobacillus saki ATCC 15521 (00015*)	50-100	luxuriant
Lactobacillus lactis ATCC 19435 (00016*)	50-100	luxuriant
Pediococcus pentosaceas ATCC 33316 (00158*)	50-100	luxuriant
Escherichia coli ATCC 25922 (00013*)	>=10^4	Inhibition
Bacillus cereus ATCC 11778 (00001*)	>=10^4	Inhibition

Key: (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store dehydrated and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

Reference

1. deMan J., Rogosa M. and Sharpe M., 1960, J. Appl. Bacteriol., 23:130.
2. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
3. Marshall R.T. (Ed.), 1992, Standard Methods for the Examination of Dairy Products, 16th ed., APHA, Washington,D.C.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
5. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

6. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.1, Williams and Wilkins, Baltimore.
7. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
8. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.

Revision :02/2023

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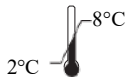
IVD ***In vitro* diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
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CE Marking

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Agar powder, Bacteriological Grade

GRM026

Intended use

Agar powder, Bacteriological Grade is manufactured from species of red seaweeds by observing good manufacturing practice. It is a Bacteriological grade powder with high mineral/metal content and is advantageous to use in certain media. It is recommended for use in bacteriological culture media and plant tissue culture media, where clarity and compatibility are not of prime importance.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. It is biological origin product since variation in colour of powder and clarity may observed.
2. Each lot of the product has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's requirement.
3. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium prepared by the product.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature

Quality Control

- **Appearance :** Cream coloured powder homogeneous free flowing powder
- **Solubility :** Freely soluble in hot water at temperatures above 85°C. Insoluble in cold water.
- **Clarity :** A firm solid, clear to slightly opalescent gel is formed at a concentration of 1.5% at 38-40°C.
- **Dye Diffusion :** Agar dye diffusion :- 18-20mm
- **pH :** pH of 1.5% w/v aqueous solution at 25 °C 6.5 - 7.5
- **Identification test :** As per method specified in USP 2022

  A: Infrared absorption

  B: Iodine TS colours some of the fragments of the Agar bluish black, with some areas reddish to violet.

  C: Agar forms a clear liquid that congeals at 30-39 ° C to form a firm resilient gel, which does not liquefy below 80°C.
- **Microbial Load :**

  Bacterial Count : <= 1000 CFU/gram by plate method, when incubated at 30-35ºC for not less than 3 days

  Yeast & mould Count : <= 100 CFU/gram by plate method, when incubated at 20-25ºC for not less than 5 days.
- **Test for pathogens :** 1. *Escherichia coli*- Absent/gram of sample 2. *Salmonella* species- Absent/10 gram of sample 3. *Pseudomonas aeruginosa*- Absent/gram of sample 4. *Staphylococcus aureus*- Absent/gram of sample 5. *Candida albicans*- Absent/gram of sample 6. *Clostridia*- Absent/gram of sample

- **Test for Water absorption :** As per method specified in USP 2022
  NMT 75 ml of water is absorbed by 5.0 g of agar
- **Limit of Gelatin :** As per method specified in USP 2022 No yellow precipitate is formed.
- **Limit of Foreign Starch :** As per method specified in USP 2022
  The sample solution does not, upon cooling ,produce a blue colour upon the addition of iodine TS.
- **Growth Promotion Test :** As per method specified in USP 2022
- **Cultural response :** Cultural response observed after an incubation at 35-37°C for 18-24 hours by preparing Nutrient Agar (M001) using Agar Powder, Bacteriological as an ingredient.

Cultural Response

Organism	Growth
Escherichia coli ATCC 25922 (WDCM00013)	Luxuriant
Pseudomonas aeruginosa ATCC 27853 (WDCM 00025)	Luxuriant
Staphylococcus aureus subsp. *aureus* ATCC 25923(WDCM 00034)	Luxuriant
Salmonella enterica subsp. *enterica* Typhi ATCC 6539	Luxuriant
Streptococcus pyogenes ATCC 19615	Luxuriant
Salmonella enterica subsp.*enterica* Enteritidis ATCC 13076 (WDCM 00030)	Luxuriant
Salmonella enterica subsp. *enterica* Typhimurium ATCC 14028 (WDCM 00031)	Luxuriant
Yersinia enterocolitica subsp. *enterocolitica* ATCC 9610 (WDCM 00038)	Luxuriant
Yersinia enterocolitica subsp. *enterocolitica* ATCC 23715 (WDCM 00160)	Luxuriant

Chemical Analysis :

Gelling temperature : 38-40°C

Melting Range : ≥85°C

Water (KF) : ≤20%

Calcium (Ca) : ≤ 0.1%

Arsenic (As) : ≤3 ppm

Lead(Pb) : ≤ 10 ppm

Acid- Insoluble Ash (On dry-Weight basis) : ≤0.5%

Total Ash (On dry-weight basis) : ≤6.5%

Foreign organic matter : ≤1.0%

Limit of Foreign insoluble matter : ≤15 mg in 7.5 gm of Agar

Gelling Strength : ≥ 800g/cm^2

Storage and Shelf Life

Store below 30°C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques.

Below 30°C Storage temperature

Do not use if package is damaged

HiMedia Laboratories Pvt Limited
C-40,21/Y, MIDC, Wagle Ind Area
Thane(W)–400604,Maharashtra,India

Revision : 03/2022

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HiIndicator™ pH papers **LA310, LA312, LA315, LA318, LA321, LA323, LA334, LA335.**

The convenience of using HiIndicator papers for the rapid determination of pH values has led to many applications in laboratories and industry. These pH papers are made with special indicator dyes that change color at specified pH value.

Somewhat uneven colour of the strips is of no consequence. The colour obtained on use is indicative of the correct pH.

Application : Analytical chemistry, biology & various laboratories and industries etc.

Product Name	Product Code	Description	pH Range
HiIndicator™ pH papers.	**LA310**	HiIndicator pH paper	2.00 – 10.50
	LA312	HiIndicator pH paper	3.50 – 6.00
	LA315	HiIndicator pH paper	3.80 – 5.30
	LA318	HiIndicator pH paper	5.00 – 7.50
	LA321	HiIndicator pH paper	6.50 – 9.00
	LA323	HiIndicator pH paper	8.00 – 10.50
	LA334	HiIndicator pH paper	2.00 - 4.50
	LA335	HiIndicator pH paper	1.00 - 14.00

Direction for use : Tear off strip of indicator paper and insert it for a few seconds into the solution to be tested. With highly viscous or stained liquids and with suspensions, drip the substance onto the indicator paper. Compare the wet paper with the colour scale. For papers where liquids are dripped, compare the reverse side. Possible discolouration of the dry new papers may be caused by their high sensitivity. This does not impair the efficacy of the Indicator papers for pH determinations.

The so-called indicator error may occur with very weakly buffered or unbuffered solution and can be compensated for up to a point in the following manner. : - The strip can be made to adhere to the inner wall of the a test tube, which can then filled to the upper edge of the paper with the fluid to be tested. After 1/2 to 1 minute, the colour of the paper may be compared with the scale through the glass of test tube.

Please refer disclaimer Overleaf

Product Features:

- Instant pH readings.
- Accurate for a wide range of routine pH testing.
- Convenient and portable for field use.
- Pack Size : 1 pack-200 Nos.

Nutrient Agar

M001

Intended use

Nutrient Agar is used as a general purpose medium for the cultivation of less fastidious microorganisms, can be enriched with blood or other biological fluids.

Composition**

Ingredients	Gms / Litre
Peptone	5.000
Sodium chloride	5.000
HM peptone B#	1.500
Yeast extract	1.500
Agar	15.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

- Equivalent to Beef extract

Directions

Suspend 28.0 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. If desired ,the medium can be enriched with 5-10% blood or other biological fluids. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Nutrient media are basic culture media used for maintaining microorganisms, cultivating fastidious organisms by enriching with serum or blood and are also used for purity checking prior to biochemical or serological testing (1,2). Nutrient Agar is ideal for demonstration and teaching purposes where a more prolonged survival of cultures at ambient temperature is often required without risk of overgrowth that can occur with more nutritious substrate. This relatively simple formula has been retained and is still widely used in the microbiological examination of variety of materials and is also recommended by standard methods. It is one of the several non-selective media useful in routine cultivation of microorganisms (3,4). It can be used for the cultivation and enumeration of bacteria which are not particularly fastidious. Addition of different biological fluids such as horse or sheep blood, serum, egg yolk etc. makes it suitable for the cultivation of related fastidious organisms. Peptone, HM peptone B and yeast extract provide the necessary nitrogen compounds, carbon, vitamins and also some trace ingredients necessary for the growth of bacteria. Sodium chloride maintains the osmotic equilibrium of the medium.

Type of specimen

Clinical samples - faeces, urine ; Food and dairy samples; Water samples

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6).
For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (3,4,7).
For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (8).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.

2.Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Light yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 2.8% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH
7.20-7.60

Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Escherichia coli ATCC 25922 (00013*)	50-100	good-luxuriant	>=70%
Pseudomonas aeruginosa ATCC 27853 (00025*)	50-100	good-luxuriant	>=70%
Salmonella Typhi ATCC 6539	50-100	good-luxuriant	>=70%
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	50-100	good-luxuriant	>=70%
Streptococcus pyogenes ATCC 19615	50-100	good-luxuriant	>=70%
Salmonella Enteritidis ATCC 13076 (00030*)	50-100	good-luxuriant	>=70%
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	good-luxuriant	>=70%
Yersinia enterocolitica ATCC 9610 (00038*)	50-100	good-luxuriant	>=70%
Yersinia enterocolitica ATCC 23715 (00160*)	50-100	good-luxuriant	>=70%

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1.Lapage S., Shelton J. and Mitchell T., 1970, Methods in Microbiology', Norris J. and Ribbons D., (Eds.), Vol. 3A, Academic Press, London.
2.MacFaddin J. F., 2000, Biochemical Tests for Identification of Medical Bacteria, 3rd Ed., Lippincott, Williams and Wilkins,Baltimore.
3.American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
4.Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
5.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
7.Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed.,APHA Inc., Washington, D.C.
8.Lipps WC, Braun-Howland EB, Baxter TE,eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.

Revision : 06/2022

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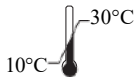
IVD ***In vitro* diagnostic medical device**



Storage temperature

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Nutrient Broth

M002

Intended use

Nutrient Broth is used for the general cultivation of less fastidious microorganisms, can be enriched with blood or other biological fluids.

Composition**

Ingredients	Gms / Litre
Peptone	5.000
Sodium chloride	5.000
HM peptone B#	1.500
Yeast extract	1.500
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

- Equivalent to Beef extract

Directions

Suspend 13.0 grams in 1000 ml purified / distilled water. Heat, if necessary, to dissolve the medium completely. Dispense into tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Nutrient media are basic culture media used for maintaining microorganisms, cultivating fastidious organisms by enriching with serum or blood and are also used for purity checking prior to biochemical or serological testing (1,2). Nutrient Broth has the formula originally designed for use in the Standard Method for Examination of Water and Waste water. It is one of the several non-selective media useful in routine cultivation of microorganisms (3,4). It can be used for the cultivation and enumeration of bacteria which are not particularly fastidious. Addition of different biological fluids such as horse or sheep blood, serum, egg yolk etc. makes it suitable for the cultivation of related fastidious organisms. Peptone, HM peptone B and yeast extract provide the necessary nitrogen compounds, carbon, vitamins and also some trace ingredients necessary for the growth of bacteria. Sodium chloride maintains the osmotic equilibrium of the medium.

Type of specimen

Clinical samples - faeces, urine etc.; Food and dairy samples; Water samples.

Specimen Collection and Handling:

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (3,4). For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (5). For clinical samples follow appropriate techniques for handling specimens as per established guidelines (6,7). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. This medium is general purpose medium and may not support the growth of fastidious organisms.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium
Light yellow coloured clear to slightly opalescent solution

Reaction
Reaction of 1.3% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH
7.20-7.60

Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth
Escherichia coli ATCC 25922 (00013*)	50-100	good-luxuriant
Pseudomonas aeruginosa ATCC 27853 (00025*)	50-100	good-luxuriant
Salmonella Typhi ATCC *6539*	50-100	good-luxuriant
Staphylococcus aureus aubsp.aureus ATCC 25923 (00034*)	50-100	good-luxuriant
Streptococcus pyogenes ATCC 19615	50-100	good-luxuriant

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use.
Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (6,7).

Reference

1. Lapage S., Shelton J. and Mitchell T., 1970, Methods in Microbiology', Norris J. and Ribbons D., (Eds.), Vol. 3A, Academic Press, London.
2. MacFaddin J. F., 2000, Biochemical Tests for Identification of Medical Bacteria, 3rd Ed., Lippincott, Williams and Wilkins, Baltimore.
3. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
4. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, American Public Health Association, Washington, D.C
5. Lipps WC, Braun-Howland EB, Baxter TE,eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.
6. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
7. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
8. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.

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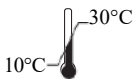

Storage temperature

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Fluid Thioglycollate medium (Thioglycollate medium Fluid) M009

Intended use

Recommended for sterility testing of biologicals and for cultivation of aerobes, anaerobes and microaerophiles.

Composition**

Ingredients	Gms / Litre
Tryptone	15.000
Yeast extract	5.000
Dextrose (Glucose)	5.500
Sodium chloride	2.500
L-Cystine	0.500
Sodium thioglycollate	0.500
Resazurin sodium	0.001
Agar	0.750
Final pH (at 25°C)	7.1±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 29.75 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 25°C and store in a cool dark place preferably below 25°C. Note : If more than the upper one-third of the medium has acquired a pink-purple colour, the medium may be restored once by heating in a water bath or in free flowing steam until the pink-purple colour disappears.

Principle And Interpretation

Brewer (1) formulated Fluid Thioglycollate Medium for rapid cultivation of aerobes as well as anaerobes including microaerophiles by adding a reducing agent and small amount of agar. The BP (2), EP (3), USP (4), and AOAC (5) have recommended the media for sterility testing of antibiotics, biologicals and foods and for determining the phenol coefficient and sporicidal effect of disinfectants. However, it is intended for the examination of clear liquid or water-soluble materials. Fluid Thioglycollate Medium is also routinely used to check the sterility of stored blood in blood banks (6). Dextrose, tryptone, yeast extract, L-cystine provide the growth factors necessary for bacterial multiplication. L-cystine and sodium thioglycollate allows Clostridium to grow in this medium even under aerobic conditions (7). Also the small amount of agar used in the medium favors the growth of aerobes as well as anaerobes in the medium, even if sodium thioglycollate is deleted from the medium(1). Sodium thioglycollate act as a reducing agent and neutralizes the toxic effects of mercurial preservatives and peroxides formed in the medium, thereby promoting anaerobiosis, and making the medium suitable to test materials containing heavy metals. (8,9). Any increase in the oxygen content is indicated by a colour change of redox indicator, resazurin to red (6,10,11). The small amount of agar helps in maintaining low redox potential for stabilizing the medium (9).

Type of specimen

Pharmaceutical samples for sterility testing, clinical samples- pus, wounds

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (12,13).
For pharmaceutical samples, follow appropriate techniques for sample collection, processing as per guidelines (2,3,4) After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. It is intended for the examination of clear liquid or water-soluble materials.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light straw coloured, clear to slightly opalescent solution with upper 10% or less medium pink-purple on standing.

Reaction

Reaction of 2.97% w/v aqueous solution at 25°C. pH : 7.1±0.2

pH

6.90-7.30

Cultural Response

Cultural characteristics observed after an incubation at 30-35°C for not more than 3 days.

Organism	Inoculum (CFU)	Growth
Clostridium sporogenes ATCC 19404 (00008*)	50 -100	luxuriant
Clostridium sporogenes ATCC 11437	50 -100	luxuriant
Clostridium perfringens ATCC 13124 (00007*)	50 -100	luxuriant
Bacteroides fragilis ATCC 23745	50 -100	luxuriant
Bacteroides vulgatus ATCC 8482	50 -100	luxuriant
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	50 -100	luxuriant
Staphylococcus aureus subsp. *aureus* ATCC 6538 (00032*)	50 -100	luxuriant
Pseudomonas aeruginosa ATCC 27853 (00025*)	50 -100	luxuriant
Pseudomonas aeruginosa ATCC 9027 (00026*)	50 -100	luxuriant
Micrococcus luteus ATCC 9341	50 -100	luxuriant
Streptococcus pneumoniae ATCC 6305	50 -100	luxuriant
Escherichia coli ATCC 25922 (00013*)	50 -100	luxuriant
Escherichia coli ATCC 8739 (00012*)	50 -100	luxuriant
Escherichia coli NCTC 9002	50 -100	luxuriant
Salmonella Typhimurium ATCC 14028 (00031*)	50 -100	luxuriant
Salmonella Abony NCTC 6017 (00029*)	50 -100	luxuriant

Bacillus subtilis subsp. *spizizenii* ATCC 6633 (00003*)	50 -100	luxuriant

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (12,13).

Reference

1. Brewer, 1940, J. Am. Med. Assoc., 115:598.
2. The British Pharmacopoeia, 2022, Medicines and Healthcare products Regulatory Agency.
3. European Pharmacopoeia, 2022, 10 th volume, European Directorate for the quality of medicines & Healthcare.
4. The United States Pharmacopoeia-National Formulatory (USP-NF), 2022
5. Williams H., (Ed.), 2005, Official Methods of Analysis of the Association of Official Analytical Chemists, 19th Ed., AOAC,Washington, D.C
6. Nungester, Hood and Warren, 1943, Proc. Soc. Exp. Biol. Med., 52:287.
7. Portwood, 1944, J. Bact., 48:255.
8. Federal Register, 1992, Fed. Regist., 21:640.
9. Quastel and Stephenson, 1926, J.Biochem., 20
10. Marshall, Gunnison and Luxen, 1940, Proc. Soc. Exp. Biol. Med., 43:672.
11. MacFaddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
12. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
13. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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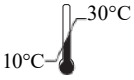

Storage temperature

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Soyabean Casein Digest Medium (Tryptone Soya Broth) M011

Intended Use:

Recommended as a general purpose medium used for cultivation of a wide variety of microorganisms and recommended for sterility testing of moulds and lower bacteria.

Composition**

Ingredients	Gms / Litre
Tryptone	17.000
Soya peptone	3.000
Sodium chloride	5.000
Dextrose (Glucose)	2.500
Dipotassium hydrogen phosphate	2.500
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 30.0 grams in 1000 ml purified/ distilled water. Heat if necessary to dissolve the medium completely. Mix well and dispense in tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Note: If any fibres are observed in the solution, it is recommended to filter the solution through a 0.22 micron filter to eliminate the possibility of presence of fibres.

Principle And Interpretation

Soyabean Casein Digest Medium is recommended by various pharmacopeias as a sterility testing and as a microbial limit testing medium (1,2,3). This medium is a highly nutritious medium used for cultivation of a wide variety of organisms (4). The combination of Tryptone and soya peptone makes the medium nutritious by providing nitrogenous, carbonaceous substances, amino acids and long chain peptides for the growth of microorganisms. Dextrose/glucose serve as the carbohydrate source and dibasic potassium phosphate buffer the medium. Sodium chloride maintains the osmotic balance of the medium.

Type of specimen

Pharmaceutical samples, Clinical samples - urine, pus, wound samples.

Specimen Collection and Handling

For clinical samples, follow appropriate techniques for handling specimens as per established guidelines (5,6). For pharmaceutical samples, follow appropriate techniques for sample collection, processing as per pharmaceutical guidelines (2). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Biochemical characterization is necessary to be performed on colonies from pure cultures for further identification.
2. This medium is general purpose medium and may not support the growth of fastidious organisms.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium
Light yellow coloured clear solution without any precipitate.

Reaction
pH of 3.0% w/v aqueous solution at 25°C (after sterilization). pH : 7.3±0.2

pH
7.10-7.50

Stability test
Light yellow coloured clear solution without any precipitation or sedimentation at room temperature for 7 days

Growth promoting properties
Clearly visible growth of microorganism comparable to that previously obtained with previously tested and approved lot of medium occurs at the specified temperature for not more than the shortest period of time specified inoculating not more than 100 cfu (at 30-35°C for 18-24 hours for bacteria and 5days for fungal) Growth promotion is carried out as per USP/ EP/BP/JP/IP.

Organism	Inoculum (CFU)	Growth	Incubation temperature	Incubation period
Salmonella Typhimurium ATCC 14028 (00031*)	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Salmonella Abony NCTC 6017 (00029*)	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Pseudomonas aeruginosa ATCC 9027 (00026*)	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Streptococcus pneumoniae ATCC 6305	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Staphylococcus aureus subsp. aureus ATCC 6538 (00032*)	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Escherichia coli ATCC 25922 (00013*)	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Escherichia coli NCTC 9002	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Escherichia coli ATCC 8739 (00012*)	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Bacillus subtilis subsp. spizizenii ATCC 6633 (00003*)	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Micrococcus luteus ATCC 9341	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Pseudomonas aeruginosa ATCC 27853 (00025*)	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Candida albicans ATCC 10231 (00054*)	50 -100	luxuriant	20 -25 °C	<=5 d
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Sterility Testing- Growth promotion+Validation				
Staphylococcus aureus subsp. aureus ATCC 6538 (00032*)	50 -100	luxuriant	20 -25 °C	<=3 d
# *Aspergillus brasiliensis* ATCC 16404 (00053*)	50 -100	luxuriant	20 -25 °C	<=5 d
Candida albicans ATCC 2091 (00055*)	50 -100	luxuriant	30 -35 °C	<=5 d
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	50 -100	luxuriant	20 -25 °C	<=3 d
Escherichia coli ATCC 25922 (00013*)	50 -100	luxuriant	20 -25 °C	<=3 d

Pseudomonas aeruginosa ATCC 9027 (00026*)	50 -100	luxuriant	20 -25 °C	<=3 d
Bacillus subtilis subsp. spizizenii ATCC 6633 (00003*)	50 -100	luxuriant	20 -25 °C	<=3 d
Salmonella Typhimurium ATCC 14028 (00031*)	50 -100	luxuriant	20 -25 °C	<=3 d
Salmonella Abony NCTC 6017 *(*00029*)	50 -100	luxuriant	20 -25 °C	<=3 d
Streptococcus pneumoniae ATCC 6305	50 -100	luxuriant	20 -25 °C	<=3 d
Escherichia coli ATCC 8739 (00012*)	50 -100	luxuriant	20 -25 °C	<=3 d
Escherichia coli NCTC 9002	50 -100	luxuriant	20 -25 °C	<=3 d
Pseudomonas aeruginosa ATCC 27853 (00025*)	50 -100	luxuriant	20 -25 °C	<=3 d
Micrococcus luteus ATCC 9341	50 -100	luxuriant	20 -25 °C	<=3 d

Key : (#) Formerly known as *Aspergillus niger*, (*) Corresponding WDCM numbers

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Use before expiry date on the label.Product performance is best if used within stated expiry period.

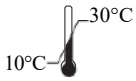
Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1.Indian Pharmacopoeia, 2022, Indian Pharmacopoeia Commission, Ministry of Health and Family Welfare Government of India.
2.MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams & Wilkins, Baltimore, M.d.
3.The United States Pharmacopoeia-National Formulatory (USP-NF), 2022.
4.Forbes B. A., Sahm D. F. and Weissfeld A. S., 1998, Bailey & Scotts Diagnostic Microbiology, 10th Ed., Mosby, Inc. St. Louis, Mo.
5.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Revision : 04/2022

	HiMedia Laboratories Pvt. Limited, Plot No.C-40, Road No.21Y, MIDC, Wagle Industrial Area, Thane (W) -400604, MS, India	IVD	***In vitro* diagnostic medical device**		**Storage temperature**
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Brilliant Green Agar Base, Modified

M016

Intended Use:

Recommended for selective isolation of *Salmonellae* other than *Salmonella* Typhi from faeces, food, dairy products.

Composition**

Ingredients	Gms / Litre
Proteose peptone	10.000
Yeast extract	3.000
Lactose	10.000
Sucrose	10.000
Sodium chloride	5.000
Phenol red	0.080
Brilliant green	0.0125
Agar	20.000
Final pH (at 25°C)	6.9±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 29.0 grams in 500 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. AVOID OVERHEATING. Cool to 45-50°C. For more selectivity, aseptically add rehydrated contents of 1 vial of S Selective Supplement (FD068). Mix well before pouring into sterile Petri plates.

Principle And Interpretation

Salmonella species cause many types of infections, from mild self-limiting gastroenteritis to life threatening typhoid fever. The most common form of *Salmonella* disease is self-limiting gastroenteritis with fever lasting less than 2 days and diarrhoea lasting less than 7 days. Brilliant Green Agar Base, Modified, as a primary plating medium for isolation of *Salmonella* species was first described by Kristensen et. al. (1) and further modified by Kauffmann (2). Brilliant Green Agar is also recommended by APHA (3,4) FDA (5) and described in EP, BP and IP (6,7,8).

This medium contains brilliant green, which inhibits growth of majority of Gram-negative and Gram-positive bacteria. *Salmonella* Typhi, *Shigella* species *Escherichia coli*, *Pseudomonas* species, *Staphylococcus aureus* are mostly inhibited. Clinical specimens can be directly plated on this medium. However, being highly selective, it is recommended that this medium should be used along with a less inhibitory medium to increase the chances of recovery. Often cultures enriched in Selenite or Tetrathionate Broth is plated on Brilliant Green Agar along with Bismuth Sulphite Agar, SS Agar, MacConkey Agar.

The medium contains proteose peptone and yeast extract as sources of carbon, nitrogen, vitamins, amino acids and essential nutrients. The two sugars namely lactose and sucrose serve as energy sources. Fermentation of lactose and/or sucrose in the medium results in the formation of acidic pH which is detected by phenol red indicator. Sodium chloride maintains the osmotic equilibrium. Brilliant green helps to inhibit the contaminating microflora. The medium can further supplemented with sulphaacetamide (1g/l) and sodium mandelate (0.25g/l) to inhibit contaminating microorganisms when the sample is suspected to contain large number of competing organisms along with *Salmonella* species. Non-lactose fermenting bacteria develop white to pinkish red colonies within 18 - 24 hours of incubation.

Type of specimen

Clinical : Faeces; Foodstuffs & dairy samples; Water samples; Pharmaceutical samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (12,13).
For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (3,4).
For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (5) .

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Though this medium is selective for *Salmonella* other species of *Enterobacteriaceae* may grow.
2. *Salmonella* Typhi and *Shigella* species may not grow on this medium.
3. Moreover *Proteus, Pseudomonas* and *Citrobacter* species may mimic enteric pathogens by producing small red colonies.
4. Further confirmation has to be carried out on presumptive *Salmonella* isolates.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to light pink homogeneous free flowing powder

Gelling

Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared medium

Greenish brown clear to slightly opalescent gel forms in Petriplates

Reaction

Reaction of 5.8% w/v aqueous solution at 25°C. pH : 6.9±0.2

pH

6.70-7.10

Cultural Response

Cultural response was carried out after an incubation at 30-35°C for 24-48 hours. Recovery rate is considered as 100% for bacteria growth on Soyabean Casein Digest Agar.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
Escherichia coli ATCC 25922 (00013*)	50 -100	none-poor	0 -10 %	yellowish green
Escherichia coli ATCC 8739 (00012*)	50 -100	none-poor	0 -10 %	yellowish green
Escherichia coli NCTC 9002	50 -100	none-poor	0 -10 %	yellowish green
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	>=10^4	inhibited	0%	
Staphylococcus aureus subsp. *aureus* ATCC 6538 (00032*)	>=10^4	inhibited	0%	
Salmonella Typhi ATCC 6539	50 -100	fair-good	30 -40 %	reddish pink
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	good-luxuriant	>=50 %	pinkish white
Salmonella Enteritidis ATCC 13076 (00030*)	50 -100	luxuriant	>=50 %	pinkish white
Salmonella Abony NCTC 6017 (00029*)	50-100	good-luxuriant	>=50 %	pinkish white

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (12,13).

Reference

1. Kauffman F., 1935, Seit F. Hyg. 177:26.
2. Kristensen M., Lester V, and Jurgens A., 1925, Brit.J.Exp.Pathol.,6:291.
3. Salfinger Y., and Tortorello M.L. , 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
4. Standard Methods for the Microbiological Examination of Dairy Products, 1995, 19th Ed, APHA, Washington, D.C.
5. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
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7. The British Pharmacopoeia, 2022, Medicines and Healthcare products Regulatory Agency.
8. European Pharmacopoeia, 2022, 10 th volume, European Directorate for the quality of medicines & Healthcare.
9. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
10. Bacteriological Analytical Manual, 5th Ed, 1978, AOAC, Washington D.C.
11. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
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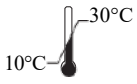

Storage temperature

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EMB Agar, Levine

M022

Intended Use:

Recommended for the isolation, enumeration and differentiation of members of *Enterobacteriaceae* from clinical and non clinical samples.

Composition**

Ingredients	Gms / Litre
Peptone	10.000
Dipotassium hydrogen phosphate	2.000
Lactose	10.000
Eosin - Y	0.400
Methylene blue	0.065
Agar	15.000
Final pH (at 25°C)	7.1±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 37.46 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. **AVOID OVERHEATING**. Cool to 50°C and shake the medium in order to oxidize the methylene blue (i.e. restore its blue colour) and to suspend the precipitate, which is an essential part of the medium.

Precaution : Store the medium away from light to avoid photo-oxidation.

Principle And Interpretation

Levine EMB Agar was developed by Levine (1,2) and is used for the differentiation of *Escherichia coli* and *Klebsiella* aerogenes and also for the rapid identification of *Candida albicans.* This medium is recommended for the detection, enumeration and differentiation of members of the coliform group by American Public Health Association (3,4,5). Weld (6,7) proposed the use of Levine EMB Agar, with added Chlortetracycline hydrochloride, for the rapid identification of *Candida albicans* in clinical specimens. A positive identification of *Candida albicans* can be made after 24-48 hours incubation at 35-37°C in 10% carbon dioxide atmosphere, from specimens such as faeces, oral and vaginal secretions and nail or skin scraping etc. However, the typical appearance is variable.

Eosin Y and methylene blue make the medium slightly selective and inhibit certain gram-positive bacteria. These dyes serve as differential indicators in response to the fermentation of carbohydrates. This helps to differentiate between lactose-fermenters and non-fermenters in EMB Agar, Levine. The ratio of eosin-methylene blue is adjusted to approximately 6:1. Coliforms produce purplish black colonies due to uptake of methylene blue-eosin dye complex, when the pH drops. The dye complex is absorbed into the colony. Non-fermenters probably raise the pH of surrounding medium by oxidative de-amination of protein, which solubilizes the methylene blue-eosin complex resulting in formation of colourless colonies . Peptone serves as source of carbon, nitrogen, long chain amino acids, vitamins and other essential growth nutrients. Lactose serves as the source of energy by being the fermentable carbohydrate. Eosin-Y and methylene blue serve as differential indicators. Phosphate buffers the medium.

The test sample can be directly streaked on the medium plates. Inoculated plates should be incubated, protected from light. However standard procedures should be followed to obtain isolated colonies. A non-selective medium should be inoculated in conjunction with EMB Agar. Confirmatory tests should be further carried out for identification of isolated colonies.

Type of specimen

Clinical samples - urine, faeces, oral and vaginal secretions and nail or skin scraping , Foodstuffs; Water samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (8,9).

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (5,10).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (3).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. A non-selective medium should be inoculated in conjunction with EMB Agar.
2. Confirmatory tests should be further carried out for identification of isolated colonies.
3. Some strains of *Salmonella* and *Shigella* species do not grow in the presence of eosin and methylene blue.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light pink to purple homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Reddish purple coloured, opalescent gel with greenish cast and finely dispersed precipitate forms in Petri plates

Reaction

Reaction of 3.75% w/v aqueous solution at 25°C. pH : 7.1±0.2

pH

6.90-7.30

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
Candida albicans ATCC 10231 (00054*)	50-100	luxuriant (incubated in 10% carbon dioxide)	>=50%	colourless
# *Klebsiella aerogenes* ATCC 13048 (00175*)	50-100	good	40-50%	pink-red
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant	>=50%	blue-black with metallic sheen
Enterococcus faecalis ATCC 29212 (00087*)	50-100	none-poor	<=10%	colourless
Pseudomonas aeruginosa ATCC 27853 (00025*)	50-100	luxuriant	>=50%	colourless
Staphylococcus aureus subsp. *aureus* ATCC 6538 (00032*)	50-100	none-poor	<=10%	colourless
Pseudomonas aeruginosa ATCC 9027 (00026*)	50-100	luxuriant	>=50%	colourless
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	luxuriant	>=50%	colourless
Saccharomyces cerevisiae ATCC 9763	50-100	none-poor	<=10%	cream
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00058*)	50-100	none-poor	<=10%	colourless
Escherichia coli NCTC 9002	50-100	luxuriant	>=50%	blue-black with green metallic sheen
Escherichia coli ATCC 8739 (00012*)	50-100	luxuriant	>=50%	blue-black with green metallic sheen

Key : (*) Corresponding WDCM numbers. (#) Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (8,9).

Reference

1. Levine M., 1918, J. Infect. Dis., 23:43.
2. Levine M., 1921, Bull. 62, Iowa State College Engr. Exp. Station.
3. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
4. Marshall R. (Ed.), 1992, Standard Methods for the Examination of Dairy , Products, 16th ed., APHA Inc., New York.
5. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
6. Weld J. T., 1952, Arch. Dermat. Syph., 66:691.
7. Weld J. T., 1953, Arch. Dermat. Syph., 67(5):433.
8. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
9. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
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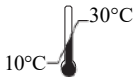

Storage temperature

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Peptone Water

M028

Intended Use:

Peptone Water is used as a growth medium and as a base for carbohydrate fermentation media.

Composition**

Ingredients	Gms / Litre
Peptone	10.000
Sodium chloride	5.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 15.0 grams in 1000 ml purified/distilled water. Add the test carbohydrate in desired quantity and dissolve completely. Dispense in tubes with or without inverted Durhams tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Peptone Water can be utilized as a base for carbohydrate fermentation studies with the addition of sugar and indicators such as bromocresol purple, phenol red or bromothymol blue. Peptone Water is also suitable as a substrate in the study of indole production. Peptone used in Peptone Water is rich in tryptophan content. Presence of indole can be demonstrated using either Kovacs or Ehlrich reagent.

Peptone Water is recommended (1,2,3) for studying the ability of an organism to ferment a specific carbohydrate which aid in differentiation of genera and species. Peptone water is formulated as per Shread, Donovan and Lee (4). Peptone Water with pH adjusted to 8.4 is suitable for the cultivation and enrichment of *Vibrio* species. Peptone provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins provides essential nutrients. Sodium chloride maintains the osmotic balance of the medium. To study the fermentation ability of carbohydrates, saccharose, rhamnose, salicin are generally added in 0.5% amount separately to the basal medium before or after sterilization. The acidity formed during fermentation can be detected by addition of phenol red indicator, which shows a colour change of the medium from red to yellow under acidic conditions. If desired, Durham's tube may be used to detect the gas production if produced.

Type of specimen

Isolated microorganism from clinical specimen, food, dairy and water samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6). For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (7,8,9). For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (10). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling clinical specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Due to nutritional variations, some strains may show poor growth.
2. Further serological and biochemical tests should be carried out on pure colony for complete identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light amber coloured clear solution without any precipitate

Reaction

Reaction of 1.5% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Indole test
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	50-100	luxuriant	negative reaction, no red ring at the interface of the medium on addition of Kovac's reagent (R008)
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant	positive reaction, red ring at the interface of the medium on addition of Kovac's reagent (R008)
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	luxuriant	negative reaction, no red ring atthe interface of the medium on addition of Kovac's reagent (R008)

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

References

1.Finegold and Baron, 1986, Bailey and Scotts Diagnostic Microbiology, 7th ed., The C.V. Mosby Co., St. Louis.

2.Lennette and others (Eds.), 1985, Manual of Clinical Microbiology, 4th ed, ASM, Washington, D.C.

3.MacFaddin J., 1980, Biochemical Tests for Identification of Medical Bacteria, 2nd ed., Williams and Wilkins, Baltimore.

4.Shread P., Donovan T.J, and Lee J.V, (1981), Soc. Gen, Microbiol. Q., 8, 184.

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10.Lipps WC, Braun-Howland EB, Baxter TE,eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.

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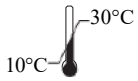

Storage temperature

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Endo Agar, Special

M029R

Endo Agar, Special is recommended for the detection of coliform and other enteric organisms.

Composition**

Ingredients	Gms / Litre
Peptone, special	11.500
Lactose	12.900
Dipotassium phosphate	0.480
Monopotassium phosphate	0.220
Sodium chloride	3.600
Sodium sulphite	0.860
Sodium lauryl sulphate	0.010
Basic fuchsin	0.830
Agar	9.600
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 40.0 grams in 1000 ml distilled water. Boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Caution: Basic Fuchsin is a potential Carcinogen and care should be taken to avoid inhalation of the powdered dye and contamination of the skin.

Principle And Interpretation

Endo (1) had first developed a culture medium for differentiation of lactose fermentors and non-fermenters and further developed as todays Endo Agar (2). Endo agar is used for microbiological examination of potable water and waste water, dairy products and food (3,4,5).

Sodium sulphite and basic fuchsin has inhibitory effect on gram-positive microorganisms. Sodium Lauryl sulphate inhibits many organisms other than coliforms. Lactose fermenting coliforms produce aldehyde and acid. The aldehyde in turn liberates fuchsin from the fuchsin-sulphite complex, giving rise to a red colouration of colonies. With *Escherichia coli* this reaction is very pronounced that the fuchsin crystallises, exhibiting to the colonies a permanent greenish metallic lustre (fuchsin lustre). The phosphates buffer the medium. Peptone special provides essential nutrients especially nitrogenous for the coliforms.

Quality Control

Appearance
Light pink to purple homogeneous free flowing powder

Gelling
Firm,comparable with 0.96% Agar gel.

Colour and Clarity of prepared medium
Pink Clear to slightly opalescent gel with a slight precipitate forms in Petri plates.

Reaction
Reaction of 4.0% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH
7.10-7.50

Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Cultural Response

Organism	Growth	Inoculum (CFU)	Recovery	Colour of Colony
Cultural Response				
Bacillus subtilis ATCC 6633	inhibited	>=10^3	0%	
Enterobacter aerogenes ATCC 13048	good-luxuriant	50-100	>=50%	pink
Enterococcus faecalis ATCC 29212	none-poor	50-100	<=10%	pink, small
Escherichia coli ATCC 25922	good-luxuriant	50-100	>=50%	pink to rose red with metallic sheen
Klebsiella pneumoniae ATCC 13883	good-luxuriant	50-100	>=50%	pink, mucoid
Salmonella Typhi ATCC 6539	good-luxuriant	50-100	>=50%	colourless to pale pink
Staphylococcus aureus ATCC 25923	inhibited	>=10^3	0%	
Pseudomonas aeruginosa ATCC 27853	good-luxuriant	50-100	>=50%	colourless, irregular
Proteus vulgaris ATCC 13315	good-luxuriant	50-100	>=50%	colourless to pale pink
Shigella sonnei ATCC 25931	good-luxuriant	50-100	>=50%	colourless to pale pink

Storage and Shelf Life

Store below 30°C in tightly closed container and prepared medium at 2 – 8°C away from light to avoid photo-oxidation. Use before expiry date on the label.

Reference

1.Endo, 1904, Zentralbl. Bakteriol., Abt. 1., Orig., 35:109.
2.Levin and Schoenlein, 1930, A Compilation of Culture Media for the Cultivation of Microorganisms, Williams and Wilkins, Baltimore.
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Revision : 01 / 2014

Xylose-Lysine Deoxycholate Agar (XLD Agar)

M031

Intended use

Recommended for the isolation and enumeration of *Salmonella* Typhi and other *Salmonella* species from clinical and non-clinical samples.

Composition**

Ingredients	Gms / Litre
Yeast extract	3.000
L-Lysine	5.000
Lactose	7.500
Sucrose	7.500
Xylose	3.500
Sodium chloride	5.000
Sodium deoxycholate	2.500
Sodium thiosulphate	6.800
Ferric ammonium citrate	0.800
Phenol red	0.080
Agar	15.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 56.68 grams in 1000 ml purified / distilled water. Heat with frequent agitation until the medium boils. **DO NOT AUTOCLAVE OR OVERHEAT**. Transfer immediately to a water bath at 50°C. After cooling, pour into sterile Petri plates. It is advisable not to prepare large volumes that will require prolonged heating, thereby producing precipitate. ***Note :*** *Slight precipitation in the medium may occur,which is inheritant property of the medium,and does not affect the performance of the medium.*

Principle And Interpretation

XLD Agar has been recommended for the identification of *Enterobacteriaceae* (1) and for the microbiological testing. XLD Agar was formulated by Taylor (2-6) for the isolation and differentiation of enteric pathogens including *Salmonella* Typhi from other *Salmonella* species of foods, water and dairy products (7-11). XLD Agar exhibits increased selectivity and sensitivity as compared to other plating media e.g. SS Agar (M108), EMB Agar (M022) and Bismuth Sulphite Agar (M027) (3,5,7,12-15). The media formulation does not allow the overgrowth of other organisms over *Salmonella* and *Shigella* (16). Samples suspected of containing enteric pathogens, along with other mixed flora, are initially enriched in Modified Semisolid RV Medium Base (M1482) (17). It is also recommended by FDA (18).

The medium contains yeast extract, which provides nitrogen and vitamins required for growth. Though the sugars xylose, lactose and sucrose provide sources of fermentable carbohydrates, xylose is mainly incorporated into the medium since it is not fermented by Shigellae but practically by all enterics. This helps in the differentiation of *Shigella* species. Sodium chloride maintains the osmotic balance of the medium. Lysine is included to differentiate the *Salmonella* group from the non-pathogens. Salmonellae rapidly ferment xylose and exhaust the supply. Subsequently lysine is decarboxylate by the enzyme lysine decarboxylase to form amines with reversion to an alkaline pH that mimics the *Shigella* reaction. However, to prevent this reaction by lysine-positive coliforms, lactose and sucrose are added to produce acid in excess. Degradation of xylose, lactose and sucrose to acid causes phenol red indicator to change its colour to yellow. Bacteria that decarboxylate lysine to cadaverine can be recognized by the appearance of a red colouration around the colonies due to an increase in pH. These reactions can proceed simultaneously or successively, and this may cause the pH indicator to exhibit various shades of colour or it may change its colour from yellow to red on prolonged incubation. To add to the differentiating ability of the formulation, an H_2S indicator system, consisting of sodium thiosulphate and ferric ammonium citrate, is included for the visualization of hydrogen sulphide produced, resulting in the formation of colonies with black centers. The non-pathogenic H_2S producers do not decarboxylase lysine; therefore, the acid reaction produced by them prevents the blackening of the colonies (2).

XLD Agar is both selective and differential medium. It utilizes sodium deoxycholate as the selective agent and therefore it is inhibitory to gram-positive microorganisms.

Type of specimen

Clinical samples - Faeces; Food and dairy samples; Water samples.

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (19,20). For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (9,10). For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (8). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Slight precipitation in the medium may occur,which is inheritant property of the medium,and does not affect the performance of the medium.
2. This medium is general purpose medium and may not support the growth of fastidious organisms.
3. Some *Proteus* strains may give red to yellow colouration with most colonies developing black centers, giving rise to false positive reactions.
4. Non-enterics like *Pseudomonas* and *Providencia* may exhibit red colonies.
5. *S.* Paratyphi A, *S.*Choleraesuis, *S.* Pullorum and *S.* Gallinarum may form red colonies without H_2S, thus resembling *Shigella* species.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to pink homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Red coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 5.67% w/v aqueous solution at 25°C . pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

Cultural response was observed after an incubation at 35-37°C for specified time. Recovery rate is considered as 100% for bacteria growth on Soyabean Casein Digest Agar.

Organism	Inoculum (CFU)	Growth	Observed Lot value (CFU)	Recovery	Colour of Colony	Incubation period
Salmonella Typhimurium ATCC 14028 (00031*)	50 -100	luxuriant	25 -100	>=50 %	red with black centres	18 -72 hrs
Salmonella Abony NCTC 6017 (00029*)	50 -100	good-luxuriant	25 -100	>=50 %	red with black centres	18 -72 hrs
Escherichia coli ATCC 8739 (00012*)	50 -100	fair	10 -30	20 -30 %	yellow	18 -72 hrs
Escherichia coli ATCC 25922 (00013*)	50 -100	fair	10 -30	20 -30 %	yellow	18 -72 hrs

Escherichia coli NCTC 9002	50 -100	fair	10 -30	20 -30 %	yellow	18 -72 hrs
Proteus vulgaris ATCC 13315	50 -100	good-luxuriant	25 -100	>=50 %	grey with black centres	18 -72 hrs
Salmonella Paratyphi A ATCC 9150	50 -100	good-luxuriant	25 -100	>=50 %	red	18 -72 hrs
Salmonella Paratyphi B ATCC 8759	50 -100	good-luxuriant	25 -100	>=50 %	red with black centres	18 -72 hrs
Salmonella Enteritidis ATCC 13076 (00030*)	50 -100	good-luxuriant	25 -100	>=50 %	red with black centres	18 -72 hrs
Salmonella Typhi ATCC 6539	50 -100	good-luxuriant	25 -100	>=50 %	red with black centres	18 -72 hrs
Shigella dysenteriae ATCC 13313	50 -100	good-luxuriant	25 -100	>=50 %	red	18 -72 hrs
Shigella flexneri ATCC 12022 (00126*)	50 -100	fair-good	15 -40	30 -40 %	red	18 -72 hrs
Shigella sonnei ATCC 25931	50 -100	fair-good	15 -40	30 -40 %	red	18 -72 hrs
# *Klebsiella aerogenes* ATCC 13048 (00175*)	50 -100	fair	10 -30	20 -30 %	yellow	18 -72 hrs
Enterobacter cloacae ATCC 13047 (00083*)	50 -100	fair	10 -30	20 -30 %	yellow	18 -72 hrs
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	>=10^4	inhibited	0	0%		>=72 hrs
Staphylococcus aureus subsp. *aureus* ATCC 6538 (00032*)	>=10^4	inhibited	0	0%		>=72 hrs
Enterococcus faecalis ATCC 29212 (00087*)	>=10^4	inhibited	0	0%		>=72 hrs

Key : *Corresponding WDCM numbers.
(#) Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use.

Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (19,20).

Reference

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Revision: 05/2022

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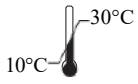

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Baird Parker Agar Base

M043S

Baird Parker Agar Base with supplements is recommended for isolation and enumeration of coagulase positive Staphylococci from food and other materials. It is recommended by BIS under the specifications IS : 5887 (Part II) 1976.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	10.000
Meat extract	5.000
Yeast extract	1.000
Glycine	12.000
Sodium pyruvate	12.000
Lithium chloride	5.000
Agar	20.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 65 grams in 950 ml distilled water.Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C and aseptically add 50 ml concentrated Egg Yolk Emulsion (FD045) and 3 ml sterile 3.5% Potassium Tellurite solution (FD047) or 50 ml Egg Yolk Tellurite Emulsion (FD046). Mix well and pour into sterile Petri plates.

Warning : Lithium chloride is harmful. Avoid bodily contact and inhalation of vapours. On contact with skin wash with plenty of water immediately.

Principle And Interpretation

Baird Parker Agar was developed by Baird-Parker (1,2) from the Tellurite - glycine formulation of Zebovitz et al (3) for isolation of *Staphylococcus aureus* from foods.

This medium was found to be less inhibitory to *Staphylococcus aureus* than other media, at the same time being more selective (4, 5, 6). Subsequently it was officially adapted by the AOAC and is also recommended in USP for use in Microbial limit test (7). ISO Committtee(10) has recommended this medium for isolation and enumeration of Staphylococci. Present formulation having slightly increased amount of pyruvate is recommended by BIS for isolation of *Staphylococcus aureus* (11). However identity of *Staphylococcus aureus* isolated on Baird-Parker Agar must be confirmed with a coagulase reaction. Smith and Baird-Parker (8) found that the addition of 50 mg/l Sulphamethazine in the medium, suppresses the growth and swarming of *Proteus species* .

Sodium pyruvate protects injured cells and helps recovery. Lithium chloride and potassium tellurite inhibit most of the contaminating microflora except *Staphylococcus aureus* . Glycine, pyruvate enhances growth of Staphylococcus. With the addition of egg yolk, the medium becomes yellow, opaque. Proteolytic bacteria produce a clear zone around colony in egg yolk containing media. A clear zone and grey-black colonies on this medium are diagnostic for coagulase positive Staphylococci.

Upon further incubation, an opaque zone is developed around colonies which can be due to lipolytic activity.

Baird-Parker Agar Base can also be used to detect coagulase activity by adding plasma fibrinogen mixture in place of egg yolk emulsion. 375 mg bovine fibrinogen, 2.5 ml rabbit plasma, 2.5 mg trypsin inhibitor and 2.5 mg potassium tellurite dissolved in 10 ml sterile distilled water and added to 90 ml sterile molten medium kept at 45-50°C (9). Mix well and pour into plates. On this medium Staphylococcal coagulase positive colonies are white to grey-black surrounded by an opaque zone of coagulase activity, within 24-40 hours incubation at 35°C. Reduction in tellurite is necessary because of absence of egg yolk emulsion. This results in translucent agar and white to grey coloured colonies of Staphylococci. For quantitative results, select 20 - 200 colonies. Count *Staphylococcus aureus* like colonies and test them for coagulase reaction. Report *Staphylococcus aureus*

per gram of food. Regardless of the negative reactions, consider all doubtful colonies as *Staphylococcus aureus* and carry out further tests. Colonies of some contaminating organisms may digest the coagulase halo reaction.

Quality Control

Appearance
Cream to yellow coloured homogeneous free flowing powder

Gelling
Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared medium
Basal medium: Yellow coloured clear to slightly opalescent gel. After addition of Egg Yolk Emulsion and Tellurite Emulsion: Yellow coloured opaque gel forms in Petri plates.

Reaction
Reaction of 6.5% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH
6.80-7.20

Cultural Response
Cultural characteristics observed with added Egg yolk emulsion and Tellurite Emulsion (FD045 and FD052), after an incubation at 35-37°C for 24-48 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony	Lecithinase
Cultural Response					
Bacillus subtilis ATCC 6633	50-100	none - poor	<=10%		
Micrococcus luteus ATCC 10240	50-100	fair-good	30-40%	shades of brown-black (very small)	Negative
Proteus mirabilis ATCC 25933	50-100	good - luxuriant	>=50%	brown - black	Negative
Staphylococcus epidermidis ATCC 12228	50-100	fair-good	30-40%	black	Negative
Escherichia coli ATCC 25922	50-100	none-poor	<=10%		
Staphylococcus aureus ATCC 25923	50-100	good - luxuriant	>=50%	grey-black shiny	Positive, opaque zone around the colony

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

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Revision : 3 / 2015

Violet Red Bile Agar

M049

Intended use

Recommended for selective isolation, detection and enumeration of coli-aerogenes bacteria in water, milk other dairy food products and clinical samples.

Composition**

Ingredients	Gms / Litre
Peptone	7.000
Yeast extract	3.000
Sodium chloride	5.000
Bile salts mixture	1.500
Lactose	10.000
Neutral red	0.030
Crystal violet	0.002
Agar	15.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 41.53 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. **DO NOT AUTOCLAVE**. Cool to 45-50°C and immediately pour into sterile Petri plates containing the inoculum. If desired, the medium can be sterilized by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

The coliform group consists of several genera of bacteria belonging to the family *Enterobacteriaceae*. The historical definition of this group has been based on the method used for detection i.e. lactose fermentation. This group is defined as all aerobic and facultative anaerobic, gram-negative, non-spore-forming rod shaped bacteria that ferment lactose with gas and acid formation within 48 hour at 35°C (1,2). Examination of foods, ingredients and raw materials, for the presence of marker groups such as coliforms is the one of the common tests.

Violet Red Bile Agar, a modification of MacConkey's original formulation (1) is used for the enumeration of coli-aerogenes bacterial group. It relies on the use of the selective inhibitory components crystals violet and bile salts and the indicator system lactose, and neutral red. Thus, the growth of many unwanted organisms is suppressed, while tentative identification of sought bacteria can be made. Organisms, which rapidly attack lactose, produce purple colonies surrounded by purple halos. Non-fermenters or late lactose-fermenters produce pale colonies with greenish zones (3). VRBA is recommended by APHA (4,5). Selectivity of VRBA can be increased by incubation under anaerobic conditions and/ or at elevated temperature, i.e. equal to or above 42°C (6-8). It is also recommended by ISO (9).

Peptone and yeast extract serve as sources of carbon, nitrogen, vitamins and other essential growth nutrients. Lactose is the fermentable carbohydrate, utilization of which leads to the production of acids. Neutral red indicator detects the acidity so formed. Crystal violet and bile salts mixture help to inhibit the accompanying gram-positive and unrelated flora. Sodium chloride maintains the osmotic equilibrium. Violet Red Bile Agar is not completely specific for enteric; other accompanying bacteria may give the same reaction. Further biochemical tests are necessary for positive identification (5).

Type of specimen

Clinical samples - Stool; Food and dairy samples; Water samples

Specimen Collection and Handling:

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (3,4,5).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (10).

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (11,12).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3. Further biochemical tests must be carried out for complete identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to pink homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Reddish purple coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 4.15% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
# *Klebsiella aerogenes* ATCC 13048 (00175*)	50-100	luxuriant	>=50%	pink to pinkish red
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant	>=50%	pinkish red with bile precipitate
Salmonella Enteritidis ATCC 13076 (00030*)	50-100	luxuriant	>=50%	Colourless to orangish yellow
Staphylococcus aureus subsp.aureus ATCC 25923 (00034*)	>=10^4	inhibited	0%	

Key : (*) Corresponding WDCM numbers. (#) Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (11,12).

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Revision : 04/2023

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Selenite Broth (Selenite F Broth) (Twin Pack)

M052

Intended Use:

Recommended as enrichment media for the isolation of *Salmonellae* from faeces, urine or other pathological materials.

Composition**

Ingredients	Gms / Litre
Part A	-
Tryptone	5.000
Lactose	4.000
Sodium phosphate	10.000
Part B	-
Sodium hydrogen selenite	4.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 4.0 grams of Part B in 1000 ml distilled water. Add 19.0 grams of Part A. Mix well. Warm to dissolve the medium completely. Distribute in sterile test tubes. Sterilize in a boiling water bath or free flowing steam for 10 minutes. **DO NOT AUTOCLAVE.** Excessive heating is detrimental. Discard the prepared medium if large amount of selenite is reduced (indicated by red precipitate at the bottom of tube/bottle).

Note: Recommended to adjust the pH if slight drift is occurring after addition of selenite.

Principle And Interpretation

Klett (1) first demonstrated the selective inhibitory effects of selenite and Guth (2) used it to isolate *Salmonella* Typhi. Leifson fully investigated selenite and formulated the media (3). Enrichment media are routinely employed for detection of pathogens in faecal specimens as the pathogens are present in a very small number in the intestinal flora. Selenite Broth is useful for detecting *Salmonella* in the non-acute stages of illness when organisms occur in the faeces in low numbers and for epidemiological studies to enhance the detection of low number of organisms from asymptomatic or convalescent patients (4).

Tryptone provides nitrogenous substances. Lactose maintains the pH of medium. Selenite is reduced by bacterial growth and alkali is produced. An increase in pH lessens the toxicity of the selenite and results in overgrowth of other bacteria. The acid produced by bacteria due to lactose fermentation serves to maintain a neutral pH. Sodium phosphate maintains a stable pH and also lessens the toxicity of selenite. Enriched broth is subcultured on differential plating media such as Bismuth Sulphite Agar (M027), Brilliant Green Agar (M016), XLD Agar (M031) etc. Do not incubate the broth longer than 24 hours as inhibitory effect of selenite decreases after 6 - 12 hours of incubation (5).

Type of specimen

Clinical samples : faeces, urine or other pathological materials.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (6,7).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/ eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1.Selenite Broth is inhibitory and recommended for selective isolation of *Salmonella* species.

2.Do not incubate the broth longer than 24 hours as inhibitory effect of selenite decreases after 6 - 12 hours of incubation (6)

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Part A : White to light yellow homogeneous free flowing powder

Part B : White to cream crystalline powder

Colour and Clarity of prepared medium

Cream to yellow coloured clear solution without any precipitate

Reaction

Reaction of medium [(1.9% w/v) Part A and (0.4% w/v) Part B] at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

Cultural characteristics observed when subcultured on MacConkey Agar(M081) after an incubation at 35-37°C for 18-24hours.

Organism	Inoculum (CFU)	Recovery	Colour of colony
Escherichia coli ATCC 8739 (00012*)	50-100	none to poor (no increase in numbers)	pink with bile precipitate
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	good-luxuriant	colourless
Escherichia coli ATCC 25922 (00013*)	50-100	none to poor (no increase in numbers)	pink with bile precipitate
Salmonella Typhi ATCC 6539	50-100	good-luxuriant	colourless
Salmonella Choleraesuis ATCC 12011	50-100	good-luxuriant	colourless

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (6,7).

Reference

1.Klett A., 1900, Zeitsch Für Hyg. Und. Infekt., 33: 137.

2.Guth F., 1926, Zbl. Bakt. I. Orig., 77:487.

3.Leifson E., 1936, Am. J. Hyg., 24(2) : 423.

4.Chattopadhyay W. and Pilford J. N., 1976, Med. Lab. Sci., 33:191

5.Kelly, Brenner and Farmer, 2003, Manual of Clinical Microbiology, 8th ed., Lennett and others (Eds.), ASM, Washington, D.C.

6.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

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Revision : 05/2023

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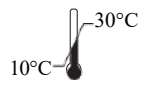
IVD ***In vitro* diagnostic medical device**



Storage temperature

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Phenol Red Broth Base

M054

Intended Use:

A basal medium to which carbohydrates are added for determination of fermentation reactions of pure cultures of microorganisms. The composition of this medium is in accordance with FDA BAM.

Composition**

Ingredients	Gms / Litre
Proteose peptone	10.000
HM peptone B #	1.000
Sodium chloride	5.000
Phenol red	0.018
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Beef extract

Directions

Suspend 16.02 grams in 1000 ml purified/distilled water,mix well. Heat if necessary to dissolve the medium completely. Mix well and dispense in fermentation tubes (tubes containing inverted Durham's tubes). Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Aseptically add filter sterilized or autoclave sterilized carbohydrate solution to sterile basal medium.

Principle And Interpretation

Phenol Red Broth Medium is formulated as per Vera (1) and is recommended to determine the fermentation reaction of carbohydrates for the differentiation of microorganisms (2-4). It is recommended by FDA BAM (5). Phenol Red Broth Medium with various added carbohydrates serves as a differential medium by aiding in differentiation of various species and genera by their ability to ferment the specific carbohydrate, with the production of acid or acid and gas (6). Phenol Red Broth Base is a complete medium without added carbohydrate, which can be used with the addition of 5-10 %, desired carbohydrate. It is used as a negative control for studying fermentations or as a base for the addition of carbohydrates. Proteose peptone and HM peptone B serve as sources for carbon and nitrogen. Sodium chloride is the osmotic stabilizer. Phenol red is the pH indicator, which turns yellow at acidic pH. Gas formation is seen in Durhams tubes. All of the *Enterobacteriaceae* grow well in this medium. In addition to producing a pH colour shift, the production of mixed acids, notably butyric acids, often results in a pungent, foul odour from the culture medium (7).

Type of specimen

Isolated Microorganisms from clinical and non clinical sample

Specimen Collection and Handling:

For isolated Microorganisms samples follow appropriate techniques for handling specimens as per established guidelines (8,9). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. In addition to producing a pH colour shift, the production of mixed acids, notably butyric acids, often results in a pungent, foul odour from the culture medium (2).

Performance and Evaluation

Performance of the medium is expected when used as per thedirection on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Light yellow to pink coloured homogeneous free flowing powder

Colour and Clarity of prepared medium
Red coloured clear solution without any precipitate

Reaction
Reaction of 1.6% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH
7.20-7.60

Cultural Response
Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 24 hours.(longer if necessary)

Organism	Inoculum (CFU)	Growth	without carbohydrate, (Acid)	without carbohydrate, (Gas)	with dextrose, (Acid)	with dextrose, (Gas)
Citrobacter freundii ATCC 8090	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction
# *Klebsiella aerogenes* ATCC 13048 (00175*)	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction
Klebsiella pneumoniae ATCC 13883 (00097*)	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction
Proteus vulgaris ATCC 13315	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction
Salmonella Typhi ATCC 6539	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction
Serratia marcescens ATCC 8100	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Positive reaction
Shigella flexneri ATCC 12022 (00126*)	50-100	luxuriant	Negative reaction, no colour change	Negative reaction	Positive reaction, yellow colour	Negative reaction

Key : (*) Corresponding WDCM numbers, (#) Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (8,9).

Reference

1.Vera H. D., 1950, Am. J. Public Health, 40, 1267
2.Ewing W. H., 1986, Edwards and Ewings Identification of Enterobacteriaceae, 4th ed.,Elsevier Science Publishing Co., Inc., New York.
3.Finegold S. M. and Baron E. J., 1986, Bailey and Scotts Diagnostic Microbiology, 7th Ed., The C.V. Mosby Co., St. Louis.
4.MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification -Maintenanceof Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
5.Bacteriological Analytical Manual, 8th Edition, Revision A, 1998.
6.MacFaddin J. F., 2000, Biochemical tests for Identification of Medical Bacteria, 3rd edi., Lippincott, Williams and Wilkins, Baltimore.
7.Koneman E. W., Allen S. D., Janda W.M., Schreckenberger P.C., Winn W.C. Jr., 1992, Colour Atlas and Textbook of Diagnostic Microbiology, 4th Ed., J. B. Lippinccott Company
8.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
9.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Revision : 04/2022

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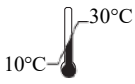

Storage temperature

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MR-VP Medium (Glucose Phosphate Broth)

M070S

MR-VP Medium (Glucose Phosphate Broth) is recommended for studying Methyl Red and Voges-Proskauer tests to differentiation amongst coli-aerogenes group.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	5.000
Dextrose	5.000
Dipotassium phosphate	5.000
Final pH (at 25°C)	7.5±0.1

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 15 grams in 1000 ml of distilled water. Distribute in test tubes in 3 ml amounts or as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Clark and Lubs (1) found that the addition of methyl red to cultures of *Escherichia coli* resulted in a red colour due to high acidity produced during dextrose fermentation. Voges-Proskauer (2) reported red colouration after addition of potassium hydroxide to specific culture media with organisms grown in it. The investigators developed MR-VP Broth which enables both tests to be performed in same medium in different tubes. The red colour produced by the addition of potassium hydroxide to cultures is due to the ability of organisms to produce a neutral product acetoin (acetyl methyl carbinol) from dextrose (3). The acetoin is oxidized in the presence of oxygen and alkali to produce diacetyl which reacts with creatine to produce a red colour. This formulation is also recommended by BIS (5) and ISO committee (8) for the detection of coli-aerogenes group. A slightly modified formulation (M070S) is recommended by BIS (4,6,7) for the detection of *E. coli, Vibrio parahaemolyticus* and *Bacillus cereus* responsible for food poisoning. To test *V.parahaemolyticus* for VP, addition of 2-3% Sodium chloride to the medium is required.

The Methyl Red (MR) test is performed after maximum of 5 days of incubation at 30°C (9) and Voges-Proskauer test (VP) cultures are incubated at 30°C for 24-48 hours (10). Various other tests have been suggested by Werkman (11), OMeara (12) Levine, Epstein and Voughn (13) and Voughn, Mitchell and Levine (9). Werkmans Test (8): Add 2 drops of a 2% solution of ferric chloride to 50 ml culture and 5 ml of 10% sodium hydroxide. Shake the tube to mix well. Stable copper colour developing in a few minutes is positive reaction. OMeara Test (8): Add of 25 mg of solid creatine to 5ml culture and then add 5 ml concentrated (40%) sodium hydroxide. Red colour development in a few minutes after shaking the tube well, is a positive reaction. Levine, Epstein and Voughn (13) modified OMeara technique by dissolving the creatine in a concentrated solution of potassium hydroxide. Voughn, Mitchell and Levine (9) recommended the method of Barritt (14) as, addition of 1 ml of 40% potassium hydroxide and 3 ml of 5% a - naphthol in absolute ethanol to 5 ml culture. Positive test is indicated by eosine pink colour within 2-5 minutes.

Quality Control

Appearance
Cream coloured homogeneous free flowing powder

Colour and Clarity of prepared medium
Light yellow coloured clear solution without any precipitate.

Reaction
Reaction of 1.5% w/v aqueous solution at 25°C. pH : 7.5±0.1

pH
7.40-7.60

Cultural Response

M070S: Cultural characteristics observed after an incubation at 30°C for 48 hours .

Organism	Inoculum (CFU)	Growth	MR Test	VP Test
Cultural Response				
Bacillus cereus ATCC 10876	50-100	luxuriant	Negative reaction, yellow colour	Positive reaction, eosin pink / red colour within 2-5 minutes
Enterobacter aerogenes ATCC 13048	50-100	luxuriant	Negative reaction, yellow colour	Positive reaction, eosin pink / red colour within 2-5 minutes
Escherichia coli ATCC 25922	50-100	luxuriant	Positive reaction , bright red colour	Negative reaction, no colour change
Klebsiella pneumoniae ATCC 23357	50-100	luxuriant	Negative reaction, yellow colour	Positive reaction, eosin pink / red colour within 2-5 minutes
Salmonella Typhi ATCC 6539	50-100	luxuriant	Positive reaction , bright red colour	Negative reaction, no colour change
Vibrio parahaemolyticus ATCC 17802	50-100	poor	Negative reaction, yellow colour	Negative reaction, no colour change

Storage and Shelf Life

Store below 30°C in tightly closed containers and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1.Clark and Lubs, 1915, J. Inf. Dis., 17 : 160.
2.Voges and Proskauer, 1898, Zeit, Hyg., 28 : 20. ,,
3.MacFaddin, J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
4.Bureau of Indian Standards, IS : 5887 (Part I) 1976, reaffirmed 1986.
5.Bureau of Indian Standards, IS : 5887 (Part - III) 1976.
6.Bureau of Indian Standards, IS : 5887 (Part IV) 1976.
7.Bureau of Indian Standards, IS : 5887 (Part - V) 1976, reaffirmed 1986.
8.International Organization for Standardization (ISO), 1993, Draft ISO/DIS 6597.
9.Vaughn, Mitchell and Levine, 1939, J. Am. Water Works Association, 31:993.
10. Kallas, Chinn and Coulter, 1931, J. Bact., 22 : 125.
11. Werkman, 1930, J. Bact., 20 : 121.
12. OMeara, 1931, J. Path. Bacteriol., 34 : 401.
13. Levine, Epstein and Voughn, 1934, Am. J. of Publ. Health, 24 : 505.
14. Barritt, 1936, J. Path. Bacteriol., 42 : 441.

Revision : 2 / 2015

Bile Broth Base

M071

Intended Use:

Recommended for cultivation of members of the *Enterobacteriaceae* and in culture of blood clots from patients with suspected enteric fever.

Composition**

Ingredients	Gms / Litre
Peptone	20.000
Sodium taurocholate	5.000
Sodium chloride	5.000
Final pH (at 25°C)	7.6±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 30.0 grams in 1000 ml distilled/purified water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and add 1 ml of Streptokinase solution (100000 units/ml). Mix well and dispense into tubes or flasks as desired.

Principle And Interpretation

Enterobacteriaceae inhabit a wide variety of niches that include the human gastrointestinal tract and various environmental niches. When blood samples from a patient with suspected enteric fever is submitted for the widal test, it is useful as a routine to culture the clot after separation of serum (1). If it is known that the blood has been withdrawn with strict aseptic precautions, the clot may be placed in a wide tube half-filled with broth, or in a wide mouth screw-capped bottle containing 80 ml of broth. When there is any doubt regarding the presence of contaminating organisms, and this is always a possibility when blood specimens are sent to the laboratory from a distance, the clot should be transferred directly to a tube of sterile ox bile and disintegrated with aseptic precautions. After overnight incubation the bile culture is examined for enteric organism in the usual manner. A method of clot culture with Streptokinase has been recommended (2). Blood is allowed to clot in 5 ml quantities in sterile screw-capped universal containers. The separated serum is removed and 15 ml of 0.5% Bile Broth Base with Streptokinase 100 units/ml is added to each bottle. The streptokinase causes rapid clot lysis with release of bacteria trapped in the clot (2).

Peptone serves as a source of nitrogen, carbon, long chain amio acids and other essential amino acids. Sodium taurocholate inhibits majority of Gram-positive species. Sodium chloride maintains the isotonicity of the medium whereas addition of streptokinase solution causes rapid clot lysis with release of bacteria trapped in the clot (2).

Type of specimen

Clinical samples - Blood clot

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Further biochemical and serological tests must be carried out for complete identification.
2. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
3. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Yellow coloured, clear solution without any haziness

Reaction

Reaction of 3.0% w/v aqueous solution at 25°C. pH : 7.6±0.2

pH

7.40-7.80

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant
#*Klebsiella aerogenes* ATCC 13048 (00175*)	50-100	luxuriant
Salmonella Typhi ATCC 6539	50-100	luxuriant
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	>=10^4	inhibited

Key : (*) Corresponding WDCM numbers, (#) Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1.Colle, J.G., Duguid J.P., Fraser A.G. and Marmion, B.P. (Eds.) 1989 Mackie and McCartney Practical Medical Microbiology, Vol. 2, p:134 Longman Group, UK.

2.Watson, K.C. 1955, Isolation of Salmonella Typhi from the blood stream. J. of ,Lab and Clinical Medicine 46:128-134.

3.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

4.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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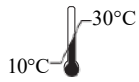

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Kligler Iron Agar

M078

Intended Use:

Recommended for differential identification of gram-negative enteric bacilli from clinical and non-clinical samples on the basis of the fermentation of glucose (dextrose), lactose and hydrogen sulphide production.

Composition**

Ingredients	Gms / Litre
Peptone	15.000
HM Peptone B #	3.000
Yeast extract	3.000
Proteose peptone	5.000
Lactose	10.000
Dextrose	1.000
Ferrous sulphate	0.200
Sodium chloride	5.000
Sodium thiosulphate	0.300
Phenol red	0.024
Agar	15.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

- Equivalent to Beef extract

Directions

Suspend 57.52 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Mix well and distribute into tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Allow the tubes to cool in slanted position to form slopes with about 1 inch butts. Best reactions are obtained on freshly prepared medium. Do not use screw capped tubes or bottles.

Note: *Avoid overheating otherwise it may produce precipitate in the medium.*

Principle And Interpretation

Kligler Iron Agar is a combination of the lead acetate medium described by Kligler (1,2) and Russels Double Sugar Agar (3) and is used as a differentiation medium for typhoid, dysentery and allied bacilli (4). Bailey and Lacey substituted phenol red for andrade indicator previously used as pH indicator (4). Kligler Iron Agar differentiates lactose fermenters from the non-fermenters. It differentiates *Salmonella* Typhi from other Salmonellae and also *Salmonella* Paratyphi A from *Salmonella* Scottmuelleri and *Salmonella* Enteritidis (5). Fermentation of dextrose results in production of acid, which turns the indicator from red to yellow. Since there is little sugar i.e. dextrose, acid production is very limited and therefore a reoxidation of the indicator is produced on the surface of the medium, and the indicator remains red. However, when lactose is fermented, the large amount of acid produced, avoids reoxidation and therefore the entire medium turns yellow. Kligler Iron Agar, in addition to Peptone, HM peptone B and yeast extract, contains lactose and glucose (dextrose), which enables the differentiation of species of enteric bacilli. Phenol red is the pH indicator, which exhibits a colour change in response to acid produced during the fermentation of sugars. The combination of ferrous sulphate and sodium thiosulphate enables the detection of hydrogen sulfide production, which is evidenced by a black color either throughout the butt, or in a ring formation near the top of the butt. Lactose non-fermenters (e.g., *Salmonella* and *Shigella*) initially produce a yellow slant due to acid produced by the fermentation of the small amount of glucose (dextrose). When glucose (dextrose) supply is exhausted in the aerobic environment of the slant, the reaction reverts to alkaline (red slant) due to oxidation of the acids produced. The reversion does not occur in the anaerobic environment of the butt, which therefore remains acidic (yellow butt). Lactose fermenters produce yellow slants and butts because of lactose fermentation. The high amount of acids thus produced helps to maintain an acidic pH under aerobic conditions. Tubes showing original colour of the medium indicates the fermentation of neither glucose (dextrose) nor lactose. Gas production (aerogenic reaction) is detected as individual bubbles or by splitting or displacement of the agar by the formation of cracks in the butt of the medium.

Pure cultures of suspected organisms from plating media such as MacConkey Agar (M081), Bismuth Sulphite Agar (M027) or Deoxycholate Citrate Agar (M065), SS Agar (M108) etc. are inoculated on Kligler Iron Agar for identification.

Type of specimen

Isolated microorganism from clinical, food, dairy and water samples.

Specimen Collection and Handling

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (6). For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (7,8,9). For clinical samples follow appropriate techniques for handling specimens as per established guidelines (10,11). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Results should be noted after 18-24 hours to avoid erroneous results.
2. Straight wire loop should be used for inoculation.
3. Pure isolates should be used to avoid erroneous results.
4. Other biochemical and serological tests must be performed for complete identification

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Light yellow to pink homogeneous free flowing powder
Gelling
Firm, comparable with 1.5% Agar gel
Colour and Clarity of prepared medium
Red coloured, clear to slightly opalescent gel forms in tubes as slants
Reaction
Reaction of 5.75% w/v aqueous solution at 25°C. pH : 7.4±0.2
pH
7.20-7.60
Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18 - 48 hours.

Organism	Inoculum (CFU)	Growth	Gas	H2S	Slant	Butt
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant	positive reaction	negative reaction, no blackening of medium	acidic reaction, yellowing of the medium	acidic reaction, yellowing of the medium
#*Klebsiella aerogenes* ATCC 13048 (00175*)	50-100	luxuriant	positive reaction	negative reaction, no blackening of medium	acidic reaction, yellowing of the medium	acidic reaction, yellowing of the medium
Citrobacter freundii ATCC 8090	50-100	luxuriant	positive reaction	positive reaction, blackening of medium	acidic reaction, yellowing of the medium	acidic reaction, yellowing of the medium
Proteus vulgaris ATCC 6380	50-100	luxuriant	negative reaction	positive reaction, blackening of medium	alkaline reaction, red colour of the medium	acidic reaction, yellowing of the medium
Klebsiella pneumoniae ATCC 13883 (00087*)	50-100	luxuriant	positive reaction	negative reaction,no blackening of medium	acidic reaction, yellowing of the medium	acidic reaction, yellowing of the medium
Salmonella Paratyphi A ATCC 9150	50-100	luxuriant	positive reaction	negative reaction,no blackening of medium	alkaline reaction, red colour of the medium	acidic reaction, yellowing of the medium

Salmonella Schottmuelleri ATCC 10719	50-100	luxuriant	positive reaction	positive reaction, blackening of medium	alkaline reaction, red colour of the medium	acidic reaction, yellowing of the medium
Salmonella Typhi ATCC 6539	50-100	luxuriant	negative reaction	positive reaction, blackening of medium	alkaline reaction, red colour of the medium	acidic reaction, yellowing of the medium
Salmonella Enteritidis ATCC 13076 (00030*)	50-100	luxuriant	positive reaction	positive reaction, blackening of medium	alkaline reaction, red colour of the medium	acidic reaction, yellowing of the medium
Shigella flexneri ATCC 12022 (00126*)	50-100	luxuriant	negative reaction	negative reaction,no blackening of medium	alkaline reaction, red colour of the medium	acidic reaction, yellowing of the medium
Pseudomonas aeruginosa ATCC 27853 (00025*)	50-100	luxuriant	negative reaction	negative reaction, blackening of medium	alkaline reaction, red colour of the medium	alkaline reaction,red colour of the medium
Yersinia enterocolitica ATCC 27729	50-100	luxuriant	variable reaction	negative reaction,no blackening of medium	alkaline reaction,red colour of the medium	acidic reaction, yellowing of the medium
Enterobacter cloacae ATCC 13047 (00083*)	50-100	luxuriant	positive reaction	negative reaction,no blackening of medium	acidic reaction, yellowing of the medium	acidic reaction, yellowing of the medium

Key :* Corresponding WDCM numbers

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (10,11).

Reference

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Revision : 03/2022

HiMedia Laboratories Pvt. Limited,
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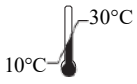
IVD ***In vitro* diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE **CE Marking**

Do not use if package is damaged

Disclaimer :

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Lauryl Sulphate Broth (Lauryl Tryptose Broth)

M080

Intended use

Recommended for detection and enumeration of coliform bacteria in water, waste water, dairy products ,other food samples.

Composition**

Ingredients	Gms / Litre
Tryptose	20.000
Lactose	5.000
Sodium chloride	5.000
Dipotassium hydrogen phosphate	2.750
Potassium dihydrogen phosphate	2.750
Sodium lauryl sulphate (SLS)	0.100
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 35.60 grams in 1000 ml purified/distilled water. Heat if necessary to dissolve the medium completely. Distribute into tubes containing inverted Durhams tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. For inoculum of 1 ml or less, use single strength medium. For inocula of 10 ml or more, double strength or proportionate medium should be prepared.

Principle And Interpretation

Coliforms are considered to be members of *Enterobacteriaceae*, which grow in the presence of bile salts and produce acidand gas from lactose within 48 hours at 37°C (1). These bacteria can also be defined as, members of *Enterobacteriaceae* capable of growing at 37°C, that normally possess β-galactosidase (2). Lauryl Sulphate Broth is used for the detection of coliforms in water, dairy products and other foods, as recommended by APHA (3,4,5). It can also be used for the presumptive detection of coliforms in water, effluent or sewage by the MPN test (6). Lauryl Sulphate Broth was developed by Mallmann and Darby (7). Cowls (6) demonstrated that inclusion of sodium lauryl sulphate makes the medium selective for coliform bacteria. It was later investigated that Lauryl Sulphate Broth gave a higher colon index than the confirmatory standard methods media and also that gas production in Lauryl Sulphate Broth not only acts as a presumptive test but also as a confirmatory test for the presence of coliforms, in the routine testing of water (7). Lauryl Sulphate Broth is also recommended by the ISO Committee for the detection of coliforms (8).

Lauryl Sulphate Broth is designed to obtain rich growth and substantial amount of gas from small inocula of coliform organisms. Aerobic spore-bearers are completely inhibited in this medium. Tryptose provides essential growth substances, such as nitrogen and carbon compounds, sulphate and trace ingredients. The potassium phosphates provide buffering system, while sodium chloride maintains osmotic equilibrium. Sodium lauryl sulphate inhibits organisms other than coliforms.For inoculum of 1 ml or less, use single strength medium. For inocula of 10 ml or more, double strength or proportionate medium should be prepared. After inoculation, incubate the tubes at 37°C for 24 to 48 hours. For every tube showing fermentation (primary fermentation), inoculate two tubes of Lauryl Tryptose Broth from the tube showing primary fermentation and incubate these tubes at 37°C and 44°C respectively. If there is fermentation in the tube incubated at 44°C after 8 to 24 hours, perform indole test by adding Kovacs reagent. A positive indole test in a broth tube showing gas production at 44°C indicates the presence of *Escherichia coli*. If no fermentation occurs in the tube incubated at 37°C after 24 hours, the primary fermentation is assumed to be due to organisms other than coliforms. Broth becomes cloudy if stored at 2-8°C, but it gets cleared at room temperature. Refer appropriate references for standard procedures (1,6,8).

Type of specimen

Food and dairy samples; Water samples

Specimen Collection and Handling:

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (4,5). For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards(1,3). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light yellow coloured, clear solution without any precipitate

Reaction

Reaction of 3.56% w/v aqueous solution at 25°C. pH : 6.8±0.2

pH

6.60-7.00

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Gas Production	Indole production (44°C)
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant	positive reaction	positive reaction, red ring at the interface of the medium
# *Klebsiella aerogenes* ATCC 13048 (00175*)	50-100	luxuriant	positive reaction	negative reaction, no colour development / cloudy ring
Enterococcus faecalis ATCC 29212 (00087*)	>=10^4	inhibited		
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	luxuriant	negative reaction	negative reaction, no colour development / cloudy ring
Staphylococcus aureus subsp aureus ATCC 25923 (00034*)	>=10^4	inhibited		

Key : (#) Formerly known as *Enterobacter aerogenes, (*) corresponding WDCM numbers

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (9,10).

Reference

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Revision : 04/2022

MacConkey Agar w/ 0.15% Bile salts, CV and NaCl

M081

For the selective isolation and differentiation of coliform organisms and other enteric pathogens from clinical and non clinical samples.

Composition**

Ingredients	Gms / Litre
Gelatin peptone	17.000
Tryptone	1.500
Peptone	1.500
Lactose	10.000
Bile salts	1.500
Sodium chloride	5.000
Neutral red	0.030
Crystal violet	0.001
Agar	15.000
Final pH (at 25°C)	7.1±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 51.53 grams in 1000 ml purified/distilled water. Heat to boiling with gentle swirling to dissolve the agar completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Avoid overheating. Cool to 45-50°C. Mix well and pour into sterile Petri plates. The surface of the medium should be dry when inoculated.

Principle And Interpretation

MacConkey agars are slightly selective and differential plating media mainly used for the detection and isolation of gram-negative organisms from clinical (1), dairy (2), food (3,4), water (5), pharmaceutical (6,7) and industrial sources (8). It is also recommended for the selection and recovery of the *Enterobacteriaceae* and related enteric gram-negative bacilli. USP recommends this medium for use in the performance of Microbial Limit Tests (7).

These agar media are selective since the concentration of bile salts, which inhibit gram-positive microorganisms, is low in comparison with other enteric plating media. The medium M081, which corresponds with, that recommended by APHA can be used for the direct plating of water samples for coliform bacilli, for the examination of food samples for food poisoning organisms (4) and for the isolation of *Salmonella* and *Shigella* species in cheese (2). Other than that this medium is also used for count of coli-aerogenes bacteria in cattle and sheep faeces (9), the count of coli-aerogenes and non-lactose fermenters in poultry carcasses (9), bacterial counts on irradiated canned minced chicken (10) and the recognition of coli-aerogenes bacteria during investigations on the genus *Aeromonas* (11,12).

MacConkey Agar is the earliest selective and differential medium for cultivation of enteric microorganisms from a variety of clinical specimens (13,14). The original medium contains protein, bile salts, sodium chloride and two dyes. The selective action of this medium is attributed to crystal violet and bile salts, which are inhibitory to most species of gram-positive bacteria. Gram-negative bacteria usually grow well on the medium and are differentiated by their ability to ferment lactose. Lactose-fermenting strains grow as red or pink colonies and may be surrounded by a zone of acid precipitated bile. The red colour is due to production of acid from lactose, absorption of neutral red and a subsequent colour change of the dye when the pH of medium falls below 6.8. Lactose non-fermenting strains, such as *Shigella* and *Salmonella* are colourless, transparent and typically do not alter appearance of the medium.

Peptone, Tryptone and gelatin peptone are sources of nitrogen, carbon, long chain amino acids and other nutrients. Lactose is a fermentable carbohydrate,Sodium chloride maintains the osmotic equilibrium. Bile salts and crystal violet are selective agents that inhibit growth of gram-positive organisms. Neutral red is the pH indicator dye.

Type of specimen

Clinical - faeces, urine etc., foodstuffs and dairy samples, water samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,15).
For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (2,4).
For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (5).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling clinical specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Though the medium is recommended for selective isolation, further biochemical and serological testing must be carried out for further confirmation.
2. The surface of the medium should be dry when inoculated.
3. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
4. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to pink homogeneous free flowing powder

Gelling

Firm comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Red with purplish tinge coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 5.15% w/v aqueous solution at 25°C. pH : 7.1±0.2

pH

6.90-7.30

Cultural Response

Cultural response was observed after an incubation at 30-35°C for 18-72 hours. Recovery rate is considered as 100% for bacteria growth on Soybean Casein Digest Agar.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Corynebacterium diphtheriae type gravis	>=10^4	inhibited	0%	
Shigella flexneri ATCC 12022 (00126*)	50 -100	fair to good	30 -40 %	colourless
Salmonella Paratyphi A ATCC 9150	50 -100	luxuriant	>=50 %	colourless
Salmonella Abony NCTC 6017 (00029*)	50 -100	luxuriant	>=50 %	colourless
Proteus vulgaris ATCC 13315	50 -100	luxuriant	>=50 %	colourless
Salmonella Typhi ATCC 6539	50 -100	luxuriant	>=50 %	colourless
Staphylococcus epidermidis ATCC 12228 (00036*)	>=10^4	inhibited	0%	
Escherichia coli ATCC 8739 (00012*)	50 -100	luxuriant	>=50 %	pink-red with bile precipitate

Staphylococcus aureus subsp.aureus ATCC 6538 (00032*)	>=10^4	inhibited	0%	
Salmonella Paratyphi B ATCC 8759	50 -100	luxuriant	>=50 %	colourless
Escherichia coli ATCC 25922 (00013*)	50 -100	luxuriant	>=50 %	pink to red with bile precipitate
Escherichia coli NCTC 9002	50 -100	luxuriant	>=50 %	pink to red with bile precipitate
# *Klebsiella aerogenes* ATCC 13048 (00175*)	50 -100	luxuriant	>=50 %	pink to red
Salmonella Typhimurium ATCC 14028 (00031*)	50 -100	luxuriant	>=50 %	colourless
Enterococcus faecalis ATCC 29212 (00087*)	50 -100	none - poor	<=10 %	colourless to pale pink
Salmonella Enteritidis ATCC 13076 (00030*)	50 -100	luxuriant	>=50 %	colourless
Staphylococcus aureus subsp.aureus ATCC 25923 (00034*)	>=10^4	inhibited	0%	

Key :- * Corresponding WDCM numbers, # Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,15).

Reference

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Revision : 06/ 2022

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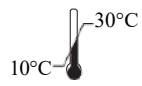
IVD ***In vitro* diagnostic medical device**



Storage temperature

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Pseudomonas Agar Base

M085

Intended use :

For selective isolation of *Pseudomonas* species.

Composition**

Ingredients	Gms / Litre
Tryptone	10.000
Gelatin peptone	16.000
Potassium sulphate	10.000
Magnesium chloride, anhydrous	1.400
Agar	11.000
Final pH (at 25°C)	7.1±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 24.2 grams in 500 ml purified/distilled water containing 5 ml glycerol. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add sterile rehydrated contents of either CetriNix Supplement (FD029) or CFC Supplement (FD036) as desired. Mix well and pour into sterile Petri plates. *Note : Do not keep the molten agar for longer than 4 hours.*

Principle And Interpretation

Pseudomonas Agar Base is a modification of Kings A medium (1) which contains magnesium chloride and potassium sulphate to enhance pigment production. Goto and Enomoto (2) formulated CetriNix supplement for the selective isolation of *Pseudomonas aeruginosa* from clinical specimens. Lowbury and Collins (3) studied cetrimide as a selective agent. CetriNix supplement suppresses *Klebsiella, Proteus* and *Providencia* species.

Tryptone and gelatin peptone supplies nitrogenous and carbonaceous compounds, long chain amino acids, and other essential growth nutrients.

C-F-C Supplement was formulated by Mead and Adams (4) making the medium specific for isolation of *Pseudomonas* from chilled foods and processing plants, environmental samples and water. This medium is recommended for enumeration of *Pseudomonas* species from meat and meat products. It can also be used for clinical samples.

Examine inoculated plates after 24 hours and 48 hours using both white and UV light. The presence of blue-green or brown pigmentation may be considered as presumptive evidence of *Pseudomonas aeruginosa. Alteromonas* species may form brown or pink colonies on the medium.

Type of specimen

Clinical samples - pus, urine, body fluids, Food samples; Water samples.

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6).

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (7).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (8).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.

2.Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3.Further biochemical and serological tests must be performed for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.1% Agar gel.

Colour and Clarity of prepared medium

Yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 4.84% w/v aqueous solution containing 1% v/v glycerol at 25°C. pH : 7.1±0.2

pH

6.90-7.30

Cultural Response

Cultural characteristics observed after an incubation for 40-48 hours. Recovery rate is considered as 100% for growth on Soyabean Casein Digest Agar

Organisms	Inoculum (CFU)	Growth (at 34-38°C with FD029)	Recovery 34-38°C with FD029)	Growth (at 24-26°C with FD036)	Recovery (at 24-26°C with FD036)	Colour/ Fluorescence under uv
Proteus vulgaris ATCC 13315	>=10^4	inhibited	0%	-	-	-
Pseudomonas aeruginosa ATCC 27853 (00025*)	50-100	good-luxuriant	>=50%	-	-	blue-green /positive
Pseudomonas aeruginosa ATCC 9027 (00026*)	50-100	good-luxuriant	>=50%	-	-	blue-green /positive
Pseudomonas aeruginosa ATCC 10145 (00024*)	50-100	good-luxuriant	>=50%	-	-	blue-green /positive
Pseudomonas cepacia ATCC 10661	50-100	-	-	good-luxuriant	>=50%	
Pseudomonas fluorescens ATCC 13525 (00115*	50-100	-	-	good-luxuriant	>=50%	
Pseudomonas fragi ATCC 4973 (00116*	50-100	-	-	good-luxuriant	>=50%	
Enterococcus faecalis ATCC 29212 (00087*	>=10^4	inhibited	0%	-	-	-
Enterococcus faecalis ATCC 19433 (00009*	>=10^4	inhibited	0%	-	-	-
Escherichia coli ATCC 25922 (00013*)	>=10^4	inhibited	0%	inhibited	0%	
Escherichia coli ATCC 8739 (00012*)	>=10^4	inhibited	0%	inhibited	0%	

Key : * - Corresponding WDCM numbers

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

References

1.King E.O., Ward M.K. and Raney D.E., 1954, J.Lab and Clin. Med., 44:301.

2.Goto S. and Entomoto S., 1970, Jap. J. Microbiol., 14:65.

3.Lowbury E.J. and Collins A.G., 1955, Clin. Path., 8:47.

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5.Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.

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7.Salfinger Y., and Tortorello M.L. , 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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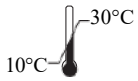

Storage temperature

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Plate Count Agar (Standard Methods Agar)

M091

Intended use

Recommended for the determination of plate counts of microorganisms in food, water, waste water samples.

Composition**

Ingredients	Gms / Litre
Tryptone	5.000
Yeast extract	2.500
Dextrose (Glucose)	1.000
Agar	15.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 23.5 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Plate Count Agar is formulated as described by Buchbinder et al (1) which is recommended by APHA (2,3,4) and FDA (5). Tryptone provides nitrogenous and carbonaceous compounds, long chain amino acids, and other essential nutrients. Yeast extract supplies Vitamin B complex. APHA recommends the use of pour plate technique. The samples are diluted and appropriate dilutions are added in Petri plates. Sterile molten agar is added to these plates and plates are rotated gently to ensure uniform mixing of the sample with agar. The poured plate count method is preferred to the surface inoculation method, since it gives higher results. Plate Count Agar is also suitable for enumerating bacterial count of sterile rooms.

Type of specimen

Food and dairy samples; Water samples

Specimen Collection and Handling:

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (3,4). For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (2). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 2.35% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 48 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Bacillus subtilis subsp. spizizenni ATCC 6633 (00003*)	50-100	luxuriant	>=70%
Enterococcus faecalis ATCC 29212 (00087*)	50-100	luxuriant	>=70%
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant	>=70%
Lactobacillus rhamnosus ATCC 9595	50-100	luxuriant	>=70%
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	50-100	luxuriant	>=70%
Streptococcus pyogenes ATCC 19615	50-100	luxuriant	>=70%

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (6,7).

Reference

1. Buchbinder L., Baris Y., Aldd E., Reynolds E., Dilon E., Pessin V., Pincas L. and Strauss A., 1951, Publ. Hlth. Rep., 66:327.
2. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
3. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
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5. FDA Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, DC.
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Revision : 04/2023

Simmons Citrate Agar

M099

Intended Use:

Recommended for differentiation the members of *Enterobacteriaceae* on the basis of citrate utilization from clinical and non clinical samples.

Composition**

Ingredients	Gms / Litre
Magnesium sulphate	0.200
Ammonium dihydrogen phosphate	1.000
Dipotassium phosphate	1.000
Sodium citrate	2.000
Sodium chloride	5.000
Bromothymol blue	0.080
Agar	15.000
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 24.28 grams in 1000 ml purified/ distilled water. Heat, to boiling, to dissolve the medium completely. Mix well and distribute in tubes or flasks. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.
Precaution: Before using water, ensure pH of water is 6.5 to 7.0. Initial colour of the medium may deviate from expected colour, if the above precaution is ignored.

Principle And Interpretation

These media are used for the differentiation between *Enterobacteriaceae* and the members of aerogenes group on the basis of citrate utilization as sole carbon source. Initially the citrate medium was developed by Koser (1) containing ammonium salt as the only nitrogen source and citrate as the only carbon source for differentiating *Escherichia coli* and *Enterobacter aerogenes* by IMViC tests. Later on Simmons (2) modified Kosers formulation by adding agar and bromothymol blue (3). It is recommended by APHA (4).
Ammonium dihydrogen phosphate and sodium citrate serve as the sole nitrogen and carbon source respectively. Microorganisms also use inorganic ammonium salts as their sole nitrogen source. Metabolism of these salts causes the medium to become alkaline, indicated by a change in colour of the pH indicator from green to blue. Bromothymol blue is the pH indicator. The medium should be freshly prepared because in dry conditions, changes in colour may appear even before inoculation, especially at the bottom of the slant.

Type of specimen

Isolated microorganism from clinical and non clinical samples.

Specimen Collection and Handling

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (5). For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (6,7,8). For clinical samples follow appropriate techniques for handling specimens as per established guidelines (9,10).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1.Before using water, ensure pH of water is 6.5 to 7.0.Initial colour of the medium may deviate from expected colour, if the above precaution is ignored.

2.The pH affects the performance of the medium and must be correctly monitored.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder.
Gelling
Firm, comparable with 1.5% Agar gel
Colour and Clarity of prepared medium
Forest green coloured slightly opalescent gel forms in tubes as slants.
Reaction
Reaction of 2.43% w/v aqueous solution at 25°C. pH : 6.8±0.2.
pH
6.60-7.00
Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Citrate utilisation
# *Klebsiella aerogenes* ATCC 13048 (00175*)	50-100	good-luxuriant	positive reaction, blue colour
Escherichia coli ATCC 25922 (00013*)	>=10^4	inhibited	
Salmonella Typhi ATCC 6539	50-100	fair-good	negative reaction, green colour
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	good-luxuriant	positive reaction, blue colour
Shigella dysenteriae ATCC 13313	>=10^4	inhibited	
Salmonella Choleraesuis ATCC 12011	50-100	good-luxuriant	positive reaction, blue colour
Salmonella Enteritidis ATCC 13076 (00030*)	50-100	good-luxuriant	positive reaction, blue colour

Key: * Corresponding WDCM numbers
Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (9,10).

Reference

1. Koser, 1923, J. Bact., 8:493.
2. Simmons, 1926, J. Infect. Dis., 39:209.
3. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
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8. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
9. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
10. Jorgensen,J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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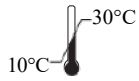

Storage temperature

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SS Agar (Salmonella Shigella Agar)

M108

Intended Use:

Recommended for the isolation of *Salmonella* and some *Shigella* species from pathological specimens, suspected foodstuffs etc.

Composition**

Ingredients	Gms / Litre
Peptone	5.000
HM peptone B #	5.000
Lactose	10.000
Bile salts mixture	8.500
Sodium citrate	10.000
Sodium thiosulphate	8.500
Ferric citrate	1.000
Brilliant green	0.00033
Neutral red	0.025
Agar	15.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

- Equivalent to Beef extract

Directions

Suspend 63.02 grams in 1000 ml purified /distilled water. Boil with frequent agitation to dissolve the medium completely. DO NOT AUTOCLAVE OR OVERHEAT. Overheating may destroy selectivity of the medium. Cool to about 50°C. Mix and pour into sterile Petri plates.

Principle And Interpretation

SS Agar medium is recommended as differential and selective medium for the isolation of *Salmonella* and *Shigella* species from pathological specimens (1) and suspected foodstuffs (2,3,4,5) and for microbial limit test (6). SS Agar is a moderately selective medium in which gram-positive bacteria are inhibited by bile salts, brilliant green and sodium citrate.

Peptone, HM peptone B provides nitrogen and carbon source, long chain amino acids, vitamins and essential growth nutrients. Lactose is the fermentable carbohydrate. Brilliant green, bile salts and thiosulphate selectively inhibit gram-positive and coliform organisms. Sodium thiosulphate is reduced by certain species of enteric organisms to sulphite and H_2S gas and this reductive enzyme process is attributed by thiosulphate reductase. Production of H_2S gas is detected as an insoluble black precipitate of ferrous sulphide, formed upon reaction of H_2S with ferric ions or ferric citrate, indicated in the center of the colonies.

The high selectivity of Salmonella Shigella Agar allows the use of large inocula directly from faeces, rectal swabs or other materials suspected of containing pathogenic enteric bacilli. On fermentation of lactose by few lactose-fermenting normal intestinal flora, acid is produced which is indicated by change of colour from yellow to red by the pH indicator-neutral red. Thus these organisms grow as red pigmented colonies. Lactose non-fermenting organisms grow as translucent colourless colonies with or without black centers. Growth of *Salmonella* species appears as colourless colonies with black centers resulting from H_2S production. *Shigella* species also grow as colourless colonies which do not produce H_2S.

Type of specimen

Clinical: faeces, rectal swabs; Suspected food stuffs.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (8,9).

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (2,3,4,5).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1.The medium is highly selective and may be toxic to certain *Salmonella* or *Shigella* species. Hence it is recommended to use to inoculate plates of less inhibitory media parallel to SS Agar, such as Hektoen Enteric Agar (M467) or Deoxycholate Citrate Agar (M065) for easier isolation of *Shigella* species (9).

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to pink homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Reddish orange coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 6.3% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
# *Klebsiella aerogenes* ATCC 13048 (00175*)	50-100	fair	20-30%	cream pink
Escherichia coli ATCC 25922 (00013*)	50-100	fair	20-30%	pink with bile precipitate
Salmonella Choleraesuis ATCC 12011	50-100	good-luxuriant	>=50%	colourless with black centre
Salmonella Typhi ATCC 6539	50-100	good-luxuriant	>=50%	colourless with black centre
Enterococcus faecalis ATCC 29212 (00087*)	50-100	none-poor	<=10%	colourless
Proteus mirabilis ATCC 25933	50-100	fair-good	30-40%	colourless, may have black centre
Shigella flexneri ATCC 12022 (00126*)	50-100	good	40-50%	colourless
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	good-luxuriant	>=50%	colourless with black centre
Salmonella Enteritidis ATCC 13076 (00030*)	50-100	good-luxuriant	>=50%	colourless with black centre

Key : *Corresponding WDCM numbers.
Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (8,9).

Reference

1. Lennette and others (Eds.), 1985, Manual of Clinical Microbiology, 4th ed., ASM, Washington, D.C.
2. Lipps WC, Braun-Howland EB, Baxter TE,eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.
3. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
4. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed.,APHA Inc., Washington, D.C.
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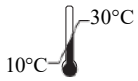

Storage temperature

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Urea Agar Base (Christensen)(Autoclavable)

M112

Intended Use:

Urea Agar Base with the addition of Urea is recommended for the detection of urease production, particularly by members of the genus *Proteus*.

Composition**

Ingredients	Gms / Litre
Peptone	1.000
Dextrose (Glucose)	1.000
Sodium chloride	5.000
Disodium hydrogen phosphate	1.200
Potassium dihydrogen phosphate	0.800
Phenol red	0.012
Agar	15.000
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 24.01 grams in 950 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 10 lbs pressure (115°C) for 20 minutes. Cool to 45-50°C and aseptically add 50 ml of sterile U40 Supplement (5 ml per vial) (FD048) and mix well. Dispense into sterile tubes and allow to set in the slanting position. Do not overheat or reheat the medium as urea decomposes very easily.

Principle And Interpretation

Urea Agar is used to detect urease production. Urea Agar described by Christensen (1,2) detected urease activity by all rapidly urease-positive *Proteus* organisms and also by other members of *Enterobacteriaceae* (1) that exhibited a delayed urease reaction (3). This was accomplished by :

a) adding glucose to the medium.
b) decreasing the peptone concentration and
c) decreasing the buffering system, as a less buffered medium detects even smaller amount of alkali (4).

Peptone is the source of essential nutrients. Dextrose is the energy source. Sodium chloride maintains the osmotic equilibrium of the medium whereas phosphates serve to buffer the medium. Urea is hydrolyzed to liberate ammonia. Phenol red indicator detects the alkalinity generated by visible colour change from orange to pink.

Prolonged incubation may cause alkaline reaction in the medium. A medium without urea serves as negative control to rule out false positive results. Also, all urea test media rely on the alkalinity formation and so they are not specific for determining the absolute rate of urease activity (3). The utilization of proteins may raise the pH to alkalinity due to protein hydrolysis and excess of amino acids liberation results in false positive reaction.

Type of specimen

Isolated microorganism from clinical, food and water samples.

Specimen Collection and Handling

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (5,6,7).
For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (8).
For clinical samples follow appropriate techniques for handling specimens as per established guidelines (9,10).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1.Prolonged incubation may cause alkaline reaction in the medium.
2.Also, all urea test media rely on the alkalinity formation and so they are not specific for determining the absolute rate of urease activity (6).
3.The utilization of proteins may raise the pH to alkalinity due to protein hydrolysis and excess of amino acids liberation results in false positive reaction.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Light yellow to light pink homogeneous free flowing powder
Gelling
Firm, comparable with 1.5% Agar gel
Colour and Clarity of prepared medium
Yellowish orange coloured clear to slightly opalescent gel forms in tubes as slants
Reaction
Reaction of 2.4% w/v aqueous solution at 25°C. pH : 6.8±0.2
pH
6.60-7.00
Cultural Response
Cultural characteristics observed on addition of sterile U40 Supplement (5 ml per vial) (FD048) after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Urease
Escherichia coli ATCC 25922 (00013*)	50-100	negative reaction, no change
# *Klebsiella aerogenes* ATCC 13048 (00175*)	50-100	negative reaction, no change
Proteus mirabilis ATCC 25933	50-100	positive reaction, cerise colour
Proteus vulgaris ATCC 13315	50-100	positive reaction, cerise colour
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	negative reaction, no change

Key : *Corresponding WDCM numbers.

Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (9,10).

Reference

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Revision : 06/2023

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Brilliant Green Bile Broth

M121I

Intended Use:

Recommended for isolation and cultivation of coliform organisms from cream, yogurt and raw milk. The composition and performance criteria of this medium are as per the specifications laid down in ISO 4831:2006, ISO 11133:2014 & A1:2018.

Composition**

ISO 4831:2006, ISO 11133:2014 & A1:2018

Ingredients	Gms / Litre
Enzymatic digest of casein	10.000
Lactose	10.000
Dehydrated Ox bile	20.000
Brilliant green	0.0133
Final pH (at 25°C)	7.2±0.2

Brilliant Green Bile Broth M121I

Ingredients	Gms / Litre
Tryptone	10.000
Lactose monohydrate	10.000
Dehydrated bile	20.000
Brilliant green	0.0133
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 39.51 grams (the equivalent weight of dehydrated medium per liter) in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Dispense the medium in quantities of 10ml in test tubes of approximately 16mm x 160mm containing Durham tubes. Sterilize in an autoclave set at 121°C for 15 minutes. Cool to 45-50°C.

Note: The Durham tube shall not contain air bubbles after sterilization.

Principle And Interpretation

Brilliant Green Bile Broth is formulated as per ISO 4831:2006 (E) for confirmation of coliform bacteria (1,2) present in food samples or environmental samples in the area of food handling or food sampling.

Brilliant green and Dehydrated bile present in the medium inhibit gram-positive bacteria including lactose fermenting *Clostridia* (3). Production of gas from lactose fermentation is detected by incorporating inverted Durham's tube, indicates a positive evidence of faecal coliforms since nonfaecal coliforms growing in this medium do not produce gas. During examination of food samples or environmental samples, growth from presumptive positive tubes showing gas in Lauryl Tryptose Broth (M080) is inoculated in Brilliant Green Bile Broth wherein gas formation within 48 ± 2 hours confirms the presumptive test (1). Gram-positive spore-formers may produce gas if the bile or brilliant green inhibition is weakened by food material.

Type of specimen

Food samples

Specimen Collection and Handling:

ISO 4831:2006 (

Depending on the limit of detection that is required, x ml of the test sample if liquid, or x ml of the initial suspension in the case of other products, is transferred to a tube containing 10 ml of double-strength selective enrichment medium. Incubate at 30°C or 37°C (as agreed) for 24 h ± 2 h, continue incubation for another 24 h ± 2 h for gas formation. Gas formation is considered as positive.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1.This medium is general purpose medium and may not support the growth of fastidious organisms.
2.Further biochemical & serological identification is necessary for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to pale green homogeneous free flowing powder

Colour and Clarity of prepared medium

Emerald green coloured, clear solution without any precipitate.

Reaction

Reaction of 3.95% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

Cultural characteristics observed after an incubation at 30±1°C for 24±2h to 48±2h.

Organism	Inoculum (CFU)	Growth	Gas
Productivity			
Escherichia coli ATCC 25922 (00013*)	50-100	good-luxuriant	positive reaction
Escherichia coli ATCC 8739 (00012*)	50-100	good-luxuriant	positive reaction
Citrobacter freundii ATCC 43864 (00006*)	50-100	good-luxuriant	positive reaction
Selectivity			
Enterococcus faecalis ATCC 29212 (00087*)	50-100	none-poor	negative reaction
Enterococcus faecalis ATCC 19433 (00009*)	50-100	none-poor	negative reaction

Key : * - Corresponding WDCM numbers

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1. International Standard, ISO 4831:2006 (E). Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of coliforms — Most probable number technique.
2. ISO 11133:2014 7 A1:2018, Microbiology of food, animal feeding stuffs and water- Preparation, production, storage and performance testing of culture media (ISO/DIS 11133;2012).
3. McCrady and Langerin, 1932, J. Dairy Science, 15:321.
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Revision:04/2023

EC Broth

M127

Intended Use:

Recommended for the selective enumeration of presumptive *Escherichia coli* by MPN technique from water samples and food samples.

Composition**

Ingredients	Gms / Litre
Tryptone	20.000
Lactose	5.000
Bile salts mixture	1.500
Dipotassium hydrogen phosphate	4.000
Potassium dihydrogen phosphate	1.500
Sodium chloride	5.000
Final pH (at 25°C)	6.9±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 37.0 grams in 1000 ml purified/distilled water. Heat if necessary to dissolve the medium completely. Dispense in test tubes containing inverted Durhams tube. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Adjust the concentration of medium in accordance with sample size.

Principle And Interpretation

EC Medium is used for detection of coliforms during bacteriological examination of water, milk and foods. It was originally described by Hajna and Perry (1). This medium was later used by Fishbein and Surkiewicz to carry out *Escherichia coli* confirmatory tests (2). It is also used in MPN methods (3) and is often used for confirmation of coliforms. The procedure employing EC Medium provides information regarding the source of the coliform group (fecal or non-fecal) when used as a confirmatory test (4). EC Broth should not be used for the direct isolation of coliforms since prior enrichment in a presumptive medium for optimal recovery of faecal coliforms is required. Tryptone provides nitrogenous and carbonaceous compounds, long chain amino acids and other essential growth nutrients. Lactose is the fermentable sugar. Bile salts mixture inhibit gram-positive bacteria especially bacilli and faecal Streptococci. Phosphates control the pH during fermentation of lactose. Gas production in a fermentation tube within 24 hour or less is a presumptive evidence of the presence of coliform bacteria. This medium can be used at 37°C for the detection of coliform organisms or at 44.5°C for the isolation of *Escherichia coli* from water and shellfish) or 45.5°C for foods.

When using sample more than 10 ml, the medium must be reconstituted at a concentration equivalent to that specified on the directions, once the sample is added, the working procedure is as follows:

Transfer a loopful of culture from all the tubes of Lauryl Sulphate Broth (M080) showing gas formation within 24 hours and from all the tubes showing bacterial growth within 48 hours to EC Broth tubes. Within 30 minutes from the inoculum, place the tubes in a water bath and incubate at 44°C for 24 hours. Consider the growth showing gas production as positive.

Calculate the density of the faecal coliform organisms by using MPN tables. False-negative reactions in recovering coliforms from water supplies can occur due to low pH, refrigeration and use of bactericidal or bacteriostatic agents (5).

Gas formation at 44.5°C or 45.5°C (and 37°C) *Escherichia coli*, possibly also other coliforms. Gas formation at 37°C Coliform bacteria without *Escherichia coli.*

Type of specimen

Food samples; Water sample.

Specimen Collection and Handling

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (6,7,8). For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (9).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1.For identification, organisms must be in pure culture.
2.Morphological, biochemical and/or serological tests should be performed for final identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder
Colour and Clarity of prepared medium
Yellow coloured, clear solution without any precipitate
Reaction
Reaction of 3.7% w/v aqueous solution at 25°C. pH : 6.9±0.2
pH
6.70-7.10
Cultural Response
Cultural characteristics observed after an incubation at 44.5°C ± 0.2 for 24 hours.

Organism	Inoculum (CFU)	Growth	Gas
Klebsiella pneumoniae ATCC 13883 (00097*)	50-100	good-luxuriant	positive reaction
Pseudomonas aeruginosa ATCC 27853 (00025*)	50-100	fair to good	negative reaction
Enterococcus faecalis ATCC 29212 (00087*)	>=10^4	inhibited	
Bacillus subtilis subsp. spizizenii ATCC 6633 (00003*)	>=10^4	inhibited	
Escherichia coli ATCC 25922 (00013*)	50-100	good-luxuriant	positive reaction
# *Klebsiella aerogenes* ATCC 13048 (00175*)	>=10^4	inhibited	

Key *- Corresponding WDCM Numbers ; # - Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in-order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (9,10).

Reference

1. Hajna A. A. and Perry C. A., 1943, Am. J. Public Health, 33:550.
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Revision : 05/2022

Columbia Blood Agar Base

M144

Intended Use:

For preparation of blood agar, chocolate agar and for preparation of various selective and identification media and isolation of organisms from clinical and non clinical samples.

Composition**

Ingredients	Gms / Litre
Peptone, special	23.000
Corn starch	1.000
Sodium chloride	5.000
Agar	15.000
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 44.0 grams of in 1000 ml purified/ distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C before adding heat sensitive compounds.
For Blood Agar: Add 5% v/v sterile defibrinated sheep blood to sterile cool base.
For Chocolate Agar: Add 10% v/v sterile defibrinated sheep blood to sterile cool base. Heat to 80°C for 10 minutes with constant agitation.
The medium can be made selective by adding different antimicrobials to sterile base.
For *Brucella* species: Add rehydrated contents of 1 vial of NPBCVN Selective Supplement (FD005) to 500 ml sterile molten base.
For *Campylobacter* species: Add rehydrated contents of 1 vial of Blaser-Wang Selective Supplement (FD006) or Butzler Selective Supplement (FD007) or Skirrow Selective Supplement (FD008) or VTCA Selective Supplement (FD090) or Butzler VI Selective Supplement (FD106) to 500 ml sterile molten base along with rehydrated contents of 1 vial of Minerals Growth Supplement (FD009) and 5-7% v/v horse or sheep blood.
For *Gardnerella* species: Add rehydrated contents of 1 vial of GNA Selective Supplement (FD056) to 500 ml sterile molten base.
For Cocci: Add rehydrated contents of 1 vial of NC Selective Supplement (FD030) or NNP Selective Supplement (FD031) or CO Selective Supplement (FD119) to 500 ml sterile molten base.

Principle And Interpretation

Columbia Blood Agar Base was devised by Ellner et al (1). This medium contains special peptone which supports rapid and luxuriant growth of fastidious and non-fastidious organisms. Also, this medium promotes typical colonial morphology; better pigment production and more sharply defined haemolytic reactions. Fildes found that Nutrient Agar supplemented with a digest of sheep blood supplied both of these factors and the medium would support the growth of *H. influenzae* (2,3). The inclusion of bacitracin makes the enriched Columbia Agar Medium selective for the isolation of *Haemophilus* species from clinical specimens, especially from upper respiratory tract (4). Columbia Agar Base is used as the base for the media containing blood and for selective media formulations in which different combinations of antimicrobial agents are used as additives.
Corn starch serves as an energy source and also neutralizes toxic metabolites. Sheep blood permits the detection of haemolysis and also provides heme (X factor) which is required for the growth of many bacteria. However it is devoid of V factor (Nicotinamide adenine dinucleotide) and hence *Haemophilus influenzae* which needs both the X and V factors, will not grow on this medium.
Columbia Agar Base with added sterile serum provides an efficient medium for *Corynebacterium diphtheriae* virulence test medium. After following the established technique for *C. diphtheriae,* lines of toxin-antitoxin precipitation are clearly visible in 48 hours. Many pathogens require carbon dioxide; therefore, plates may be incubated in an atmosphere containing approximately 3-10% CO_2.
Precaution: Brucella cultures are highly infective and must be handled carefully; incubate in 5-10% CO_2. Campylobacter species are best grown at 42°C in a micro aerophillic atmosphere. Plates with Gardenerella supplements plates should be incubated at 35°C for 48 hours containing 7% CO_2 (2).

Type of specimen

Clinical samples : throat swabs, pus.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Certain fastidious organisms like *Haemophilus influenzae* may not grow on the medium, blood supplementation may be required.
2. As this medium have a relatively high carbohydrate content, beta-hemolytic *Streptococci* may exhibit a greenish hemolytic reaction which may be mistaken for the alpha haemolysis.
3. Biochemical characterization is required on colonies of pure culture for complete identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Basal medium: Light amber coloured clear to slightly opalescent gel.
After addition of 5%w/v sterile defibrinated blood : Cherry red coloured opaque gel forms in Petri plates.

Reaction

Reaction of 4.4% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH

7.10-7.50

Cultural Response

Cultural characteristics observed with added 5% w/v sterile defibrinatedblood, after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Haemolysis
Neisseria meningitidis ATCC 13090	50-100	luxuriant	>=70%	none
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	50-100	luxuriant	>=70%	beta / gamma
Staphylococcus epidermidis ATCC 12228 (00036*)	50-100	luxuriant	>=70%	gamma
Staphylococcus aureus subsp. *aureus* ATCC 6538 (00032*)	50-100	luxuriant	>=70%	beta / gamma
Streptococcus pneumoniae ATCC 6303	50-100	luxuriant	>=70%	alpha
Streptococcus pyogenes ATCC 19615	50-100	luxuriant	>=70%	beta
Clostridium sporogenes ATCC 19404 (00008*)	50-100	luxuriant	>=50 %	
Clostridium sporogenes ATCC 11437	50-100	luxuriant	>=50 %	
Clostridium perfringens ATCC 13124 (00007*)	50-100	luxuriant	>=50 %	
Clostridium perfringens ATCC 12934	50-100	luxuriant	>=50 %	

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

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2. Fildes P., 1920, Br. J. Exp. Pathol., 1:129.
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Revision : 04/2022

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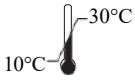
IVD ***In vitro*** **diagnostic medical device**



Storage temperature

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Mueller Hinton Agar

M173

Intended Use:

Recommended for determination of susceptibility of microorganisms to antimicrobial agents isolated from clinical samples.

Composition**

Ingredients	Gms / Litre
HM infusion B from #	300.000
Acicase ##	17.500
Starch	1.500
Agar	17.000
Final pH (at 25°C)	7.3±0.1

**Formula adjusted, standardized to suit performance parameters
- Equivalent to Beef infusion from
- Equivalent to Casein acid hydrolysate

Directions

Suspend 38.0 grams in 1000 ml purified/ distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates. Note: The performance of this batch has been tested and standardised as per the current CLSI (formerly, NCCLS) document M6-protocols for Evaluating Dehydrated Mueller Hinton Agar.

Principle And Interpretation

The Mueller Hinton formulation was originally developed as a simple, transparent agar medium for the cultivation of pathogenic *Neisseria* species (1). Other media were subsequently developed that replaced the use of Mueller Hinton Agar for the cultivation of pathogenic *Neisseria* species, but it became widely used in the determination of sulfonamide resistance of gonococci and other organisms. Mueller Hinton Agar is now used as a test medium for antimicrobial susceptibility testing (2). Mueller Hinton Agar is recommended for the diffusion of antimicrobial agents impregnated on paper disc through an agar gel as described in CLSI Approved Standard (3). Mueller Hinton Agar has been selected by the CLSI for several reasons:

i. It demonstrates good batch-to-batch reproducibility for susceptible testing.

ii. It is low in sulfonamide, trimethoprim and tetracycline inhibitors.

iii. It supports the growth of most non-fastidious bacterial pathogens and

iv. Many data and much experience regarding its performance have been recorded (4).

Kirby-Bauer et al recommended this medium for performing antibiotic susceptibility tests using a single disc of high concentration (5). WHO Committee on Standardization of Susceptibility Testing has accepted Mueller Hinton Agar for determining the susceptibility of microorganisms because of its reproducibility (6). Mueller Hinton Agar with 5% sheep blood and Mueller Hinton Agar with Hemoglobin have been recommended for antimicrobial susceptibility testing of *Streptococcus pneumoniae* and *Haemophilus influenzae*.

HM infusion B from and acicase provide nitrogenous compounds, carbon, sulphur and other essential nutrients. Starch acts as a protective colloid against toxic substances present in the medium. Starch hydrolysis yields dextrose, which serves as a source of energy. These ingredients are selected for low thymine and thymidine content as determined by MIC values for

Enterococcus faecalis with sulfamethoxazole trimethoprim (SXT).

The Kirby-Bauer procedure is based on agar diffusion of antimicrobial substances impregnated on paper discs. This method employs disc with a single concentration of antimicrobial agent and the zone diameters observed are correlated with minimum inhibitory concentration (MIC) values (7,1,2). A standardized suspension of the organism is swabbed over the entire surface of the medium.

Paper discs impregnated with specific amounts of antimicrobial agents are then placed on the surface of the medium, incubated and zones of inhibition around each disc are measured. The susceptibility is determined by comparing with CLSI standards (4). The various factors, which influence disc diffusion susceptibility tests, are agar depth, disc potency, inoculum concentration, pH of the medium and beta-lactamase production by test organisms (4,8).

Mueller Hinton Agar is not appropriate for assay by disc diffusion method with slow growing organisms, anaerobes and capnophiles. With slow growing organisms, increased incubation may cause deterioration of diffusing antibiotic and produce unprecise readings (9).

Type of specimen

Clinical samples : Isolated microorganisms from urine , stool etc.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,5).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. This medium is recommended for susceptibility testing of pure cultures only.
2. Inoculum density may affect the zone size. Heavy inoculum may result in smaller zones or too less inoculum may result in bigger zones.
3. Fastidious organisms may not grow on this medium and may require supplementation of blood.
4. Fastidious anaerobes may not grow on this medium.
5. As antimicrobial susceptibility is carried with antibiotic disc, proper storage of the disc is desired which may affect the potency of the disc.
6. Under certain circumstances, the in vitro results of antibiotic susceptibility may not show the same in vivo.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder.

Gelling

Firm, comparable with 1.7% agar gel.

Colour and Clarity of prepared medium

Light amber coloured clear to slight opalscent gel froms in Petri plates.

Reaction

Reaction of 3.8% w/v aqueous solution at 25°C. pH : 7.3±0.1

pH

7.20-7.40

Cultural Response

Cultural characteristics observed after incubation at 30-35°C for 18 -24 hours for bacterial cultures.

For testing *S. pneumoniae* : The medium was supplemented with 5% Sheep blood and incubated at 35°C for 16-18 hours at 5% CO_2 .

For testing *H. influenaze* : The medium was supplemented with 5g/l of Yeast extract & 2 vials /l of Haemophilus Growth Supplement (FD117 containing 15 mg/l of Haematin + 15 mg/l of NAD) and incubated at 35°C for 20-24 hours at 5% CO_2.

Antibiotic Sensitivity test

Various discs were tested for standard ATCC strains and zone of inhibition were measured after an incubation 30-35°C for 18 hours. (As per the latest CLSI Protocol M6 & Standards as per the current CLSI M100).

Thymine/Thymidine Content

The zones for these discs are indicative of the Thymine/Thymidine content of the medium.

Divalent Cation Content

$ The zones for these discs are indicative of the Divalent Cation content of the medium

Thymine/Thymidine Content

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Divalent Cation Content

$ The zones for these discs are indicative of the Divalent Cation content of the medium

Organism	Growth	Standard Zone	Zone of inhibition Observed
***Escherichia coli* ATCC 25922 (00013*)**	luxuriant		
Cephalothin CEP 30mcg		29-37 mm	29 -37 mm
Chloramphenicol C 30 mcg		21-27 mm	21 -27 mm
Co-Trimoxazole COT 25 mcg #		23-29 mm	23 -29 mm
Cefotaxime CTX 30 mcg		29-35 mm	29 -35 mm
Gentamicin GEN 10 mcg		19-26 mm	19 -26 mm
Sulphafurazole SF 300 mcg		15-23 mm	15 -23 mm
***Staphylococcus aureus* subsp. *aureus* ATCC 25923 (00034*)**	luxuriant		
Co-Trimoxazole COT 25 mcg #		# 20 mm (Clear zone)	>=20 mm
Cefoxitin CX 30 mcg		23-29 mm	23 -29 mm
Erythromycin E 15 mcg		22-30 mm	22 -30 mm
Linezolid LZ 30 mcg		25-32 mm	25 -32 mm
Oxacillin OX 1mcg		18-24 mm	18 -24 mm
Pristinomycin RP 15 mcg		21-28 mm	21 -28 mm
Tetracycline TE 30 mcg $		18-25 mm	18 -25 mm
Ciprofloxacin CIP 5mcg		22-30 mm	22 -30 mm
***Pseudomonas aeruginosa* ATCC 27853 (00025*)**	luxuriant		
Ceftazidime CAZ 30 mcg		22-29 mm	22 -29 mm
Ciprofloxacin CIP 5mcg		30-40 mm	30 -40 mm
Tobramycin TOB 10 mcg $		19-25 mm	19 -25 mm
Amikacin AK 30 mcg $		18-26 mm	18 -26 mm
Aztreonam AT 3mcg		23-29 mm	23 -29 mm
Cephotaxime CTX 30 mcg		18-22 mm	18 -22 mm
Gentamicin GEN 10 mcg $		16-21 mm	16 -21 mm
Imipenem IPM 10 mcg		20-28 mm	20 -28 mm
Piperacillin PI 100 mcg		12-18 mm	25 -33 mm
***Escherichia coli* ATCC 35218**	luxuriant		
Amoxyclav AMC 30 mcg		18-24 mm	18 -24 mm
Piperacillin/Tazobactam PIT 100/10 mcg		24-30 mm	24 -30 mm
Ticarcillin TI 75 mcg		6 mm	6 -6 mm
Ticarcillin/Clavulanic acid TCC 75/10mcg		20-28 mm	20 -28 mm
Ampicillin AMP 10 mcg		16-22 mm	16 -22 mm
Ampicillin/Sulbactam A/S 10/10 mcg		29-37 mm	29 -37 mm
***Enterococcus faecalis* ATCC 29212 (00087*)**	luxuriant		
Trimethoprim TR 5 mcg #		# 20 mm	>=20 mm
Vancomycin VA 30 mcg		17-21 mm	17 -21 mm
***Staphylococcus aureus* subsp. *aureus*ATCC 43300 (MRSA) (00211*)**	luxuriant		
Oxacillin OX 1 mcg		Very Hazy to No Zone	No zone

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use.

Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,5).

Reference

1. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
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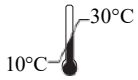

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Bordet Gengou Agar Base

M175

Intended use

Recommended for the cultivation and isolation of *Bordetella pertussis* and *Bordetella parapertussis*.

Composition**

Ingredients	Gms / Litre
Potato infusion from	125.000
Peptone	10.000
Sodium chloride	5.500
Agar	20.000
Final pH (at 25°C)	6.7±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 40.0 grams in 1000 ml purified/distilled water containing 10 ml glycerol. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add 15-20 % sterile, fresh defibrinated blood (sheep, rabbit, human or horse). For selectivity aseptically add rehydrated contents of 2 vials of Bos Selective Supplement (FD004). Mix thoroughly, taking care to avoid incorporation of air bubbles and pour into sterile Petri plates.

Principle And Interpretation

Bordet Gengou Agar Media were originally formulated by Bordet and Gengou (1) for cultivation of *Bordetella* species. *Bordetella pertussis* is the causative agent of whooping cough and with the help of cough-plate technique, *B. pertussis* can be isolated from pharyngeal extracts, nasopharyngeal secretions and pre-nasal swabs. Kendrick and Eldering (2) modified the original media by replacing 50% human or rabbit blood with 15% sheep blood to make the medium more enriched for detection of *B. pertussis* by the virtue of its haemolytic reaction. Enrichment of the basal media with 25% human blood aids in the detection of *Mycobacterium* species from small sputum inocula and in Streptomycin sensitivity testing (3).

The medium is highly nutritious thus supports luxuriant growth of *Bordetella* species and can also be used for mass cultivation of *B.pertussis* for vaccine production (4) and for maintaining stock cultures (1).

Potato infusion and peptone serve as carbon and nitrogen source, amino acids while glycerol and blood enrichment provides additional nutrients. Sodium chloride maintains osmotic equilibrium. Incubation should be carried out in a moist chamber (60% humidity) at 37°C for upto 7 days. Medium should not be over dried before use. After 40 hours *B.pertussis* colonies appear smooth, raised, glistening with a zone of haemolysis. Some strains of *Bordetella* are not haemolytic. For confirmation, serodiagnosis and biochemical test should be performed. This medium can be made more selective for *Bordetella,* by using antibiotics like penicillin (5), methicillin (4), cephalexin (2) of which, cephalexin was found to be superior. Cephalexin suppresses unwanted nasopharyngeal growth and significantly increases the isolation rate of *Bordetella* species. Cephalexin is used at a concentration of 40 mg/liter (FD004). Amphotericin B (10 µg/ml) can be added as an antifungal agent to the medium.

For isolation of *B.pertussis* from specimens, use standard procedures. Incubate the plates in a moist chamber at 35-37°C for 7 days and examine daily with or without dissecting microscope (oblique illumination) to detect the presence of *B. pertussis* . Sometimes the accompanying mold colonies can mask the *B.pertussis* colonies. Use sterile scalpel or needle to remove the portion of the agar that contains spreading colonies of moulds. *B.pertussis* colonies may not be visible without the aid of a microscope for 2-4 days. After 7 days of incubation plates may be discarded as negative. Some *Haemophilus* species will grow on *Bordetella* isolation media and cross-react with *B.pertussis* antisera. It may be prudent to rule out X and V factor dependence.

Type of specimen

Clinical samples -Pharyngeal extracts, nasopharyngeal secretions and pre-nasal swabs.

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (7,8).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Some *Haemophilus* species will grow on *Bordetella* isolation media and cross-react with *B. pertussis* antisera.
2. *B. pertussis* colonies may not be visible without the aid of a microscope for 2-4 days.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder.

Gelling

Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared medium

Basal Medium : Light yellow coloured clear to slightly opalescent gel. After addition of glycerol and 15% v/v sterile defibrinated blood: Cherry red coloured opaque gel forms in Petri plates.

Reaction

Reaction of 4% w/v aqueous solution at 25°C. pH : 6.7±0.2

pH

6.50-6.90

Cultural Response

Cultural characteristics observed with added Glycerol and 15% v/v sterile defibrinated blood and Bordetella Selective Supplement (FD004), after an incubation at 35-37°C for 3-4 days.

Organism	Inoculum (CFU)	Growth	Recovery	Haemolysis
Bordetella bronchiseptica ATCC 4617	50-100	good-luxuriant	>=50%	gamma
Bordetella parapertussis ATCC 15311	50-100	good-luxuriant	>=50%	gamma
Bordetella pertussis ATCC 8467	50-100	good-luxuriant	>=50%	beta
Staphylococcus aureus subsp.aureus ATCC 25923 (00034*)	>=10^4	inhibited	0%	

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (7,8).

Reference

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Revision : 03/2023

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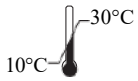

Storage temperature

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TCBS Agar

M189

Intended Use:

Recommended for the selective isolation and cultivation of *Vibrio cholerae* and other enteropathogenic *Vibrio's* causing food poisoning from clinical and food specimen.

Composition**

Ingredients	Gms / Litre
Proteose peptone	10.000
Yeast extract	5.000
Sodium thiosulphate	10.000
Sodium citrate	10.000
Bile	8.000
Sucrose	20.000
Sodium chloride	10.000
Ferric citrate	1.000
Bromo thymol blue	0.040
Thymol blue	0.040
Agar	15.000
Final pH (at 25°C)	8.6±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 89.08 grams in 1000 ml purified/ distilled water. Heat to boiling to dissolve the medium completely. **DO NOT AUTOCLAVE.** Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

TCBS Agar was developed by Kobayashi et al (1), who modified the selective medium of Nakanishi (2). Although this medium was originally designed for the isolation of *V.cholerae* and *V. parahaemolyticus*, most *Vibrio's* grow to healthy large colonies with many different colonial morphologies. TCBS Agar is also recommended by APHA for the selective isolation of *V. cholerae* and *V. parahaemolyticus* (3,4). Enrichment in Alkaline Peptone Water (M618), followed by isolation on TCBS Agar is routinely used for isolation of *V.cholerae* (5,6,7).

Proteose peptone and yeast extract provide nitrogenous compounds, vitamin B complex and other essential growth nutrients. Bile, a derivative of bile salts and sodium citrate inhibit gram-positive bacteria and coliforms (8). Sodium thiosulphate serves as a good source of sulphur, which in combination with ferric citrate detects the production of hydrogen sulphide. For the metabolism of *Vibrio's*, sucrose is added as a fermentable carbohydrate. *Vibrio* that is able to utilize sucrose will from yellow colonies. Bromothymol blue and thymol blue are the pH indicators. The alkaline pH of the medium improves the recovery of *V.cholerae*. Strains of *V. cholerae* produce yellow colonies on TCBS Agar because of fermentation of sucrose. *V. alginolyticus* also produce yellow colonies. *V.parahaemolyticus* is a sucrose non-fermenting organism and therefore produces blue-green colonies, as does *V.vulnificus*.

Type of specimen

Clinical : faeces, etc; Food samples; Water samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (7,8).
For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (4,9,10).
For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (3).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. The medium should be inoculated heavily with faecal specimens because growth of few species may be inhibited on the medium due to fermentation of sucrose and accumulation of acids.
2. However, occasional isolates of *Pseudomonas* and *Aeromonas* may also form blue green colonies on TCBS Agar (11).
3. *Proteus* species that are sucrose-fermenters may form yellow colonies (11).
4. TCBS Agar is not a suitable medium for oxidase testing of *Vibrio* species (12).
5. A few strains of *V. cholerae* may appear green or colourless on TCBS Agar due to delayed sucrose fermentation (11).
6. TCBS Agar is highly selective for *Vibrio* species. Any H_2S negative colony of TCBS Agar can be considered presumptive positive for *Vibrio.*
7. Further biochemical and serological tests must be carried out for complete identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to light tan homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Bluish green coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 8.9% w/v aqueous solution at 25°C. pH : 8.6±0.2

pH

8.40-8.80

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Productivity				
Vibrio parahaemolyticus NCTC 10885 (00185*)	50-100	good-luxuriant	>=50%	blue
Vibrio furnissii NCTC 11218 (00186*)	50-100	good-luxuriant	>=50%	greenish yellow
Specificity				
Escherichia coli ATCC 25922 (00013*)	>=10^4	inhibited	0%	
Escherichia coli ATCC 8739(00012*)	>=10^4	inhibited	0%	
Escherichia coli ATCC 11775(00090*)	>=10^4	inhibited	0%	
Additional Microbiological Testing				
Vibrio parahaemolyticus ATCC 17802 (00037*)	50-100	good-luxuriant	>=50%	blue
Vibrio cholerae ATCC 15748	50-100	good-luxuriant	>=50%	yellow

Vibrio fluvialis ATCC 33809 (00137*)	50-100	good-luxuriant	>=50%	yellow
Vibrio vulnificus ATCC 29306	50-100	fair - good	>=20%	greenish yellow
Proteus vulgaris ATCC 13315	>=10^4	inhibited	0%	
Shigella flexneri ATCC 12022 (00126*)	>=10^4	inhibited	0%	
Enterococcus faecalis ATCC 29212 (00087*)	>=10^4	inhibited	0%	

Key: (*) Corresponding WDCM numbers

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (7,8).

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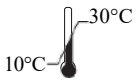

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Casman Agar

M201

Intended Use:

Recommended for isolation of fastidious microorganisms from clinical specimens under reduced oxygen tension.

Composition**

Ingredients	Gms / Litre
Proteose peptone	10.000
Tryptose	10.000
HM peptone B	3.000
Dextrose (Glucose)	0.500
Corn starch	1.000
Sodium chloride	5.000
Nicotinamide	0.050
p-Amino benzoic acid (PABA)	0.050
Agar	14.000
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 43.6 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add 0.15% v/v sterile water lysed blood (water:blood:3:1) of 5% sterile blood. Alternatively add 5% partially lysed blood. Mix well and dispense as desired.

Principle And Interpretation

Fastidious microorganisms such as *Haemophilus* and *Neisseria* require the addition of X and V- growth factors for in vitro cultivation (1). Casman (1, 2, 3) described a blood-enriched medium for cultivation of *Haemophilus* and *Gonococci* (1). The medium was developed to replace the previously described formulations that required time-consuming preparations using fresh and heated blood and meat infusion to supply the essential nutrients for growth of these fastidious organisms (2, 3). Blood supplies factor-X (hemin) and factor-V (Nicotinamide Adenine Dinucleotide), which is required for growth of *Haemophilus influenzae*. Sheep blood lacks factor-V due to NADase, an enzyme that destroys factor- V (4). Horse and rabbit blood supplies both the factor X and factor V, and are relatively free of NADase activity, therefore it is preferred over sheep blood. Nicotinamide is added to medium to inhibit nucleotidase of erythrocytes that may destroy factor V.

Proteose peptone, tryptose and HM peptone B provide amino acids and other complex nitrogenous nutrients. Dextrose improves growth of pathogenic cocci. Corn starch prevents fatty acids from inhibiting the growth of *Neisseria gonorrhoeae*, without interfering with haemolytic reaction. Corn starch also neutralizes the inhibitory action of dextrose. Inoculate the medium as soon as the specimen arrives at the laboratory. After incubation *H. influenzae* produces colourless to grey colonies with a characteristic mousy odour while *N. gonorrhoeae* produces small colourless to greyish-white colonies.

Type of specimen

Clinical samples : vaginal swabs, rectal swabs, etc.

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Further biochemical and serological tests must be carried out for further identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder
Gelling
Firm, comparable with 1.4% Agar gel.
Colour and Clarity of prepared medium
Basal medium: Yellow coloured clear to slightly opalescent gel. After addition of 5%w/v sterile defibrinated blood : Cherry red coloured After addition of 5%w/v sterile defibrinated blood: opaque gel forms in Petri plates.
Reaction
Reaction of 4.36% w/v aqueous solution at 25°C. pH : 7.3±0.2
pH
7.10-7.50
Cultural Response
Cultural characteristics observed with added water-lysed blood, after an incubation at 35-37°C for 40-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Haemolysis
Haemophilus influenzae ATCC 35056	50-100	good	50-70%	none
Neisseria meningitidis ATCC 13090	50-100	luxuriant	>=70%	none
Streptococcus mitis ATCC 9811	50-100	luxuriant	>=70%	beta
Streptococcus pneumoniae ATCC 6303	50-100	luxuriant	>=70%	alpha
Streptococcus pyogenes ATCC 19615	50-100	luxuriant	>=70%	beta

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use.
Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1. Casman, 1947, Am. J. Clin. Pathol., 17:281.
2. Casman, 1942, J. Bact., 43:33.
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Revision :03/ 2022

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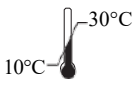
Plot No.C-40, Road No.21Y,
MIDC, Wagle Industrial Area,
Thane (W) -400604, MS, India

IVD ***In vitro*** **diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE Marking

Do not use if package is damaged

Disclaimer :

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BHI Broth

M210

Intended Use:

BHI Broth is employed for the propagation of fastidious pathogenic cocci and other organisms associated with blood culture work and allied pathological investigations.

Composition**

Ingredients	Gms / Litre
HM infusion powder #	12.500
BHI powder	5.000
Proteose peptone	10.000
Dextrose (Glucose)	2.000
Sodium chloride	5.000
Disodium hydrogen phosphate	2.500
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Calf brain infusion from

Directions

Suspend 37.0 grams in 1000 ml purified/distilled water. Dispense into bottles or tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. For best results, the medium should be used on the day it is prepared, otherwise, it should be boiled or steamed for a few minutes and then cooled before use.

Principle And Interpretation

BHI Medium is useful for cultivating a wide variety of microorganisms since it is a highly nutritive medium. It is also used to prepare the inocula for antimicrobial susceptibility testing. BHI Broth is a modification of the original formulation of Rosenow, where he added pieces of brain tissues to dextrose broth (1). BHI Broth is also the preferred medium for anaerobic bacteria, yeasts and moulds (2,3,4). This medium is nutritious and well buffered to support the growth of wide variety of organisms (2,5,6). With the addition of 10% defibrinated sheep blood, it is useful for isolation and cultivation of *Histoplasma capsulatum* (7) and other fungi. For selective isolation of fungi, addition of gentamicin and/or chloramphenicol is recommended (8).

Proteose peptone, HM infusion powder and BHI powder serve as sources of carbon, nitrogen, essential growth factors, amino acids and vitamins. Dextrose serves as a source of energy. Disodium phosphate helps in maintaining the buffering action of the medium whereas sodium chloride maintains the osmotic equilibrium of the medium.

Type of specimen

Clinical samples : pathological samples like faeces; Food samples.

Specimen Collection and Handling

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (4,9,10).

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (11,12).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. As organisms differ in their nutritional requirements, some fastidious organisms may be inhibited or may show poor growth.
2.. Biochemical and serological tests must be performed for confirmation of isolated organisms.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder.

Colour and Clarity of prepared medium

Light to medium amber coloured, clear solution without any precipitate .

Reaction

Reaction of 3.7% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth
Neisseria meningitidis ATCC 13090	50-100	good-luxuriant
Streptococcus pneumoniae ATCC 6303	50-100	good-luxuriant
Streptococcus pyogenes ATCC 19615	50-100	good-luxuriant
Candida albicans ATCC 10231 (00054*)	50-100	good-luxuriant
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	50-100	good-luxuriant
Enterococcus faecalis ATCC 29212 (00087*)	50-100	good-luxuriant

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (11,12).

Reference

1. Rosenow, 1919, J. Dental Research, 1:205.
2. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
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Revision : 04 / 2022

HiMedia Laboratories Pvt. Limited,
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MIDC, Wagle Industrial Area,
Thane (W) -400604, MS, India

IVD ***In vitro*** **diagnostic medical device**

30°C
10°C **Storage temperature**

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE Marking

Do not use if package is damaged

Disclaimer :

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Phenyl Alanine Agar Slant

M281

Intended Use:

Recommended for differentiation of *Proteus* and *Providencia* group of organisms from other members of *Enterobacteriaceae* on the basis of their ability to form phenyl pyruvic acid from phenylalanine.

Composition**

Ingredients	Gms / Litre
Yeast extract	3.000
Sodium chloride	5.000
DL-Phenylalanine	2.000
Disodium hydrogen phosphate	1.000
Agar	15.000
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 26 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Dispense in tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Allow the tubed medium to cool in a slanting position.

Principle And Interpretation

The ability of *Proteus* species to convert phenylalanine to phenylpyruvic acid is an important reaction in the differentiation of *Enterobacteriaceae* (3,7). Based on this criterion, Buttiaux developed Phenylalanine Agar for differentiation of *Proteus* and *Providencia* group from other members of *Enterobacteriaceae* (1,6) by the ability of organism in the genera within *Proteus* to deaminate phenylalanine. Phenylalanine Agar is the modification of the medium originally developed by Ewing et al (2).
Yeast extract in the medium supports the growth of the organisms. Sodium chloride maintains osmotic equilibrium. The phenylalanine serves as the substrate for enzymes, which are able to deaminate it to form phenylpyruvic acid. A recommended technique is to inoculate the slant surface with plenty of inoculum and incubate it for 12-16 hours. After incubation, add 0.2 ml of 10% ferric chloride solution so that the solution floods all over the growth. The addition of (0.2 ml 3-5 drops) of a 10% aqueous ferric chloride solution (or a 12% aqueous ferric chloride solution acidified with 2.5 ml of concentrated HCl per 100 ml of reagent) to the cultures following incubation results in the appearance of a light to deep green color (positive reaction) or no color change (negative reaction). In a positive reaction, any phenylpyruvic acid present will react with the ferric salt in the reagent to give a green color. Interpret the results within 5 minutes upon addition of reagent as the green colour fades quickly (6,7).

Type of specimen

Isolated Microorganisms

Specimen Collection and Handling:

A recommended technique is to inoculate the slant surface with plenty of inoculum and incubate it for 12-16 hours. After incubation, add 0.2 ml of 10% ferric chloride solution so that the solution floods all over the growth. The addition of (0.2 ml 3-5 drops) of a 10%aqueous ferric chloride solution (or a 12% aqueous ferric chloride solution acidified with 2.5 ml of concentrated HCl per 100 ml of reagent) to the cultures following incubation results in the appearance of a light to deep green color (positive reaction) or no color change (negative reaction). In a positive reaction, any phenylpyruvic acid present will react with the ferric salt in the reagent to give a green color. Interpret the results within 5 minutes upon addition of reagent as the green colour fades quickly (6,7).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations:

1. Some organism may show poor growth due to nutritional variation.
2. Other biochemical tests must be carried out in conjunction for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder
Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Light amber coloured slightly opalescent gel forms in tubes as slants

Reaction
Reaction of 2.6% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH
7.10-7.50

Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 12-16 hours

Organism	Inoculum (CFU)	Growth	Phenylalanine deaminase
# Klebsiella aerogenes ATCC 13048 (00175*)	50-100	luxuriant	negative reaction
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant	negative reaction
Proteus mirabilis ATCC 25933	50-100	luxuriant	positive reaction, green colouration after addition of 10% ferric chloride
Proteus vulgaris ATCC 13315	50-100	luxuriant	positive reaction, green colouration after addition of 10% ferric chloride
Providencia alcalifaciens ATCC 9886	50-100	luxuriant	positive reaction, green colouration after addition of 10% ferric chloride

Key : *Corresponding WDCM numbers.
(#) Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20 - 30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Use before expiry date on the label.
Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

Reference

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2. Ewing W. H., Davis B. R. and Reavis R. W., 1957, Public Health Lab., 15:153.
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4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
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Revision : 02 / 2022

EE Broth, Mossel

M287

Intended Use:

Recommended for the selective enrichment of *Enterobacteriaceae* in bacteriological examination of foods.

Composition**

Ingredients	Gms / Litre
Peptone	10.000
Dextrose (Glucose)	5.000
Disodium hydrogen phosphate	6.450
Potassium dihydrogen phosphate	2.000
Bile, purified#	20.000
Brilliant green	0.0135
Final pH (at 25°C)	7.2±0.2

Equivalent to Ox bile, purified
**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 43.46 grams in 1000 ml purified/distilled water. Dispense in tubes or flasks as desired. Stopper with cotton plugs or loose fitting caps. Heat in free flowing steam or boiling water for 30 minutes. Avoid overheating of the medium. **DO NOT AUTOCLAVE.**

Principle And Interpretation

The family *Enterobacteriaceae* consists of *Salmonella*, *Shigella* and other enteric pathogens. These organisms find entry into the food system through faecally contaminated water. Majority of these organisms may be eliminated under the stringent food processing parameters. But some of these organisms may become sublethally injured during the changes in pH, exposure to steam or heat and other unfavourable conditions (1). Therefore the important aspect of food monitoring depends upon the identification and enumeration of these injured cells, after resuscitation. EE Broth, Mossel, formulated by Mossel et. al. (2) is recommended as an enrichment medium for *Enterobacteriaceae* in the biological examination of foods (2) and animal feed stuffs (3).

Peptone and dextrose provide the essential nutrients required for the growth of most of the members of *Enterobacteriaceae.* Brilliant green and Bile, purified, purified inhibit growth of gram-positive bacteria. Lactose-negative, anaerogenic lactose-positive or late lactose-fermenting *Enterobacteriaceae* are often missed by the standard coli-aerogenes test. To overcome this problem, lactose is replaced by dextrose in these media. Phosphates form the buffering system of the medium.The cells damaged while drying or low pH are resuscitated in well-aerated Tryptone Soya Broth (M011) for 2 hours at 25°C prior to enrichment in EE Broth. The resuscitation procedure is recommended for dried foods (4), animal feeds (5) and semi-preserved foods (6). EE Broth is an enrichment broth and should be used in conjunction with Violet Red Bile Glucose Agar (M581).

Subcultures must be made onto lactose differential media such as MacConkey Agar (M081), Deoxycholate Citrate Agar (M065) or Brilliant Green Agar (M016) for the detection of lactose negative or delayed lactose fermenters. This is used to inoculate MPN tubes prepared using EE Broth. Inoculate a loopful from these tubes onto Violet Red Bile Glucose Agar (M581) after an initial incubation at 35-37°C for 24 hours. Typical pink colonies from M581 are subcultured for biochemical confirmation by oxidase and fermentation reactions (7). Decimal dilutions of the food homogenate are used if the expected counts are high or else initial suspension is used. EE Broth, Mossel (M287).

Type of specimen

Food samples

Specimen Collection and Handling

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (8).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Avoid overheating of the medium as media is heat sensitive.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to greenish yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Emerald green coloured, clear solution without any precipitate

Reaction

pH of 4.35% w/v aqueous solution at 25°C. pH 7.00-7.40

pH

7.00-7.40

Cultural Response

Cultural response was observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Acid
Escherichia coli ATCC 8739 (00012*)	50 -100	luxuriant	positive reaction, yellow colour
Pseudomonas aeruginosa ATCC 9027(00026*)	50 -100	luxuriant	Negative reaction, no colour change
Staphylococcus aureus subsp. aureus ATCC 6538 (00032*)	>=10^4	inhibited	
Escherichia coli ATCC 25922 (00013*)	50 -100	luxuriant	positive reaction, yellow colour
Escherichia coli NCTC 9002	50 -100	luxuriant	positive reaction, yellow colour
Pseudomonas aeruginosa ATCC 27853 (00025*)	50 -100	luxuriant	Negative reaction, no colour change
# *Klebsiella aerogenes* ATCC 13048 (00175*)	50 -100	luxuriant	positive reaction, yellow colour
Proteus mirabilis ATCC 25933	50 -100	luxuriant	positive reaction, yellow colour
Salmonella Enteritidis ATCC 13076 (00030*)	50 -100	luxuriant	variable reaction
Shigella boydii ATCC 12030	50 -100	luxuriant	negative reaction
Staphylococcus aureus subsp.aureus ATCC 25923 (00034*)	>=10^4	inhibited	

Key : (*) Corresponding WDCM numbers.
(#) Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15 - 25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (9,10).

Reference

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Revision : 04/2023

Soyabean Casein Digest Agar (Tryptone Soya Agar) (Casein Soyabean Digest Agar)

M290

Intended use

For cultivation of a wide variety of microorganisms from clinical and non-clinical samples and For sterility testing in pharmaceutical procedures.

Composition**

Ingredients	Gms / Litre
Tryptone #	15.000
Soya peptone	5.000
Sodium chloride	5.000
Agar	15.000
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters
Equivalent to Pancreatic digest of casein

Directions

Suspend 40.00 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. If desired, aseptically add 5% v/v defibrinated blood in previously cooled medium to 45-50°C for cultivation. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Soyabean Casein Digest Agar is a widely used medium, which supports the growth of wide variety of organisms even that of fastidious ones such as *Neisseria, Listeria*, and *Brucella* etc. The medium with addition of blood provides perfectly defined haemolysis zones, while preventing the lysis of erythrocytes due to its sodium chloride content. It has been frequently used in the health industry to produce antigens, toxins etc. It's simple and inhibitor-free composition makes it suitable for the detection of antimicrobial agents in the food and other products. Tryptone Soya Agar is recommended by various pharmacopoeias as sterility testing medium (1,2). Tryptone Soya Agar conforms as per USP (1) and is used in microbial limit test and antimicrobial preservative - effective test. Gunn et al (3) used this medium for the growth of fastidious organisms and study of haemolytic reaction after addition of 5%v/v blood. The combination of tryptone and soya peptone makes this media nutritious by providing amino acids and long chain peptides for the growth of microorganisms. Sodium chloride maintains the osmotic balance. Soyabean Casein Digest Agar does not contains X and V growth factors. It can be conveniently used in determining the requirements of these growth factors by isolates of *Haemophilus* by the addition of X-factor (DD020), V-factor (DD021), and X+V factor discs (DD022) factor to inoculated TSA plates (4).

Type of specimen

Pharmaceutical samples, Clinical samples- urine, faeces, abscess etc.

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6). For Pharmaceutical samples follow appropriate techniques for sample collection, handling and processing as per pharmacopoeias (1,2). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1.Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2.Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3.Further biochemical and serological tests must be carried out for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Basal Medium : Light yellow coloured clear to slightly opalescent gel. After addition of 5-7%w/v sterile defibrinated blood : Cherry red coloured opaque gel forms in Petri plates

Reaction

pH of 4.0% w/v aqueous solution at 25°C .

pH

7.10-7.50

Cultural response

Cultural characteristics was observed after an incubation for Bacterial at 30-35°C 18-24 hours and for Fungal at 30-35°C <=5days.

Organism	Inoculum (CFU)	Observed Lot value (CFU)	Recovery	Observed Lot value (CFU) w/blood	Recovery w/ blood	Haemolysis
Bacillus subtilis subsp. spizizenii ATCC 6633 (00003)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	none
Staphylococcus aureus subsp. aureus ATCC 25923 (00034)*	50 -100	35 -100	>=70 %	35 -100	>=70%	beta
Staphylococcus aureus subsp. aureus ATCC 6538 (00032)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	beta
Escherichia coli ATCC 25922 (00013)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	none
Escherichia coli ATCC 8739 (00012)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	none
Escherichia coli ATCC 11775 (00090)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	none
Escherichia coli NCTC 13167 (00179)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	none
Escherichia coli NCTC 9002	50 -100	35 -100	>=70 %	35 -100	>=70 %	none
Pseudomonas aeruginosa ATCC 27853 (00025)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	-
Pseudomonas aeruginosa ATCC 9027 (00026)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	-
Pseudomonas aeruginosa ATCC 10145 (00024)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	-
Salmonella Abony NCTC 6017 (00029)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	-

Micrococcus luteus ATCC 9341	50 -100	35 -100	>=70 %	35 -100	>=70 %	-
Streptococcus pneumoniae ATCC 6305	50 -100	35 -100	>=70 %	35 -100	>=70 %	-
Salmonella Typhimurium ATCC 14028 (00031)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	-
Enterococcus faecalis ATCC 29212 (00087)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	-
Candida albicans ATCC 10231 (00054)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	-
Candida albicans ATCC 2091 (00055)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	-
# *Aspergillus brasiliensis* ATCC 16404 (00053)*	50 -100	25 -70	50-70%			-
Clostridium sporogenes ATCC 19404 (00008)*	50 -100	35 -100	>=70 %	35 -100	>=70 %	none

Key : (#)- Formerly known as *Aspergillus niger*, (*) - Corresponding WDCM numbers

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1.The United States Pharmacopoeia , 2020, The United States Pharmacopoeial Convention Inc., Rockville, MD.
2.Indian Pharmacopoeia, 2018, Govt. of India, Ministry of Health and Family Welfare, New Delhi, India.
3.Gunn B. A., Ohashi D K., Gaydos C. A., Holt E. S., 1977, J. Clin. Microbiol., 5(6) : 650.
4.Forbes B. A., Sahm A. S. and Weissfeld D. F., 1998, Bailey and Scotts Diagnostic Microbiology, 10th Ed., Mosby Inc. St. Louis, Mo
5.Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
6.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Revision : 03/2022

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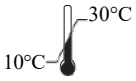

Storage temperature

Do not use if package is damaged

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory,diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.

Tinsdale Agar Base

M314

Tinsdale Agar Base with supplement is used for selective isolation and differentiation of *Corynebacterium diphtheriae* .

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	20.000
Sodium chloride	5.000
L-Cystine	0.240
Sodium thiosulphate	0.430
Agar	15.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 40.67 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C and aseptically add Diphtheria Virulence Supplement (FD073, Part A and Part B). Mix well and pour into sterile Petri plates.

Principle And Interpretation

The Corynebacteria are gram-positive, non-sporulating, non-motile rods. They are often club-shaped and frequently banded or beaded with irregularly stained granules. These bacteria are generally aerobic or facultative, but microaerophilic species do occur. *Corynebacterium diphtheriae* produces a powerful exotoxin that causes diphtheria in humans. In nature, *C. diphtheriae* occurs in nasopharyngeal area of infected persons or healthy carriers.

The three biotypes of *C. diphtheriae* are *mitis* , *intermedius* and *gravis* (6). The signs and symptoms of diphtheria are sore throat, malaise, headache and nausea (2). Tinsdale Agar Base Medium was developed by Tinsdale (1) for the selective isolation and differentiation of *C. diphtheriae* from diphtheroids. This medium was modified by Billings (2), which improved the recovery and differential qualities of *C. diphtheriae* . The present medium is according to the modified Billings Medium. Moore and Parsons (3) confirmed the halo formation as a characteristic property of *C. diphtheriae* with the exception of *C. ulcerans* , which forms colony with similar features as *C. diphtheriae* .

Peptic digest of animal tissue provides nitrogenous compounds. L-cystine and sodium thiosulphate form the H2S indicator system. Potassium tellurite from the supplement inhibits all gram-negative bacteria and most of the upper respiratory tract normal flora.

C. diphtheriae forms grayish black colonies surrounded by a dark brown halo while diphtheroids commonly found in the upper respiratory tract do not form such colonies. Dark brown halo around the colony is due to H2S production from cystine combining with the tellurite salt. Moore and Parsons (3) found Tinsdale Medium as an ideal medium for the routine cultivation and isolation of *C. diphtheriae* . They also confirmed the stability of halo formation on clear medium and its specificity for *C. diphtheriae* and *C. ulcerans* . *C. ulcerans* found in nasopharynx form colonies same as *C. diphtheriae* and require further biochemical confirmation (4).

Do not incubate the plates in 5-10% CO2 as it retards the development of characteristic halos (5). Tinsdale Agar is not suitable as a primary plating medium, since it may not support the growth of some strains of *C. diphtheriae* (6). *C. ulcerans* , *C. pseudotuberculosis* and (rarely) *Staphylococcus* species may produce a characteristic halo on Tinsdale Agar (6).Several organisms may exhibit slight browning on Tinsdale Agar in 18 hours; therefore the plates should be read after complete incubation period (48 hours) (6).

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Light amber coloured clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 4.07% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH
7.20-7.60

Cultural Response
M314: Cultural characteristics observed after an incubation at 35-37°C for 40-48 hours with added Diptheria Virulence Supplement (FD073, Part A and Part B).

Organism	Inoculum (CFU)	Growth	Recovery	Colony characteristics
Corynebacterium diphtheriae type gravis	50-100	good-luxuriant	>=50%	brown-black with halo
Corynebacterium diphtheriae type intermedius	50-100	good-luxuriant	>=50%	brown-black with halo
Corynebacterium diphtheriae type mitis	50-100	good-luxuriant	>=50%	brown-black with halo
Klebsiella pneumoniae ATCC 13883	>=10^3	inhibited	0 %	
Streptococcus pyogenes ATCC 19615	50-100	good	40-50%	black pin point, without halo

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Tinsdale G. F. W., 1947, J. Pathol. Bacteriol., 59:461.
2. Billings E., 1956, An investigation of Tinsdale Tellurite Medium: its usefulness and mechanisms of halo-formation, M.S. thesis, University of Michigan, Ann Arbor, Mich.
3. Moore M. S. and Parsons E. I., 1958, J. Infect. Dis., 102:88.
4. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
5. Murray P. R., Baron E. J., Jorgensen J. H., Pfaller M. A., Yolken R. H., (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C
6. Isenberg, (Eds.), 1992, Clinical Microbiology Procedures Handbook, Vol. 1, American Society for Microbiology, Washington, D.C.

Revision : 1 / 2011

CE

Acetate Differential Agar

M339

Intended Use:

Recommended for the differentiation of *Shigella* species from *Escherichia coli.*

Composition**

Ingredients	Gms / Litre
Sodium acetate	2.000
Magnesium sulphate	0.100
Sodium chloride	5.000
Monoammonium phosphate	1.000
Dipotassium hydrogen phosphate	1.000
Bromothymol blue	0.080
Agar	20.000
Final pH (at 25°C)	6.7±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 29.18 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Distribute in tubes in sufficient amounts to give butt and slant. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Allow the tubes to cool in a slanted position.

Principle And Interpretation

Acetate Differential Agar was formulated by Trabulsi and Ewing (6). Tatum, Ewing and Weaver (5) modified the medium by replacing sodium citrate by sodium acetate, which enables the differentiation of *Shigella* species from *Escherichia coli.* Organic acids have been used widely as an aid in the differentiation of *Enterobacteriaceae*, usually in formulae that contained organic nitrogen sources. Most bacteria, however, can use citrate and acetate in the presence of organic nitrogen. The differentiation of groups is based on the ability or failure of the test culture to utilize acetate in a medium devoid of trace organic nitrogen. This medium contains sodium acetate as the sole source of carbon. Trabulsi and Ewing demonstrated that *Shigella* and *Proteus* species are unable to utilize acetate and therefore fails to grow. Majority of *Escherichia coli* and closely related organisms grow well within 24-48 hours but some strains grow very slowly and a few strains are unable to utilize acetate as a sole carbon source. Acetate utilization is indicated by formation of blue colour, which is due to the utilization of sodium acetate and subsequent formation of an alkaline reaction detected by the presence of bromothymol blue indicator.

Sodium acetate is utilized as a sole source of carbon by some serobiotypes of *S.flexneri* such as *Shigella flexneri* 4a (1,4). Magnesium sulphate is essential ion. Sodium chloride maintains osmotic equilibrium and phosphates act as buffers.

Type of specimen

Isolated Microorganism

Specimen Collection and Handling

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Some strains of *Escherichia coli* utilize acetate slowly or not at all and therefore may produce a false negative reaction.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to light green homogeneous free flowing powder

Gelling
Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared medium
Emerald green coloured clear to slightly opalescent gel forms in tubes as slants

Reaction
Reaction of 2.92% w/v aqueous solution at 25°C. pH : 6.7±0.2

pH
6.50-6.90

Cultural Response
Cultural characteristics observed after an incubation at 25-30°C for upto 1-7 days.

Organism	Inoculum (CFU)	Growth	Acetate utilization
Citrobacter freundii ATCC 8090	50-100	good-luxuriant	positive reaction, blue colour
Enterobacter cloacae ATCC 23355 (00082*)	50-100	good-luxuriant	positive reaction, blue colour
Escherichia coli ATCC 25922 (00013*)	50-100	good-luxuriant	positive reaction, blue colour
Klebsiella pneumoniae ATCC 13883 (00097*)	50-100	good-luxuriant	positive reaction, blue colour
Proteus vulgaris ATCC 13315	>=10^4	inhibited	
Salmonella Arizonae *ATCC 13314*	50-100	good-luxuriant	positive reaction, blue colour
Salmonella Typhi *ATCC 19430*	50-100	poor	negative reaction green colour
Shigella sonnei ATCC 25931	50-100	none-poor	negative reaction, no change, medium remains green

Key : *- Corresponding WDCM numbers

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Use before expiry date on the label.
Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

Reference

1. Ewing, 1986, Edwards and Ewings Identification of *Enterobacteriaceae*, 4th Ed. Elsevier Science Publishing Co., Inc., New York.

2. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.

3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

4. Talukder K. A, Islam M. A., Dutta D.K., Hasan F., Sada A., Nair G. B . and Sack D. A., 2002, J. Clin. Microbiol., 40:2490

5. Tatum H. W., Ewing W. H., and Weaver R. E., 1974, Manual of Clinical Microbiology,2nd Ed., American Society for Microbiology, Washington D.C. Pg.-270

6. Trabulsi and Ewing, 1962, Public Health Lab., 20:137.

Revision : 02 / 2019

Malonate Broth

M382

Malonate Broth is recommended for the differentiation of *Enterobacter* and *Escherichia* on the basis of malonate utilization.

Composition**

Ingredients	Gms / Litre
Ammonium sulphate	2.000
Dipotassium phosphate	0.600
Monopotassium phosphate	0.400
Sodium chloride	2.000
Sodium malonate	3.000
Bromothymol blue	0.025
Final pH (at 25°C)	6.7±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Dissolve 8.02 grams in 1000 ml distilled water. Dispense and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Avoid the addition of carbon and nitrogen from other sources.

Principle And Interpretation

Leifson developed a synthetic liquid medium, which differentiated *Aerobacter* (now *Enterobacter*) from *Escherichia* species based on their ability to utilize malonate (1) where *Enterobacter* utilizes malonate and *Escherichia* does not.

An organism that can simultaneously utilize sodium malonate as its carbon source and ammonium sulfate as its nitrogen source produces alkalinity due to the formation of sodium hydroxide (2). The alkali changes the color of the bromothymol blue indicator in the medium to light blue and finally to prussian blue. The color of the medium remains unchanged in the presence of an organism that cannot utilize these substances. Also some malonate-positive organisms produce only a slight alkalinity that causes the results to be difficult to interpret. Therefore these tubes should be compared with an un-inoculated malonate tube (2).

Quality Control

Appearance
Light yellow to light green homogeneous free flowing powder

Colour and Clarity of prepared medium
Bluish green coloured clear solution without any precipitate

Reaction
Reaction of 0.8% w/v aqueous solution at 25°C. pH : 6.7±0.2

pH
6.50-6.90

Cultural Response
M382: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours .

Organism	Inoculum (CFU)	Growth	Malonate Utilization
Enterobacter aerogenes ATCC 13048	50-100	luxuriant	positive reaction, dark blue colour
Escherichia coli ATCC 25922	50-100	poor-fair	negative reaction
Klebsiella pneumoniae ATCC 13883	50-100	luxuriant	positive reaction, dark blue colour

Salmonella Arizonae ATCC 13314	50-100	luxuriant	positive reaction, dark blue colour
Salmonella Typhimurium ATCC 14028	50-100	fair-good	negative reaction

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Leifson, 1933, J. Bact., 25:329.
2. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore

Revision : 2 / 2015

Thayer Martin Medium Base

M413

Thayer Martin Medium Base used for selective isolation of Gonococci from pathological specimens.

Composition**

Ingredients	Gms / Litre
Peptone, special	23.000
Starch	1.000
Sodium chloride	5.000
Agar	13.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 21.0 grams in 450 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45°C. Aseptically add 50 ml of sterile lysed blood and rehydrated contents of one vial of Vitamino Growth Supplement (FD025) and V.C.N Supplement (FD023) or V.C.N.T Supplement (FD024). If desired GC Supplement with Antibiotics (FD021) can be used as a single supplement. Mix well before pouring into sterile Petri plates. If Hemoglobin (FD022) is used suspend 21.0 grams of Thayer Martin Medium Base in 250 ml distilled water.Heat to boiling to dissolve the medium completely. Prepare 250 ml of 2% hemoglobin solution. Sterilize separately by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45°C. Mix both and add the supplements as above.

Principle And Interpretation

Carpenter and Morton reported an improved medium to isolate Gonococci in 24 hours (1). Later on the efficiency of GC medium supplemented with haemoglobin and yeast concentrate was demonstrated for isolating gonococci (2). Subsequently Thayer and Martin Medium was developed for the primary isolation of *Neisseria gonorrhoeae* and *Neisseria meningitidis* from specimens containing mixed flora collected from throat, vagina, rectum an d urethra (3, 4). Thayer and Martin (4) used Vancomycin, Colistin and Nystatin. Martin and Lester (5) used an additional antibiotic Trimethoprim to make the medium selective.

Special peptone provides nutrients to the organisms while starch neutralizes the toxic fatty acids if present in the agar. Haemoglobin provides the X factor whereas the V factor (N.A.D.) is provided by the added supplement. Supplement (FD025) also supplies vitamins, amino acids, coenzymes etc. which enhances the growth of pathogenic *Neisseria* . Vancomycin and colistin inhibits gram-positive and gram-negative bacteria respectively (6). Nystatin inhibits fungi. This medium may inhibit *Haemophilus* species. Some strains of *Capnocytophaga* species may grow on this medium when inoculated with oropharyngeal specimens

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.3% Agar gel.

Colour and Clarity of prepared medium
Basal Medium : Yellow coloured clear to slightly opalescent gel. After addition of haemoglobin or sterile lysed blood and supplements: chocolate coloured opaque gel forms in Petri plates.

Reaction
Reaction of 4.2% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH
6.80-7.20

Cultural Response

M413: Cultural characteristics observed with added sterile lysed blood/Haemoglobin solution (FD022), Vitamino Growth Supplement (FD025) and V.C.N. Supplement (FD023)/V.C.N.T. Supplement (FD024) after an incubation at 35-37°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Escherichia coli ATCC 25922	>=10^3	inhibited	0%	
Neisseria gonorrhoeae ATCC 19424	50-100	good-luxuriant	>=50%	small, grayish-white to colourless, mucoid
Neisseria meningitidis ATCC 13090	50-100	good-luxuriant	>=50%	medium to large, blue-gray, mucoid
Proteus mirabilis ATCC 25933	>=10^3	inhibited	0%	

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

Reference

1. Carpenter and Morton, 1947, Proc. N.Y. State Assoc. Public Hlth. Labs., 27:58.
2. Carpenter et al, 1949, Am. J. Syphil. Gonorrh. Vener. Dis., 33:164.
3. Martin, Billings, Hackney and Thayer, 1967, Public Hlth. Rep., 82:361.
4. Thayer J. and Martin J.E. Jr., 1966, Public Health Rep., 81:559.
5. Martin J.E. Jr. and Lester A., 1971, HSMHA Hlth. Service Rep., 86(1):30.
6. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.

Revision : 1 / 2011

Yeast Extract Agar

M456

Yeast Extract Agar is a highly nutritive medium recommended for plate count of microorganisms in water.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	5.000
Yeast extract	3.000
Agar	15.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 23 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Yeast Extract Agar is formulated according to the formula described by Windle Taylor (1) for the plate count of microorganisms in water. Water can contain a large number of microorganisms, particularly coming from the earth and vegetation.

Yeast extract and peptic digest of animal tissue provide nitrogenous compounds, vitamin B complex and other growth nutrients. From the water sample, make a decimal dilution bank with Ringer Solution (M525) and take aliquots to 2 parallel series of plates. Pour the molten, cooled (45°C) Yeast Extract Agar and homogenize with sample. Incubate one of the series of plates at 35°C for 24 hours and the other series of plates at 20-22°C for 3 days. Separate counts are made of the organisms forming visible colonies after 24 hours at 35°C and the organisms forming colonies after 3 days at 20-22°C (2). Select the plates containing 30-300 colonies.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium
Yellow coloured clear to slightly opalescent gel forms in Petri plates.

Reaction
Reaction of 2.3% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH
7.00-7.40

Cultural Response
M456: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery
Enterobacter aerogenes ATCC 13048	50-100	luxuriant	>=70%
Escherichia coli ATCC 25922	50-100	luxuriant	>=70%
Pseudomonas aeruginosa ATCC 27853	50-100	luxuriant	>=70%
Staphylococcus aureus ATCC 25923	50-100	luxuriant	>=70%

Storage and Shelf Life

Store below 30°C in tightly closed container and prepared medium at 2-8° C. Use before expiry period on the label.

Reference

1.Taylor W. E., 1958, The Examination of Waters and Water Supplies, 7th Ed., Churchill Ltd, London, pg. 394, 778.
2.Dept. of Health and Social Security, 1982, report No.71: HMSO, London, 54.

Revision : 02 2015

Violet Red Bile Glucose Agar w/o Lactose

M581

Intended Use:

Recommended for enumeration of Enterobacteriaceae in raw food and clinical samples. The composition and performance criteria are in accordance with ISO 21528-1&2:2017.

Composition**

Ingredients	Gms / Litre
Peptone	7.000
Yeast extract	3.000
Sodium chloride	5.000
Bile salts mixture	1.500
Glucose (Dextrose)	10.000
Neutral red	0.030
Crystal violet	0.002
Agar	12.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 38.53 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. **DO NOT AUTOCLAVE.** Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Violet Red Bile Agar, a modification of MacConkey original formulation (1) is used for the enumeration of coli-aerogenes bacterial group.Violet Red Bile Glucose Agar w/o Lactose, a modification of VRBA (M049), was designed for the enumeration of *Enterobacteriaceae* (2). It employs the selective inhibitory components crystals violet and bile salts and the indicator system glucose and neutral red. Sought bacteria will dissimilate glucose and produce purple zones around the colonies (3). ISO committee has also recommended this medium (4). Selectivity of VRBGA can be increased by incubation under anaerobic conditions and/or at elevated temperature, i.e. equal to or above 42°C (5-7).

Peptone and yeast extract serve as sources of carbon, nitrogen, vitamins and other essential growth nutrients. Glucose is the fermentable carbohydrate, utilization of which leads to the production of acids. Neutral red indicator detects the acidity so formed. Crystal violet and bile salts mixture help to inhibit the accompanying gram-positive and unrelated flora. Sodium chloride maintains the osmotic equilibrium. Further biochemical tests are necessary for positive identification (8).

Type of specimen

Clinical samples - faeces ; Food and dairy samples; Water samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (9,10).
For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (11-13).
For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards(14). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Over incubation may result in reverting of reaction.
2. Further biochemical tests must be carried out on colonies of pure culture for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to pinkish beige homogeneous free flowing powder

Gelling

Firm,comparable with 1.2% Agar gel.

Colour and Clarity of prepared medium

Reddish purple coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 3.85% w/v of aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

Cultural characteristics was observed after an incubation at 35-37°C for 18-24 hours. Recovery rate is considered as 100% for bacteria growth on Soyabean Casein Digest Agar.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Escherichia coli ATCC 25922 (00013*)	50 -100	good-luxuriant	>=50 %	pink-red
Escherichia coli ATCC 8739 (00012*)	50 -100	luxuriant	>=50 %	pink-red with bile precipitate
Escherichia coli NCTC 9002	50 -100	luxuriant	>=50 %	pink-red with bile precipitate
Pseudomonas aeruginosa ATCC 9027(00026*)	50 -100	good-luxuriant	>=50 %	pink to red
Salmonella Enteritidis ATCC 13076 (00030*)	50 -100	good-luxuriant	>=50 %	light pink
# *Klebsiella aerogenes* ATCC 13048 (00175*)	50 -100	good-luxuriant	>=50 %	pink-red
Staphylococcus aureus subsp.*aureus* ATCC 25923 (00034*)	>=10^4	inhibited	0%	
Staphylococcus aureus subsp.*aureus* ATCC 6538 (00032*)	>=10^4	inhibited	0%	

Key : (*) Corresponding WDCM numbers. # - Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (9,10).

Reference

1. MacConkey A., 1905, J. Hyg., 5, 333-379.
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Revision : 05/2022

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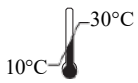
IVD ***In vitro*** **diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
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Giolitti-Cantoni Broth Base

M584

Intended Use:

Recommended for selective enrichment of *Staphylococcus aureus* from food.

Composition**

Ingredients	Gms / Litre
Tryptone	10.000
HM peptone B #	5.000
Yeast extract	5.000
Mannitol	20.000
Sodium chloride	5.000
Lithium chloride	5.000
Glycine	1.200
Sodium pyruvate	3.000
Final pH (at 25°C)	6.9±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Beef extract

Directions

Suspend 54.2 grams in 1000 ml purified/distilled water. Warm gently to dissolve the medium completely. Dispense 19 ml amounts in 20mm x 200mm test tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool rapidly to room temperature and aseptically add 0.3 ml of 3.5% Potassium Tellurite Solution (FD047) to each tube. Add 0.03 ml for testing meat and meat products. Mix well before use.

Principle And Interpretation

Giolitti-Cantoni Broth Base is a fluid medium employed for the recovery of low number of Staphylococci from foodstuffs as described by Giolitti and Cantoni (2). Giolitti- Cantoni Broth was also recommended by Mossel et.al. for detecting *Staphylococcus aureus* in dried milk, baby food and other food products (9). This medium was recommended as an enrichment medium by the International Dairy Federation (IDF) and APHA for detecting *S.aureus* in dried milk and other foods stating that the organism should be absent in 1 gram of sample (4,8). ISO committee has also recommended this medium for examination of meat and meat products (3).

Giolitti-Cantoni Broth Base contains tryptone, yeast extract and HM peptone B as sources of carbon, nitrogen, vitamins and minerals and B-complex vitamins. Mannitol and sodium pyruvate in the basal medium act as growth stimulants for *S. aureus*.

Lithium chloride inhibits gram-negative lactose fermenting bacilli. Potassium tellurite and glycine inhibit gram-positive bacilli (7). Addition of sterile paraffin wax to the inoculated medium inhibits Micrococci due to creation of anaerobic conditions. Potassium tellurite concentration must be reduced as per the weight of test sample (0.1 - 0.01 gram).

Type of specimen

Food samples

Specimen Collection and Handling

Inoculate 1 gram of sample or 1 ml of a suitable dilution of a sample into 19 ml of Giolitti-Cantoni Broth tubes in duplicate. Overlay the medium with 5 ml molten sterile paraffin wax and incubate at 37°C for 24-48 hours and examine daily. Blackening of the medium (usually at the bottom) within 48 hours indicates the presence of *S.aureus*. The blackened medium, when streaked on Baird Parker Agar (M043), shows black colonies surrounded by clear zones (1). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. The medium should be inoculated as soon as it has been cooled after sterilization, otherwise absorbed oxygen should be expelled by placing the tubes in free-flowing steam for 15-20 minutes.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to brownish yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Medium amber coloured, clear solution without any precipitate

Reaction

Reaction of 5.42% w/v aqueous solution at 25°C. pH : 6.9±0.2

pH

6.70-7.10

Cultural Response

Cultural characteristics observed with added 3.5% PotassiumTellurite Solution (FD047), after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Tellurite reduction
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	50-100	good-luxuriant	positive, blackening at the bottom of the tubes or general blackening of the medium
Escherichia coli ATCC 25922 (00013*)	>=10^4	inhibited	
Micrococcus luteus ATCC 10240	>=10^4	inhibited	
Staphylococcus aureus subsp. *aureus* ATCC 6538 (00032*)	50-100	good-luxuriant	positive, blackening at the bottom of the tubes or general blackening of the medium
Bacillus cereus ATCC 11778 (00001*)	>=10^4	inhibited	
Pseudomonas aeruginosa ATCC 27853 (00025*)	>=10^4	inhibited	
Staphylococcus epidermidis ATCC 12228 (00036*)	50-100	poor-fair	variable reaction

Key : * - Corresponding WDCM numbers

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1. De Waart J., Mossel D. A. A., Ten Broeke R. and Van de Moosdijk A.,1968, J. Appl. Bacteriol., 31:276.
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5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
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Revision : 03 /2021

Slanetz and Bartley Medium

M612

Intended Use

Recommended for detection and enumeration of faecal Streptococci by membrane filtration technique.

Composition**

Ingredients	Gms / Litre
Tryptose	20.000
Yeast extract	5.000
Dextrose (Glucose)	2.000
Disodium hydrogen phosphate	4.000
Sodium azide	0.400
2,3,5-Triphenyl tetrazolium chloride	0.100
Agar	15.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 46.5 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE OR OVERHEAT. Excessive heating is detrimental. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Slanetz and Bartley Medium was originally devised by Slanetz and Bartley (9) for the detection and enumeration of Enterococci by membrane filtration technique. It can be also used as a direct plating medium (2,7). The medium is highly selective for Enterococci.

Tryptose and yeast extract in the medium provide the necessary nitrogen, carbon, vitamins and minerals required for the growth of organisms. Sodium azide has inhibitory effect on gram-negative organisms. Triphenyl Tetrazolium Chloride is reduced to the insoluble formazan inside the bacterial cell forming dark red-coloured colonies. When the medium is incubated at higher temperature (44-45°C), all red or maroon colonies can be considered as presumptive Enterococci (6,10). The Department of Health (3) has recommended this medium to be used for enumeration of Enterococci in water supplies. Water is filtered through a membrane filter which is then placed on the surface of the Slanetz and Bartley Medium plates and incubated at 35°C for 4 hours and then at 44-45°C for 44-48 hours. Red or maroon colonies are counted as Enterococci. The preliminary incubation at 35°C helps for the recovery of stressed organisms. Not all the species reduce TTC, hence pale colonies also should be considered.

Food samples are homogenized and so diluted with physiological saline to give 15-150 colonies on each Petri plate. Homogenates or dilutions are spread on agar surface and incubated at 35°C for 48 hours. Pink or dark red colonies with a narrow whitish border are counted (7).

Type of specimen

Food; Water samples

Specimen Collection and Handling:

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (8).
For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards(1).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Further biochemical testing is required for identification of species.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Light yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 4.65% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH
7.00-7.40

Cultural Response
Cultural characteristics observed after an incubation at 44-45°C for 44-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Enterococcus faecalis ATCC 29212 (00087)*	50-100	good-luxuriant	>=50%	red or maroon
Escherichia coli ATCC 25922 (00013)*	>=10^4	inhibited	0%	

Key: (*) Corresponding WDCM numbers

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Use before expiry date on the label.
Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

Reference

1. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
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Revision : 03 / 2019

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Alkaline Peptone Water

M618

Intended use

Recommended for enrichment of *Vibrio* species from food, water and clinical samples.

Composition**

Ingredients	Gms / Litre
Peptone	10.000
Sodium chloride	10.000
Final pH (at 25°C)	8.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 20.0 grams in 1000 ml purified/distilled water. Heat if necessary to dissolve the medium completely. Dispense in tubes or flasks as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Clinical materials containing small numbers of *Vibrio* should be inoculated into an enrichment medium prior to plating onto a selective medium, such as TCBS Agar (M189). Alkaline Peptone Water is a suitable enrichment broth for this purpose (1-3).

The relatively high pH of the medium (approximately 8.4) provides a favorable environment for the growth of *Vibrio*'s.

This medium is recommended by APHA (4) for enrichment of *Vibrio* species from seafood, infectious materials and other clinical specimens such as faeces (5).

Peptone provides nitrogen and carbon source, long chain amino acids, vitamins and other essential nutrients. Sodium chloride maintains osmotic equilibrium.

Add 10 grams of seafood to 90 ml of Alkaline Peptone Water and incubate for upto 18-20 hours at 37°C. Prolonged incubation will result in growth of the suppressed contaminating organisms to develop (6). Growth in tubes is indicated by turbidity compared to an un-inoculated tube (control). Growth from the enrichment broth is used for plating on selective media. For biochemical identification a pure culture is recommended.

Type of specimen

Clinical samples: faeces; Food samples; Water samples

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,7).
For food samples, follow appropriate techniques for sample collection and processing as per guidelines (4).
For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (8).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Certain strains of *Vibrio* species requiring higher sodium chloride concentration may show poor growth.
2. Further recovery from this enriched broth onto selective media is required.
3. Biochemical characterization is carried out from pure isolates for complete identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light yellow coloured clear solution without any precipitate

Reaction

Reaction of 2% w/v aqueous solution at 25°C. pH : 8.4±0.2

pH

8.20-8.60

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth
Vibrio cholerae ATCC 15748	50-100	luxuriant
Vibrio parahaemolyticus ATCC 17802 (00037*)	50-100	luxuriant

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in-order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,7).

Reference

1.Forbes B. A., Sahm A. S., and Weissfeld D. F., Bailey & Scotts Diagnostic Microbiology, 10th Ed., 1998, Mosby, Inc., St. Louis, Mo.

2.Gilligan, Janda, Karmali and Miller, 1992, Cumitech 12A, Laboratory Diagnosis of Bacterial Diarrhea, Coord. Ed., Nolte, American Society for Microbiology, Washington, D.C.

3.Isenberg, (Ed.), 1992, Clinical Microbiology Procedures Handbook, Vol. I, American Society for Microbiology, Washington,D.C.

4.Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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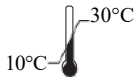
IVD ***In vitro*** **diagnostic medical device**



Storage temperature

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MYP Agar Base (Phenol Red Egg Yolk Polymyxin Agar Base) M636

Intended Use:

Recommended for isolation and identification of pathogenic *Staphylococci* and *Bacillus* species.

Composition**

Ingredients	Gms / Litre
Peptone	10.000
HM extract #	1.000
D-Mannitol	10.000
Sodium chloride	10.000
Phenol red	0.025
Agar	15.000
Final pH (at 25°C)	7.1±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Meat extract

Directions

Suspend 23.01 grams in 450 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Aseptically add rehydrated contents of one vial of sterile PolyB Selective Supplement (FD003) solution to a final concentration of 100 units per ml and 50 ml sterile Egg Yolk Emulsion (FD045). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Bacillus cereus is ubiquitously present in soil, vegetation water and dust. It has been isolated from a large variety of foods, including vegetables, meat, cereals, pasteurized fresh milk and powdered milk (1-3) and processed foods. Under favourable conditions, the organism multiplies and causes gastrointestinal illness (4). It is implicated in two different forms of food poisoning; an emetic illness and a diarrhoeal illness. The emetic illness is mediated by a highly stable toxin that survives high temperature, exposure to trypsin, pepsin and pH extremes. The diarrhoeal illness is mediated by a heat and acid labile enterotoxin. Lecithinase activity is the key reaction in the differential identification of *B.cereus*, the most commonly encountered and important species in clinical laboratories, from the majority of the other *Bacillus* species. If unknown isolate produces lecithinase, *Bacillus cereus* can be presumptively identified by also observing colonial morphology, hemolytic reactivity and motility tests. Mossel et al (5) formulated Mannitol-Egg Yolk-Polymyxin (MYP) Agar, which is recommended by APHA to isolate and enumerate *B.cereus* from foods (3,4,6,7). When present in large numbers in certain foodstuffs, *B.cereus* can produce metabolites responsible for the clinical symptoms of food poisoning (5). This medium differentiates *B.cereus* from other bacteria based on the basis of lecithinase activity, mannitol fermentation and resistance to polymyxin (FD003) (3,8). MYP Agar contains peptone and HM extract, which provide nitrogen source. Mannitol fermentation can be detected by phenol red, which yields yellow colour to the mannitol fermenting colonies due to acid production. Added egg yolk emulsion helps in differentiation of lecithinase producing colonies, which are surrounded by a zone of white precipitate. Addition of PolyB Selective Supplement (FD003) helps to restrict growth of gram-negative bacteria such as *Escherichia coli* and *Pseudomonas aeruginosa*. These differentiating media allow differentiation of *B.cereus* from other *Bacillus* species by its inability to ferment mannitol and poor sporulation. *B.cereus* dissimilates egg yolk and gives rise to typical bacilli form colonies.

Type of specimen

Clinical samples - Faeces; Food samples; Water samples

Specimen Collection and Handling:

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (9).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (10).

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (11,12). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1.Individual organisms differ in their growth requirement and may show variable growth patterns on the medium..
2.If unknown isolate produces lecithinase, *Bacillus cereus* can be presumptively identified by also observing colonial morphology, hemolytic reactivity and motility tests.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to light pink homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Basal medium :Red coloured clear to slightly opalescent gel. After Addition of Egg Yolk Emulsion (FD045) : Light orange coloured opaque gel forms in Petri plates

Reaction

Reaction of 4.6% w/v aqueous solution at 25°C. pH : 7.1±0.2

pH

6.90-7.30

Cultural Response

Cultural characteristics observed with added Egg Yolk Emulsion (FD045) and PolyB Selective Supplement(FD003) after an incubation at 32°C for 18-40 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony	Lecithinase activity
Bacillus cereus ATCC 10876	50-100	luxuriant	>=50%	red	positive, opaque zone around the colony
Bacillus subtilis subsp. spizizenii ATCC 6633 (00003*)	50-100	luxuriant	>=50%	yellow	negative
Escherichia coli ATCC 25922 (00013*)	50-100	none-poor	<=10%		
Proteus mirabilis ATCC 25933	50-100	luxuriant	>=50%	red	negative
Pseudomonas aeruginosa ATCC 27853 (00025*)	50-100	none-poor	<=10%		
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	50-100	luxuriant	>=50%	yellow	positive, opaque zone around the colony

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (11,12).

Reference

1. Bergdoll M. S., 1981, Clin. Microbiol. Newsletter 3: 85-87.
2. Centers for Disease Control: Bacillus cereus- Maine, MMWR, 35: 408-410, 1986.
3. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
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5. Mossel D. A. A., Koopman M. J. and Jongerium E., 1967, Appl. Microbiol, 15:650.
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7. Rhodehamel J. and Harmon S. M., 1995, FDA Bacteriological Analytical Manual, 8th Ed., AOAC International, Gaithersburg, Md.
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9. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
10. Lipps WC, Braun-Howland EB, Baxter TE,eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.
11. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
12. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Revision : 06/2023

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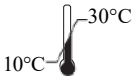
IVD ***In vitro* diagnostic medical device**



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Perfringens Agar Base (T.S.C.)

M837I

Intended use

Perfringens Agar Base (T.S.C.) recommended for the enumeration of *Clostridium perfringens* from food .The composition and performance criteria of this medium are as per the specifications laid down in ISO 7937:1985.

Composition**

Ingredients	Gms / Litre
Tryptose	15.000
Soya peptone	5.000
Yeast extract	5.000
Sodium metabisulphite	1.000
Ferric ammonium citrate	1.000
Agar	15.000
Final pH (at 25°C)	7.6±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 21 grams in 500 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C and add rehydrated contents of one vial of TSC Supplement (FD014). Alternatively if fluorogenic detection is desired add rehydrated contents of Clostridium perfringens supplements (FD243). Mix well before pouring into sterile Petri plates.

Principle And Interpretation

Tryptose Sulphite Cycloserine Agar (TSC) was originally formulated by Harmon et al (1) for the enumeration of *C.perfringens* from food. TSC Agar has been documented as one of the most useful media for the quantitative recovery of *C. perfringens* while suppressing growth of other facultative anaerobes (2). Perfringens Agar Base is also recommended by APHA (3). Perfringens Agar Base (M837I) is recommended for enumeration of *C.perfringens* from foods by ISO Committee (4) .

Tryptose, soya peptone, yeast extract, provide nitrogenous and carbonaceous compounds, long chain amino acids, vitamin B complex and trace elements essential for clostridial growth. Sodium metabisulphite and ferric ammonium citrate act as an indicator of sulphite reduction, indicated by black coloured colonies. D-cycloserine (FD014) help in the selective isolation of *C.perfringens* by inhibiting accompanying flora. Homogenized food samples can be directly streaked on the surface of plates or can be pre-enriched in Cooked Meat Medium (M149) before streaking.

Type of specimen

Food and animal feed samples.

Specimen Collection and Handling:

For food and animal feed samples, follow appropriate techniques for sample collection and processing as per guidelines (4). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidleines should be followed while handling clincal specimens. Saftey guidelines may be referred in individual safety data sheets

Limitations :

1. Some species of Clostridia may show poor growth. Preenrichment may be required.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Light yellow to brownish yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Amber coloured clear to slightly opalescent gel.

Reaction
Reaction of 4.2% w/v aqueous solution at 25°C. pH : 7.6±0.2

pH
7.40-7.80

Cultural Response
Cultural characteristics observed under anaerobic condition with added TSC Supplement (FD014) and Egg Yolk Emulsion (FD045), after an incubation at 35-37°C for 18-24 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Sulphite Reduction	Fluorescence
Cultural Response					
Clostridium perfringensATCC 12924	50-100	luxuriant	>=50%	positive, blackening of medium	Positive Reaction
Clostridium sordellii ATCC 9714	>=10^3	inhibited	0%		

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Use before expiry date on the label.
Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1.Harmon S. M., Kauttar D.A. and Peiler J. T., 1971, Appl. Microbiol., 22:688.
2.Harmon S. M. and Kautter D.A., 1987, J. Asso. Off. Anal. Chem., 70: 994.
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5.Isenberg, H.D. Clinical Microbiology Procedures Handb0ook. 2nd Edition.
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Revision : 2 / 2017

Yersinia Selective Agar Base

M843

Intended use

Recommended for the selective isolation and enumeration of *Yersinia enterocolitica* from clinical specimens and food samples.

Composition**

Ingredients	Gms / Litre
Peptone, special	20.000
Yeast extract	2.000
Mannitol	20.000
Sodium pyruvate	2.000
Sodium chloride	1.000
Magnesium sulphate	0.010
Sodium deoxycholate	0.500
Neutral red	0.030
Crystal violet	0.001
Agar	12.500
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 29.02 grams in 500 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add reconstituted contents of 1 vial of Yersinia Selective Supplement (FD034). Mix well before pouring into sterile Petri plates.

Principle And Interpretation

Yersinia enterocolitica is widely distributed in lakes and reservoirs. Epizootic outbreaks of diarrhea, lymphadenopathy, pneumonia and spontaneous abortions occur in various animals. It is the most common species of *Yersinia* recovered from clinical specimens. *Y. enterocolitica* is biochemically more active at room temperature than at 37°C. Yersinia Selective Agar Base with added Yersinia Selective Supplement is used to isolate *Y. enterocolitica* from clinical and non-clinical specimens. The formulation is based on CIN Agar of Schiemann (1,2) and is recommended by ISO Committee (3). Schiemann (1) modified his previous formula of CIN medium by replacing bile salts with sodium deoxycholate.

The medium differentiates between mannitol fermenting and non-fermenting bacteria. Microorganisms that ferment the sugar mannitol acidify the medium and cause a localized drop in pH around the colonies. In presence of neutral red, the colonies take red colour. Mannitol negative organisms form colourless and translucent colonies. The medium is selective due to the of presencesodium deoxycholate and crystal violet, which inhibit gram-positive and a number of gram-negative bacteria. Addition of antibiotic supplement makes it highly selective for *Yersinia.* Typical colonies of *Y. enterocolitica* will form dark red colonies resembling bull's eye, which are normally surrounded by a transparent border. Colony size, smoothness and ratio of the border to center diameter may vary among different serotypes.

For the isolation of *Y. enterocolitica* by direct plating and pour plating, inoculate the specimen directly onto the medium. Incubate at 22-32°C for 24-48 hours or suspend the sample (food, faeces, etc.) in sterile Phosphate Buffer Saline and incubate for upto 21 days (4) at 4°C. Periodically subculture samples onto Yersinia Agar Plate and incubate as above.

Type of specimen

Clinical samples - faeces ; Food and dairy samples.

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6).

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (4,7,8).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be

referred in individual safety data sheets.

Limitations :

1. *Serratia liquefaciens, Citrobacter freundi* and *Enterobacter agglomerans* may resemble *Y.enterocolitica* that can be further identified by biochemical tests.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to pink homogeneous free flowing powder

Gelling

Firm, comparable with 1.25% Agar gel.

Colour and Clarity of prepared medium

Orange red coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 5.8% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

Cultural characteristics observed with added Yesinia Selective Supplement (FD034) after an incubation at 22-32°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Enterococcus faecalis ATCC 29212 (00087*)	>=10^4	inhibited	0%	
Escherichia coli ATCC 25922 (00013*)	>=10^4	inhibited	0%	
Escherichia coli ATCC 8739 (00012*)	>=10^4	inhibited	0%	
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	>=10^4	inhibited	0%	
Staphylococcus aureus subsp. *aureus* ATCC 6538 (00032*)	>=10^4	inhibited	0%	
Proteus mirabilis ATCC 25933	>=10^4	inhibited	0%	
Pseudomonas aeruginosa ATCC 27853 (00025*)	>=10^4	inhibited	0%	
Yersinia enterocolitica ATCC 27729	50-100	good-luxuriant	>=50%	transluscent with dark pink centre & bile precipitate.
Yersinia enterocolitica ATCC 23715 (00160*)	50-100	good-luxuriant	>=50%	transluscent with dark pink centre & bile precipitate.
Yersinia enterocolitica ATCC 9610 (00038*)	50-100	good-luxuriant	>=50%	transluscent with dark pink centre & bile precipitate.

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1.Schiemann D. A., 1979, Can. J. Microbiol., 25: 1298.
2.Schiemann D. A., 1980, Can. J. Microbiol., 26: 1232.
3.International Organization for Standardization (ISO), 1994 Draft ISO/DIS 10273.
4.Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, American Public Health Association, Washington, D.C.
5.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
7.Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
8.Weissfeild and Sonnenwirth, 1982, J. Clin. Microbiol. 15 :508.

Revision : 05/2022

IVD — In vitro diagnostic medical device

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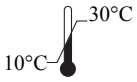

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Hugh Leifson Glucose Medium

M871

Intended Use:

Recommended for differentiation of Staphylococci from Micrococci on the basis of anaerobic fermentation of glucose

Composition**

Ingredients	Gms / Litre
Peptone	2.000
Yeast extract	0.500
Sodium chloride	30.000
Dextrose (Glucose)	10.000
Bromocresol purple	0.015
Agar	3.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 45.52 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Dispense into test tubes in duplicate for aerobic and anaerobic fermentation. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool the tubed medium in an upright position.

Principle And Interpretation

Hugh Leifson Glucose Medium is formulated by Hugh and Leifson (4). Hugh Leifson Glucose Medium is prepared as described by FDA (1) for differentiation of Staphylococci from Micrococci. They described the taxonomic significance of fermentative and oxidative metabolism of carbohydrates in gram-negative intestinal bacteria. There are two ways of utilizing carbohydrates by microorganisms, namely fermentation and oxidation. This property may be frequently used for the differentiation of some bacteria.

The medium contains a high concentration of carbohydrate and low concentration of peptone to avoid the possibility of an aerobic organism utilizing peptone and producing an alkaline condition which would neutralize slight acidity produced by an oxidative organism (3, 7). Agar concentration enables the determination of motility and aids in distribution of acid throughout the tube produced at the surface of medium.

Hugh Leifson Glucose Medium contains high salt concentration thus it is used for the identification of pathogenic and halophilic organisms and for testing aerobic and anaerobic breakdown of glucose by Staphylococci and Micrococci (2).

Type of specimen

Clinical samples- Swabs of mouth, mucosae, oropharynx and upper respiratory tract; Food and dairy samples

Specimen Collection and Handling:

The tubes for aerobic and anaerobic fermentation are inoculated and the agar surface of one tube of duplicate is covered with layer of sterile paraffin oil, about 25 mm thickness and incubated at 37°C. Oxidative organisms produce acid in unsealed tube with little or no growth and no acid formation in sealed tube while fermentative organisms produce acid in both sealed and unsealed tubes. If acid is produced, it is indicated by change in colour from purple to yellow throughout the medium. Liquid paraffin tube used should be dry sterilized at 160-170°C for 2 hours. Wet sterilization with high pressure is not sufficient for the purpose. Inoculate the culture under test into two tubes of the medium by stabbing throughout their length with a long wire loop. Cover one tube of the pair with layer of sterile liquid paraffin and incubate at 37°C. Read yellow colouration as acid production from glucose. Staphylococci produce acid by fermentation throughout the depth of the medium both in the anaerobic tubes sealed with paraffin and the aerobic unsealed tube. Micrococci either fail to produce acid in either tube or produce it only by oxidation in the upper part of the aerobic tube.

Warning and Precautions :

In Vitro diagnostic use. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Wet sterilization with high pressure is not sufficient for the purpose

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to bluish grey homogeneous free flowing powder

Gelling

Semisolid,comparable with 0.3% Agar gel.

Colour and Clarity of prepared medium

Purple coloured, clear to slightly opalescent gel forms in tubes as butts

Reaction

Reaction of 4.55% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours .

Organism	Inoculum (CFU)	Growth	Colour of Medium (Aerobic)	Colour of Medium (Anaerobic)
Micrococcus luteus ATCC 10240	50-100	good	yellow	pink-purple
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	50-100	good	yellow	yellow

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1. Bacteriological Analytical Manual, 1995, 8th Ed., Food & Drug Administration, AOAC International, USA.
2. Baird Parker, 1966, International subcommittee on Staphylococci and Micrococci.
3. Finegold S. M., Martin W. J., and Scott E. G., 1978, Bailey and Scotts Diagnostic Microbiology, 5th Ed., The C.V. Mosby Co., St. Louis.
4. Hugh and Leifson, 1953, J. Bacteriol., 66:24.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
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Revision : 02/2021

IVD — In vitro diagnostic medical device

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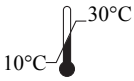

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Andrade Peptone Water

M885

Intended Use:

A basal medium which; with carbohydrate addition is used to study fermentation reactions.

Composition**

Ingredients	Gms / Litre
Peptone	10.000
Sodium chloride	5.000
Andrade indicator	0.100
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 15.1 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely and dispense in test tubes containing inverted Durhams tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to room temperature and aseptically add sterile stock solution of carbohydrate to a final concentration of 0.5% to 1.0% (w/v).

Principle And Interpretation

Bacteria differ widely in their ability to metabolize carbohydrates and related compounds. Carbohydrate fermentation reactions aids in the differentiation and identification of various bacteria. Andrade Peptone Water is the most commonly used media for carbohydrate fermentation (5). Desired carbohydrate is added to the medium, which is inoculated with the test organism. If the test organism metabolizes the added carbohydrate, acids are produced, thereby lowering the pH of the medium. This causes a subsequent colour change of the indicator, from colourless to pink to red. If the added carbohydrate is not metabolized, the medium remains pale tan to straw coloured. Gas produced during fermentation is collected in the Durhams tube.

The peptone used in the medium is free from fermentable carbohydrates (1,5) and the medium is also free from nitrates which may interfere with gas production. Andrade indicator is a solution of acid fuchsin which when titrated with sodium hydroxide; changes colour from pink to yellow. The Andrade indicator changes colour from yellow to pink as the pH decreases (5). The medium is pink when hot but becomes straw coloured on cooling. Test carbohydrate solutions should be sterilized separately and aseptically added to sterile Andrade Peptone Water. Use fresh cultures of organisms only which have been presumptively identified by Gram staining and colony morphology. The biochemical identification of organisms capable of growing in this medium is made by various sugar fermentation results (1,2,6).

Type of specimen

Food samples, Pure isolate

Specimen Collection and Handling

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (7).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets

Limitations

1. Fresh cultures should be used to avoid errorneous results.
2. For final identification further biochemical tests are required.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow coloured with pink tinge, homogeneous free flowing powder

Colour and Clarity of prepared medium

Light pink to straw coloured clear solution without any precipitate

Reaction

Reaction of 1.51% w/v aqueous solution at 25°C. pH : 7.4±0.2

Cultural response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Acid in absence of dextrose	Gas in absence of dextrose	Acid with added dextrose	Gas with added dextrose
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant	negative reaction	negative reaction	positive reaction, colour changes to pink red	positive reaction
Klebsiella pneumoniae ATCC 13883 (00097*)	50-100	luxuriant	negative reaction	negative reaction	positive reaction, colour changes to pink red	positive reaction
Proteus vulgaris ATCC 13315	50-100	luxuriant	negative reaction	negative reaction	positive reaction, colour changes to pink red	positive reaction
Salmonella Typhi *ATCC 6539*	50-100	luxuriant	negative reaction	negative reaction	positive reaction, colour changes to pink red	negative reaction
Salmonella Typhimurium *ATCC 14028* (00031*)	50-100	luxuriant	negative reaction	negative reaction	positive reaction, colour changes to pink red	positive reaction
Shigella flexneri ATCC 12022 (00126*)	50-100	luxuriant	negative reaction	negative reaction	positive reaction, colour changes to pink red	negative reaction
Shigella sonnei ATCC 25931	50-100	luxuriant	negative reaction	negative reaction	positive reaction, colour changes to pink red	negative reaction

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C0in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. Cowan S. T. and Steel K. J., 1974, Manual of Identification of Medical Bacteria, 2nd Ed., Cambridge United Press.
2. Finegold S. M. and Baron E. J., 1986, Bailey and Scotts Diagnostic Microbiology, 7th Ed., The C.V. Mosby Co., St. Louis.
3. Isenberg, (Ed.), 1992, Clinical Microbiology Procedures Handbook, Vol. I, American Society for Microbiology, Washington, D.C.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
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6. Murray P. R., Baron E. J., Jorgensen J. H., Pfaller M. A., Yolken R.H., (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C.
7. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

Revision : 02/2020

R-2A Agar

M962

Intended Use:
Recommended for heterotrophic plate count of water samples using longer incubation periods.

Composition**

Ingredients	Gms / Litre
Acicase#	0.500
Yeast extract	0.500
Proteose peptone	0.500
Dextrose (Glucose)	0.500
Starch soluble	0.500
Dipotassium hydrogen phosphate	0.300
Magnesium sulphate	0.024
Sodium pyruvate	0.300
Agar	15.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Casein Acid Hydrolysate

Directions
Suspend 18.12 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes or as per validated cycle. **DO NOT OVERHEAT**. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation
The heterotrophic plate count (HPC), formerly known as the standard plate count is a procedure for estimating the number of live heterotrophic bacteria in water and measuring changes during water treatment, in distribution systems or in swimming pools. R-2A Agar is recommended by APHA (1, 2) for estimating the heterotrophic plate count by the pour plate, spread plate or membrane filter procedure. R-2A Agar is formulated as per Reasoner and Geldreich (3). Stressed or injured organisms during water treatment are unable to grow on high nutrient media, since the faster growing organisms outgrow the former (4). Therefore the use of a low nutrient medium like R-2A Agar incubated for longer incubation periods allows these stressed organisms to grow well.

Many bacteria from natural waters which contain limited nutrients at ambient temperature, grow best on the media with less nutrient levels. They grow better at the temperatures below the routine laboratory incubation temperatures of 35 to 37°C (4).

Acicase, proteose peptone and yeast extract provide nitrogen, carbon compounds, vitamins, amino acids and minerals. Dextrose/ glucose serves as an energy source. Soluble starch aids in the recovery of injured organisms by absorbing toxic metabolic byproducts while sodium pyruvate increases the recovery of stressed cells. Magnesium sulphate is a source of divalent cations and sulphate. Dipotassium hydrogen phosphate is used to balance the pH of the medium. The number of colonies on a plate are reported as CFU (Colony Forming Units) per volume of sample.

Type of specimen
Water samples

Specimen Collection and Handling
For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standard (1). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions
Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations
1. Longer incubation time other than specified is required for slow growing microorganisms.
2. The media is intended for water samples for recovery of stressed or injured organisms.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 1.81% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

Cultural characteristics observed *by using standard ATCC cultures after an incubation at 30-35°C for 24-72 hours. (*-In case of water samples from fields it is suggested to incubate further for upto 7 days to ascertain the absence of organisms)

Organism	Inoculum (CFU)	Growth	Recovery
Candida albicans ATCC 10231 (00054)*	50-100	good-luxuriant	>=70%
Escherichia coli ATCC 25922 (00013)*	50-100	good-luxuriant	>=70%
Salmonella Enteritidis *ATCC 13076 (00030*)*	50-100	good-luxuriant	>=70%
Pseudomonas aeruginosa ATCC 9027 (00026)*	50-100	good-luxuriant	>=70%
Staphylococcus aureus subsp. *aureus ATCC 6538 (00032*)*	50-100	good-luxuriant	>=70%
Bacillus subtilis subsp. *spizizenii ATCC 6633* (00003*)	50-100	good-luxuriant	>=70%
Aspergillus brasiliensis ATCC 16404 (00053)*	50-100	good-luxuriant	>=70%
Enterococcus faecalis ATCC 29212 (00087)*	50-100	good-luxuriant	>=70%
Salmonella Typhi *ATCC 6539*	50-100	good-luxuriant	>=70%

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use.
Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1.Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, Wastewater, 20th Ed., American Public Health Association, Washington, D.C.
2.Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
3.Reasoner D. J. and Geldreich E. E., 1985, Appl. Environ. Microbiol., 49:1.

4.Collins V. J. and Willoughby J. G., 1962, Arch. Microbiol., 43:294.
5.Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
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Revision : 05/2022

Listeria Identification Agar Base (PALCAM)

M1064

Intended use

Recommended for selective isolation and identification of *Listeria* species from clinical and non-clinical samples.

Composition**

Ingredients	Gms / Litre
Peptone	23.000
Starch	1.000
Sodium chloride	5.000
Mannitol	10.000
Ammonium ferric citrate	0.500
Esculin	0.800
Dextrose (Glucose)	0.500
Lithium chloride	15.000
Phenol red	0.080
Agar	13.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 34.44 grams in 500 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of PALCAM Selective Supplement (FD061). Mix well and pour into sterile Petri plates.

Principle And Interpretation

The genus *Listeria* constitutes *Listeria monocytogenes, Listeria ivanovii, Listeria seeligeri, Listeria welshimerii, Listeria innocua, Listeria grayi, Listeria murrayi* and *Listeria denitrificans.* Among these, *L. monocytogenes* and *L. ivanovii* are associated with diseases in humans. The pathogenicity of *L.ivanovii* is uncertain. *L. monocytogenes* is found in a wide variety of habitats, including the normal microflora of healthy ruminants, gastrointestinal tract of asymptomatic humans and environmental sources including river water, sewage, soil, silage, fertilizers and decaying vegetation (1).

Listeria Identification Agar also known as Polymyxin-Acriflavin-Lithium chloride-Ceftazidime-Aesculin-Mannitol (PALCAM) Agar was formulated by Van Netten et al (2) and is recommended for the isolation of *L. monocytogenes* from foods. PALCAM medium is highly selective due to the presence of lithium chloride, ceftazidime, polymyxin B and acriflavin hydrochloride. PALCAM medium is a differential diagnostic medium utilizing two indicator systems, as esculin and ferric citrate and mannitol and phenol red.

Peptone serves as carbon, nitrogen substances, long chain amino acids, vitamins and essential growth nutrients for the organisms. Dextrose (Glucose), starch and mannitol are the carbohydrate and energy sources. Sodium chloride maintains the osmotic equilibrium of the medium. Phenol red is the pH indicator dye that exhibits changes in the pH of the medium. *L. monocytogenes* hydrolyzes esculin to form esculetin and dextrose. Esculetin reacts with ammonium ferric citrate and forms a brown-black complex seen as a black halo around colonies. *L.monocytogenes* does not ferment mannitol but contaminants such as Enterococci and Staphylococci ferment mannitol and is indicated by colour change from red to yellow. Under microaerophilic conditions, strict aerobes such as *Bacillus* species and *Pseudomonas* species are inhibited. The addition of egg yolk (2.5% v/v) to PALCAM Agar has been reported to aid repair of damaged cells (3). Medium containing blood when overlaid on PALCAM Agar enables to differentiate and enumerate haemolytic *Listeria* species (4). Depending upon the type of sample used, selective enrichment broth should be used prior to inoculation onto PALCAM Agar. Generally Listeria Selective Enrichment Medium is used for dairy products and Listeria Selective Enrichment Medium UVM (M890A), Fraser Secondary Enrichment Broth (M1083) are used for meats and poultry. On PALCAM Agar, colonies of *Listeria* appear as grey-green with a black precipitate, following inoculation and incubation at 35°C for 24-48 hours under aerobic or microaerophilic conditions.

Type of specimen

Clinical samples - faeces , body fluids, Food samples; Water samples

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6).
For food samples, follow appropriate techniques for sample collection and processing as per guidelines (7).
For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (8).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2.Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3.The medium is not differential, so further biochemical testing is required for identification between *Listeria* species.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to pink homogeneous free flowing powder

Gelling

Firm, comparable with 1.3% Agar gel.

Colour and Clarity of prepared medium

Red coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 6.9% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

Cultural characteristics observed under microaerophilic condition, with added PALCAM Selective Supplement (FD061), after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colony characteristics
Enterococcus faecalis ATCC 29212 (00087*)	50-100	none-poor	<=10%	grey colonies with a brown-green halo
Listeria monocytogenes ATCC 19111 (00020*)	50-100	luxuriant	>=50%	grey-green with black center and a black halo
Listeria monocytogenes ATCC 19112	50-100	luxuriant	>=50%	grey-green with black center and a black halo
Listeria monocytogenes ATCC 19117	50-100	luxuriant	>=50%	grey-green with black center and a black halo
Listeria monocytogenes ATCC 19118	50-100	luxuriant	>=50%	grey-green with black center and a black halo

Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	50-100	none-poor	<=10%	yellow colonies with yellow halo

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1. Watkin J., Sleath K. P., J. Appl. Bacteriol., 50: 1-9, 1981.
2. Van Netten P., Peralse I, Van de Mosdik A., Curtis G.D.W., Mossel D. A.A., 1989, Int. J. Food Microbiol., 8(4):299.
3. Veld P.H. and de Boer E., 1991, Int. J. Food Microbiol., 13:295.
4. Van Netten P., van Gaal B. and Mossel D. A. A., 1991, Lett. Appl.Microbiol, 12:20.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
7. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, American Public Health Association, Washington, D.C.
8. Lipps WC, Braun-Howland EB, Baxter TE,eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.

Revision : 04/2023

HiMedia Laboratories Pvt. Limited, Plot No.C-40, Road No.21Y, MIDC, Wagle Industrial Area, Thane (W) -400604, MS, India

IVD *In vitro* diagnostic medical device

30°C 10°C Storage temperature

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CE CE Marking

Do not use if package is damaged

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C.L.E.D. Agar Base w/o Indicator

M1146

Intended Use:

Recommended for isolation, enumeration and presumptive identification of bacterial flora in the urinary tract.

Composition**

Ingredients	Gms / Litre
Peptone	4.000
Tryptone	4.000
HM Peptone B #	3.000
Lactose	10.000
L-Cystine	0.128
Agar	15.000
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters
#- Equivalent to beef extract

Directions

Suspend 36.1 grams in 998 ml purified/ distilled water. Add rehydrated contents of 1 vial of Bromo Thymol Blue Supplement (FD091). Heat, to boiling, to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Principle And Interpretation

On a solid medium, Sandy's reported that swarming of *Proteus* species could be controlled by restricting the electrolytes (1). Formerly swarming of *Proteus* was controlled by adding alcohol, surface-active agent, sodium azide, boric acid etc. to the medium (1). Later on Sandys medium was modified by Mackey and Sandy's (2), by replacing mannitol by lactose and sucrose and elevating concentration of agar and bromothymol blue. This formulation was further modified by the same authors and called C.L.E.D. (Cystine-Lactose-Electrolyte-Deficient) by deleting the sucrose and by including L-cystine for promoting the growth of cystine dependent dwarf coliform colony (3). This medium is recommended for use in urine bacteriology, promoting the growth of all urinary pathogens. C.L.E.D. Medium is also recommended for dipstick procedures and as dip inoculum transport medium for urine specimens (2,3,4).

Peptone, HM Peptone B and tryptone provides nitrogen and carbon source, long chain amino acids, vitamins and other essential growth nutrients. Lactose is the fermentable sugar. L-cystine supports the growth of dwarf coliform colony. Bromo thymol blue is the pH indicator which turns yellow at acidic pH.

Bacteriuria may be quantitated by inoculating the surface of an agar medium by proper dilution. Inoculate the medium immediately after urine collection. It can also be inoculated by calibrated loop or duplicate dilution pour plate methods (5,6). *Shigella* species may not grow on this medium. Initiation of antibiotic therapy, before collection sample, low urine pH (less than 5) etc. may result in low bacterial count from infected patients.

Type of specimen

Clinical: Urine

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (7,8). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. This medium is recommended for urine infection. Low urine count may be a result of antibiotic therapy, low pH of urine.
2. Recovery depends on the urine count.
3. Inoculate the medium immediately after urine collection.
4. *Shigella* species may not grow on this medium.
5. For better results, the medium should not be incubated for more than 24 hours because if lactose fermenters predominate the entire medium may turn yellow masking the presence of non-lactose fermenters.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

With addition of Bromo Thymol Blue Supplement (FD091): Green coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 3.61% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH

7.10-7.50

Cultural Response

Cultural characteristics observed with added Bromothymol Blue Supplement (FD091), after an incubation at 35-37ºC for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Escherichia coli ATCC 25922 (00013*)	50-100	good-luxuriant	>=70%	yellow, opaque, center slightly deeper yellow
Enterococcus faecalis ATCC 29212 (00087*)	50-100	good-luxuriant	>=70%	slight yellowish or greenish
Klebsiella pneumoniae ATCC 13883 (00097*)	50-100	good-luxuriant	>=70%	yellow to whitish blue
Proteus vulgaris ATCC 13315	50-100	good-luxuriant	>=70%	blue
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	50-100	good-luxuriant	>=70%	deep yellow
Salmonella Typhi ATCC 6539	50-100	good-luxuriant	>=70%	bluish

Storage and Shelf Life

Store between 10- 30°C in a tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label. On opening, product should be properly stored dry,after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (7,8).

Reference

1. Sandys, 1960, J. Med. Lab. Technol., 17:224.
2. Mackey and Sandys, 1965, Br. Med. J., 2:1286.
3. Mackey and Sandys, 1966, Br. Med. J., 1:1173.
4. Dixson J. M. S. and Clark M. A., 1968, Conc. Med. Assoc. J., 99 (15)
5. Benner E. J., 1970, Appl. Microbiol., 19(3), 409
6. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore
7. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
8. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Revision : 06 / 2023

HiMedia Laboratories Pvt. Limited,
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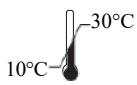
IVD *In vitro* diagnostic medical device



Storage temperature

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HiCrome™ Candida Differential Agar Base M1297AR

Intended use

HiCrome™ Candida Differential Agar Base is selective and differential medium for rapid isolation and identification of *Candida* species from mixed cultures from clinical and non-clinical samples

Composition**

Ingredients	Gms / Litre
Peptone	4.000
Chromogenic mixture	13.600
Agar	13.600
Final pH (at 25°C)	6.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 15.6 grams in 500 ml purified / distilled water. Add the rehydrated contents of one vial of HiCrome Candida Differential Selective Supplement (FD283R). Heat to boiling with frequent agitation to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Perry and Miller (4) reported that *Candida albicans* produces an enzyme b -N-acetyl- galactosaminidase and according to Rousselle et al (5) incorporation of chromogenic or fluorogenic hexosaminidase substrates into the growth medium helps in identification of C. albicans isolates directly on primary isolation. HiCrome™ Candida Differential Agar Base incorporates two chromogens X-NAG which detects the activity of hexosaminidase and BCIP which detects phosphatase activity. HiCrome™ Candida Differential Agar Base is a selective and differential medium, which facilitates rapid isolation of yeasts from mixed cultures and allows differentiation of *Candida* species namely *C.albicans, C.krusei, C.tropicalis* and *C.glabrata* on the basis of colouration and colony morphology. On this medium results are obtained within 48 hours and it is useful for the rapid and presumptive identification of common yeasts in Mycology and Clinical Microbiology Laboratory. Peptone provides nitrogenous, carbonaceous compounds and other essential growth nutrients. Chloramphenicol from the supplement suppresses the accompanying bacterial flora. *C.albicans* appear as light green coloured smooth colonies, *C.tropicalis* appear as blue to metallic blue coloured raised colonies. *C.glabrata, C.kefyr, C.parapsilosis* colonies appear as cream to white, beige/yellow due to natural pigmentation and some alkaline phosphatase activity, while *C.krusei* appear as pink-purple, fuzzy, dry colonies.

Type of specimen

Clinical samples - Blood; Food and dairy samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (2,3).
For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (1,6).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use . Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Slight variation in colour for isolates may be observed as the reaction is based on the enzyme present in organism.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to beige homogeneous free flowing powder

Gelling
Firm, comparable with 1.36% Agar gel

Colour and Clarity of prepared medium
Light amber coloured, opaque gel forms in Petri plates

Reaction
Reaction of 3.12% w/v aqueous solution at 25°C. pH : 6.0±0.2

pH
5.80-6.20

Cultural Response
Cultural characteristics observed with added HiCrome Candida Differential Selective Supplement (FD283R) after an incubation at 30-35°C for 40-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
Candida albicans ATCC 10231 (00054*)	50-100	good-luxuriant	>=50%	light green
Candida glabrata ATCC 15126	50-100	good-luxuriant	>=50%	cream to white
#Teunomyces krusei ATCC 24408	50-100	good-luxuriant	>=50%	purple, fuzzy
Candida tropicalis ATCC 750	50-100	good-luxuriant	>=50%	blue to purple
Candida kefyr ATCC 66058	50-100	good-luxuriant	>=50%	cream to white with slight purple centre
Candida utilis ATCC 9950	50-100	good-luxuriant	>=50%	pale pink to pinkish purple
Candida parapsilosis ATCC 22019	50-100	good-luxuriant	>=50%	white to cream
Candida membranifaciens ATCC 20137	50-100	good-luxuriant	>=50%	white to cream
Candida dubliensis NCPF 3949	50-100	good-luxuriant	>=50%	pale green
Escherichia coli ATCC 25922 (00013*)	>=10^4	inhibited	0%	
Staphylococcus aureus ATCC 25923 (00034*)	>=10^4	inhibited	0%	

Key : *Corresponding WDCM numbers. # - Formerly known as *Candida krusei*

Storage and Shelf Life

Store between 15-25°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

Reference

1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.

2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

4. Perry J. L. and Miller G. R., 1987, J. Clin. Microbiol., 25: 2424 -2425.

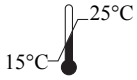
5. Rousselle P., Freydiere A., Couillerot P., de Montclos H. and GilleY., 1994, J. Clin. Microbiol. 32:3034-3036.

6. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

Revision : 04/2020

IVD — In vitro diagnostic medical device

CE — CE Marking



Storage temperature

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Bifidobacterium Broth

M1395

Intended Use:

Recommended for cultivation of *Bifidobacterium infantis.*

Composition**

Ingredients	Gms / Litre
Tryptone	20.000
Peptone	10.000
Yeast extract	10.000
Tomato juice, solids	16.650
Dextrose (Glucose)	20.000
Polysorbate 80 (Tween 80)	2.000
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 78.65 grams in 1000 ml purified / distilled water . Heat if necessary to dissolve the medium completely. Distribute in tubes or flasks as desired. Sterilize by autoclaving at 15lbs pressure for 15 minutes.

Principle And Interpretation

The genus *Bifidobacterium* is the third most numerous bacterial population found in the human intestine after Bacteroides and *Eubacterium*. It is an anaerobic bacteria that makes up the gut microbial flora, it resides in the colon and have health benefits for their hosts. Bifidobacteria are also associated with lower incidences of allergies (1,2). Bifidobacterium Broth is used for the cultivation and maintenance of *Bifidobacterium* species. The medium is used exclusively for the cultivation of *Bifidobacterium infantis* (3).

Tryptone, Peptone and yeast extract provides essential growth nutrients. Glucose is the energy source and sodium chloride maintains isotonic conditions. Tomato juice helps in maintaining acidic pH while polysorbate 80 provides fatty acids required for metabolic activity of *Bifidobacterium*.

Type of specimen

Clinical samples- faeces; Dairy samples.

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5). For dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (6,7). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Further biochemical and serological tests must be carried out for complete identification.
2. *Bifidobacterium* species are strict anaerobes, hence condition must be appropriately maintained.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder
Colour and Clarity of prepared medium
Amber coloured clear solution in tubes

Reaction
Reaction of 7.86% w/v solution at 25°C. pH : 6.8±0.2
pH
6.60-7.00
Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth
Bifidobacterium infantis ATCC 25962	50-100	good-luxuriant
Bifidobacterium bifidum ATCC 15696	50-100	good-luxuriant
Bifidobacterium breve ATCC 15698	50-100	good-luxuriant

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

Reference

1.Bjorksten B., Sepp E., Julge K., Voor T., and Mikelsaar M., 2001, J. Allergy Clin. Microbiol., Volume 108, Issue 4, 516-520.
2.Guarner F., and Malagelada J. R., 2003, The Lancet, Vol. 361, Issue 9356, 8 February 2003, 512-519
3.Atlas R. M. 2004, 3rd Edi. Handbook of Microbiological Media, Parks, L. C. (Ed.), CRC Press, Boca Raton.4.
4.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
5.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
6.American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., WashingtonD.C.
7.Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed.,APHA Inc., Washington, D.C.

Revision : 03/2022


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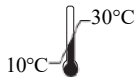
IVD *In vitro* diagnostic medical device



Storage temperature

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Rappaport Vassiliadis Soya Broth (RVS Broth)

M1491

Intended Use:

Selective enrichment medium for *Salmonellae* species from food and animal feeding stuffs and clinical specimens.

Composition**

Ingredients	Gms / Litre
Soya peptone	4.500
Sodium chloride	8.000
Potassium dihydrogen phosphate	0.600
Dipotassium hydrogen phosphate	0.400
Magnesium chloride hexahydrate	29.000
Malachite green	0.036
Final pH (at 25°C)	5.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 27.11 grams (the equivalent weight of dehydrated medium per liter) in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Dispense into tubes or flasks as desired. Sterilize by autoclaving at 115°C for 15 mins.

Principle And Interpretation

Rappaport Vassiliadis Soya Broth is designed according to the revised formulation by Van Schothorst et al (1) and is recommended for the selective enrichment of Salmonellae from pharmaceutical products. This medium can also be used in direct enrichment of samples containing low inoculum. Present medium is a modification of the Rappaport Vassiliadis Enrichment Broth described by Van Schothorst and Renauld (2). Addition of magnesium chloride to the medium was reported by Peterz et al (3). *Salmonella* species can be isolated from human faeces without pre-enrichment by using this medium.

Salmonella generally survive at little high osmotic pressure, grow at slightly low pH and are resistant to malachite green compared to other bacteria. These characteristics are exploited in this medium for selective enrichment of *Salmonella*. Magnesium chloride present in the medium raises the osmotic pressure. Natural sugars of Papaic digest of soyabean meal provide essential growth nutrients and enhance the growth of *Salmonella* (4). Phosphate buffers the medium to maintain constant pH. Sodium chloride maintains the osmotic balance. Malachite green inhibits many gram-positive bacteria, while selectively enrich *Salmonella*. The relatively lower concentration of nutrition, also aids selective enrichment of Salmonella. This medium was reported to be superior to *Salmonella* selective medium like Tetrathionate Broth and Selenite enrichment broth and to Tetrathionate-Brilliant Green Broth for the detection of *Salmonella* in milk samples. The enriched culture of Rappaport Vasiliadis Soya Broth (M1491) can be further subcultured and isolated on Brilliant Green Agar (M016) or Deoxycholate Citrate Agar (M065), Xylose Lysine Deoxycholate Agar (M031).

Type of specimen

Clinical samples - faeces; Food samples and animal feeding stuffs.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6).
For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (7,8).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use . For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. This medium contains inhibitory substances and may not support the growth of certain *Salmonella* species like *S.* Typhi.
2. Less selective enrichment broth must be used in conjunction.
3. After enrichment the organisms must be isolated on less selective media along with selective media.
4. Further biochemical and serological testing must be carried out for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to light blue homogeneous free flowing powder.

Colour and Clarity of prepared medium

Greenish blue clear to slightly opalescent with a slight precipitate.

Reaction

Reaction of 2.77% w/v aqueous solution at 25°C. pH : 5.2±0.2

pH

5.00-5.40

Cultural Response

Cultural response was observed after an incubation at 30-35°C for 18-24 hours Recovery is carried out using Xylose Lysine Deoxycholate Agar (M031) after enrichment.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
***E.coli* +*S.*Typhimurium (mixed culture)**				
E.coli	50 -100	none-poor	<=10 %	yellow
*S.*Typhimurium	50 -100	luxuriant	>=50 %	red with black centers
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	>=10^4	inhibited	0%	
Enterococcus faecalis ATCC 29212 (00087*)	>=10^4	inhibited	0%	
Salmonella Abony NCTC 6017 (00029*)	50-100	luxuriant	>=70 %	red with black centers
Salmonella Typhimurium *subsp. aureus* ATCC 14028 (00031*)	50-100	luxuriant	>=70 %	red with black centers
Staphylococcus aureus ATCC 6538 (00032*)	>=10^4	inhibited	0%	
Escherichia coli ATCC 25922 (00013*)	50 -100	none-poor	0 -10	yellow
Salmonella Enteritidis ATCC *13076* (00030*)	50-100	luxuriant	>=70 %	red with black centre
Escherichia coli ATCC 8739 (00012*)	50-100	none-poor	<=10 %	yellow
Salmonella Paratyphi B ATCC 8759	50-100	luxuriant	>=70 %	red with black centre

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store below 10-30°C in a tightly closed container and the prepared medium at 15-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in-order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1. Van Schothorst M., Renauld A. and VanBeek C., 1987, Food Microbiol., 4:11.
2. Van Schothorst M. and Renauld A., 1983, J. Appl. Bact., 54:209.
3. Peterz M., Wiberg C. and Norberg P., 1989, J. Appl. Bact., 66:523
4. McGibbon L., Quail E. and Fricker C.R. 1984, Inter. J. Food Microbiol. 1:171.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C.,Funke., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
7. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
8. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed.,APHA Inc., Washington, D.C.

Revision : 04/2023

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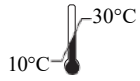
IVD ***In vitro*** **diagnostic medical device**



Storage temperature

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Eugonic LT 100 Broth Base w/o Tween 80

M1517

Intended Use:

Recommended for the enrichment and detection of mesophilic aerobic bacteria present in cosmetic products. The composition Eugonic and performance criteria of the medium are as per the specifications laid down in ISO 21149.

Composition**

Ingredients	Gms / Litre
Tryptone	15.000
Soya peptone	5.000
Sodium chloride	4.000
L-Cystine	0.700
Sodium sulphite	0.200
Glucose	5.500
Egg lecithin	1.000
Tritox X-100	1.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 32.4 grams in 1000 ml purified/distilled water containing 5 grams of Polysorbate 80 (Tween 80). Heat to boiling to dissolve the medium completely. Dispense into tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Eugonic LT 100 Broth Base was developed by Pelczar and Vera (1) for cultivation of fastidious organisms like *Brucella*. Eugon media were developed to obtain eugonic (luxuriant) growth of fastidious microorganisms like *Brucella* which are otherwise difficult to cultivate (2). The unenriched medium supports rapid growth of lactobacilli associated with cured meat products, dairy products and other foods. Eugonic media is quite similar to Tryptone Soya Agar (M290) but more bacterial propagation is expected on Eugonic media. Organisms like *Bordetella* and *Neisseria* grow luxuriantly in Eugon Media because large amount of sulfur and carbon sources have been added in the formula. Eugonic LT 100 Broth Base can be used for growth of a variety of fastidious microorganisms like *Neisseria, Francisella* and *Brucella*. The composition of the medium is as per ISO (3)for the detection of mesophilic aerobic bacteria from cosmetic products.

Tryptone and soya peptone provide the nitrogen, vitamins and amino acids, which supports the growth of fastidious microbial species. The high concentration of glucose is the energy source for rapid growth of bacteria. L-Cystine and sodium sulphite are added to stimulate growth. Sodium chloride maintains the osmotic balance of the media. The high carbohydrate content along with high sulfur (cystine) content improves growth with chromogenicity (4). Lecithin and polysorbate 80 in Eugonic LT 100 Medium w/o Tween 80 neutralize antimicrobial agents hence this medium can be used as a neutralizing diluent.

Type of specimen

Cosmetic samples

Specimen Collection and Handling

For cosmetic samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (5). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Certain fastidious organisms may not grow due to nutritional variation.
2. Further biochemical tests must be carried out for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Yellow coloured, Clear to slightly opalescent solution.

Reaction

Reaction of 3.24% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours (fungal cultures incubated at 25-30°C for 2-7 days).

Organism	Inoculum (CFU)	Growth
Bacillus pumilus ATCC 14884	50-100	good
Candida albicans ATCC 26790	50-100	good
Lactobacillus fermentum ATCC 9338	50-100	good
Streptococcus pneumoniae ATCC 6303	50-100	good-luxuriant (under 3-5% CO2)
Streptococcus pyogenes ATCC 19615	50-100	good-luxuriant (under 3-5% CO2)
Staphylococcus aureus subsp.aureus ATCC 25923 (00034*)	50-100	good-luxuriant
Staphylococcus aureus subsp.aureus ATCC 6538 (00032*)	50-100	good
Bacillus subtilis subsp. spizizenii ATCC 6633 (00003*)	50-100	good
Pseudomonas aeruginosa ATCC 9027 (00026*)	50-100	good
Escherichia coli ATCC 8739 (00012*)	50-100	good
Candida albicans ATCC 10231 (00054*)	50-100	good
Neisseria meningitidis ATCC 13090	50-100	good

* Corresponding WDCM Numbers

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1.Pelczar and Vera J., 1949, Milk Plant Monthly 38:30
2.MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams & Wilkins, Baltimore, Md.
3.ISO 21149 (2006) Cosmetics-Microbiology- Enumeration and detection of aerobic mesophilic bacteria
4.Frank H. A., 1955, J. Bacteriol., 70:269.
5.Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
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Revision : 06/2023

Tryptone Bile Glucuronic Agar (TBX Agar) M1591

Intended use

Selective agar for the detection and enumeration of *Escherichia coli* in foodstuffs, animal feed, water and clinical samples.

Composition**

Ingredients	Gms / Litre
Bile salt mixture	1.500
Tryptone	20.000
X-ß-D-glucoronic acid	0.075
Dimethyl sulfoxide	3.000
Agar	15.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 39.6 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour in sterile Petri plates.

Principle And Interpretation

The formulation of Tryptone Bile Glucuronic Agar is in accordance with ISO 16649-2 (1). Tryptone Bile Glucuronic Agar contains the enzyme ß -D- glucuronidase which differentiates most *E.coli* species from other coliforms.

E.coli absorbs the chromogenic substrate 5-bromo-4-chloro-3-indolyl-ß-D-glucuronide (2).The enzyme ß-glucuronidase splits the bond between the chromophore 5-bromo-4-chloro-3-indolyl and the ß-D-glucuronide. *E.coli* colonies are blue green coloured (3,4). Growth of accompanying gram positive flora is largely inhibited by the use of bile salts and the high incubation temperature of 44°C.

Type of specimen

Clinical samples - urine, Food samples ; Water samples

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,5).

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (6).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (7).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. ß-glucuronidase is present in 97% of *E.coli* strains, however few *E.coli* may be negative.
2. Some species may show poor growth due to nutritional variations.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow coloured homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 3.66% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

Cultural characteristics observed after an incubation at 44°C for 18- 24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
Citrobacter freundii ATCC 8090	>=10^4	inhibited	0%	
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant	>=50%	blue-green
Enterococcus faecalis ATCC 29212 (00087*)	>=10^4	inhibited	0%	

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,5).

Reference

1. International Standard ISO 16649-2: 2018. Microbiology of food and animal feeding stuffs- Horizontal method for the enumeration of presumptive Escherichia coli; Part 2: Colony-count technique at 44°C using 5-bromo-4-chloro-3-indolyl-ß-D-glucoronic acid.
2. Frampton E W, Restaino L, Blaszko L.1988. Eavaluation of ß-glucoridase substrate 5-bromo-4-chloro3-indolyl-B-D-glucuonide (X-GLUC) in a 24 hour direct plating method for Escherichia coli. J. Food Protection 51:402-404.
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4. Killian M. and Bolow P 1976 Rapid diagnosis of Enetrobacteriacea I. Detection of bacterial glycosidases. Acta Rattol. Microbiol Scand Sct B 84245:251.
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6. Lipps WC, Braun-Howland EB, Baxter TE,eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.
7. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

HiMedia Laboratories Pvt. Limited,
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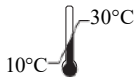
Thane (W) -400604, MS, India

IVD ***In vitro*** **diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE **CE Marking**

Do not use if package is damaged

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HiCrome™ Vibrio Agar

M1682

Intended use

HiCrome™ Vibrio Agar is recommended for the isolation, and selective chromogenic differentiation of *Vibrio* species from seafood.

Composition**

Ingredients	Gms / Litre
Peptone	10.000
Sodium chloride	25.000
Sodium thiosulphate	5.000
Sodium citrate	6.000
Sodium cholate	1.000
Chromogenic mixture	5.500
Agar	15.000
Final pH (at 25°C)	8.5±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 67.5 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C. Mix well before pouring into sterile Petri plates.

Principle And Interpretation

Vibrio' s have played a significant role in human history. Outbreaks of cholera, caused by *Vibrio cholerae*, can be traced back in time to early recorded descriptions of enteric infections. The *Vibrio*'s have also received the attention of marine microbiologists who observed that the readily cultured bacterial population in near-shore waters and those associated with fish and shell fish were predominantly *Vibrio* species (1). *Vibrio* species are mainly responsible for causing cholera and food poisoning in humans. *Vibrio cholerae* causes cholerae due to the intake of contaminated food such as raw oysters. *Vibrio parahaemolyticus* is a major cause of food borne infections, causing food poisoning (2). Since *Vibrio* species naturally occur in sea water, worth special mention is their need for sodium chloride, although some species can grow with minimum sodium chloride concentration (1). The widely used media for *Vibrio* isolation are TCBS Agar and Alkaline Peptone Water (3). However accompanying sucrose-fermenting bacteria pose a problem in the identification of *Vibrio* species on TCBS Agar. On HiCrome™ Vibrio Agar, the colour development by *Vibrio* species in not affected by the presence of colonies of other bacteria. This is because, the amount of colour developed depends on the reaction of the bacterial beta-galactosidase with the substrate contained in the media (4).

Peptone provides carbonaceous, nitrogeneous and essential nutrients to the organisms. High concentration of sodium chloride in addition to maintaining the osmotic equilibrium also has an inhibitory action on the accompanying microflora. Sodium thiosulphate, sodium citrate and sodium cholate are used in the formulation because they can inhibit the growth of gram positive and some gram negative bacteria, but not members of *Enterobacteriaceae*. The proprietary chromogenic mixture incorporated in the medium helps in the chromogenic differentiation of *Vibrio cholerae* and *Vibrio parahaemolyticus* . The high (alkaline) pH of the medium helps in selective isolation of *Vibrio* species.

Type of specimen

Food samples

Specimen Collection and Handling

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (5)

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidleines should be followed while handling specimens. Saftey guidelines may be referred in individual safety data sheets

Limitations

Not applicable

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to light tan homogeneous free flowing powder

Gelling

Firm,comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light yellow coloured, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 6.75% w/v aqueous solution at 25°C. pH : 8.5±0.2

pH

8.30-8.70

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Enterococcus faecalis ATCC 29212 (00087*)	>=10^3	inhibited	0%	
Escherichia coli ATCC 25922 (00013*)	>=10^3	inhibited	0%	
Staphylococcus aureus ATCC 25923 (00034*)	>=10^3	inhibited	0%	
Vibrio cholerae ATCC 15748	50-100	good-luxuriant	>=50%	purple
*Vibrio parahaemolyticus ATCC 17802 (*00037*)	50-100	good-luxuriant	>=50%	bluish green

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store below 30°C in a tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (6,7).

Reference

1.Thompson et al (ed.). 2006. The Biology of Vibrios, ASM Press, chapter 1, pg 3.
2.Alcamo. E.I, 2001. Fundamentals of Microbiology, 6th ed, Jones and Bartlett Publishers, Inc. pg 254, 244.
3.Clesceri, Greenberg and Eaton (ed.). 1998. Standard Method for the examination of Water and Waste water, 20th ed. American Public Health Association, Washington, D. C.
4.Kudo. H. Y et al, 2001. Improved Method for Detection of ! Vibrio parahaemolyticus @ in Seafood. ASM. Vol 67, 12,Npg 5819-5823.
5. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., American Public Health Association, Washington, D.C.
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7. Isenberg, H. . Clinical icrobiology Procedures Handb0ook. 2nd Edition.

Revision : 02/2018

Bifidobacterium Selective Count Agar Base (BSC Propionate Agar Base)

M1734

Intended Use:

Recommended for enumeration of presumptive Bifidobacteria by colony count technique from milk products.

Composition**

Ingredients	Gms / Litre
Tryptone	10.000
Yeast extract	1.000
Potassium dihydrogen phosphate	3.000
Dipotassium hydrogen phosphate	4.800
Ammonium sulphate	3.000
Magnesium sulphate heptahydrate	0.200
L-Cysteine HCl monohydrate	0.500
Sodium propionate	15.000
Galactooligosaccharide	10.000
Agar	15.000
Final pH (at 25°C)	6.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 62.35 grams (the equivalent weight of dehydrated medium per litre) in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at (115±3°C) for 15 minutes. Cool to 45-50°C. For selective isolation of Bifidobacteria add contents of 2 vials of Mup Selective Supplement (FD250). Mix carefully to avoid the formation of air bubbles and pour into sterile Petri plates or dispense as desired.

Note: This medium being sensitive to heat, excessive heat treatment may therefore indicatively influence the properties of the medium. For more selectivity Glacial acetic acid (1% glacic Selective Supplement B FD251) may also be added. After addition of 1% glacic Selective Supplement (FD251) pH of the medium will shift to the acidic side, which does not affect the performance of the medium.

Principle And Interpretation

Bifidobacteria Selective Count Agar Base is specifically prepared for selective enumeration of Bifidobacteria in fermented milks and fermented milk drinks living together with lactic acid bacteria.
Bifidobacteria Selective Count Agar Base contains highly purified Galactooligosaccharides, which is one of the most excellent Bifidobacteria growth substances. Cysteine hydrochloride helps in creating reduced conditions required for the growth of Bifidobacteria. Tryptone acts as rich nitrogen source.
The antibiotic mupirocin inhibits the growth of most lactic acid bacteria commonly used in fermented and non-fermented dairy products. Freshly prepared culture media not exposed to direct sunlight is recommended (2).
Test Procedure: Before opening the sample container, clean the external surface surrounding of the area from which the test sample is to be taken, in order to remove any material that might contaminate the sample. Weigh 90 gm of diluent in each of the 250 ml pre-sterilized bottles. Close the bottles. Weigh 10 gm of the test sample directly into the bottle with the diluent at 45°C. To dissolve the test sample, swirl slowly to wet the powder. The time between ending the preparation of the primary dilution until addition of culture medium shall not exceed 15 min.. Immediately after solidification of the medium, invert all Petri dishes in the anaerobic culture jar or anaerobic incubator at 37°C for 72 hrs ± 3 hrs. Count the colonies after incubation. Bifidobacterial colonies are recognized by their whitish colour and acetic acid odour. Some of the bifidobacterial strains may appear in different colony size as well as colony appearance on the same plate (2).

Type of specimen

Dairy samples

Specimen Collection and Handling

For dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (1,6).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Some *Bifidobacterias* are extremely fastidious that may show poor growth due to nutritional variations and selectivity.
2. Further biochemical and serological testing is required for complete identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder
Gelling
Firm, comparable with 1.5% Agar gel
Colour and Clarity of Prepared medium
Yellow coloured opalescent gel forms in Petri plates
Reaction
Reaction of 6.20% w/v aqueous solution at 25°C. pH : 6.3±0.2
pH
6.10-6.50
Cultural Response
Cultural characteristics observed with added Bifido Selective Supplement A under anaerobic conditions, after an incubation at 35-37°C for 48-72 hours.

Organism	Inoculum (CFU)	Growth	Growth with FD250
Bifiobacterium breve ATCC 15100	50-100	luxuriant	Good-luxuriant
Lactococcus lactis ATCC 19435 (00016*)	50-100	good-luxuriant	inhibited
Lactococcus cremoris ATCC 19257	50-100	good-luxuriant	inhibited
Lactobacillus acidophilus ATCC 4356 (00098*)	50-100	good	inhibited

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
2. ISO/DIS 29981 IDF 220, Milk products- Enumeration of presumptive bifidobacteria- colony count technique at 37°C, 2008.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

5.Thitaram, S, Siragusa, Hinton, 2005, Letters in Applied Microbiology, vol 41, 355-360, *Bifidobacterium* selective isolation and enumeration from chiken ceca by an oligosaccharide- antibiotic selective agar medium.
6.Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.

Revision : 03 / 2023

Mueller Hinton Agar, 2% Glucose with Methylene blue

M1825

Mueller Hinton Agar, 2% Glucose with Methylene blue is recommended for testing performing Antifungal Disk Diffusion Susceptibility of yeasts.

Composition**

Ingredients	Gms / Litre
Beef infusion from	300.000
Casein Acid Hydrolysate	17.500
Starch	1.500
Glucose	20.000
Methylene blue	0.0005
Agar	17.000
Final pH (at 25°C)	7.3±0.1

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 58 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes. Mix well before pouring.

The performance of this batch has been tested and standardized as per the current CLSI (formerly NCCLS) document M44-A2 in Method for Antifungal Disk Diffusion susceptibilty Testing of yeasts

Principle And Interpretation

The Mueller Hinton formulation was originally developed as a simple, transparent agar medium for the cultivation of pathogenic species (1). Mueller Hinton Agar, Modified (as per CLSI for antifungal) is recommended for the diffusion of antifungal agents impregnated on paper disc through an agar gel as described in CLSI Approved Standard (2).

When supplemented with glucose to a final concentration of 2%, it provides for suitable fungal growth. The addition of methylene blue to a final concentration of 5µg/ml enhances zone edge definition.

Kirby-Bauer et al recommended Mueller Hinton Agar for performing antibiotic susceptibility tests using a single disc of high concentration (4). WHO Committee on Standardization of Susceptibility Testing has accepted Mueller Hinton Agar for determining the susceptibility of microorganisms because of its reproducibility (3). Mueller Hinton Agar with 5% sheep blood and Mueller Hinton Agar with Haemoglobin have been recommended for antimicrobial susceptibility testing of *Streptococcus pneumoniae* and *Haemophilus influenzae* . Similarly Mueller Hinton Agar, Modified (as per CLSI for antifungal) is recommended for antifungal susceptibity testing of discs.

Beef infusion and casein acid hydrolysate provide nitrogenous compounds, carbon, sulphur and other essential nutrients. Starch acts as a protective colloid against toxic substances present in the medium. Starch hydrolysis yields dextrose, which serves as a source of energy. Glucose serves as an energy source for fungal cultures while Methylene blue enhances zone edge definition.

Technique:

Preparation of Inoculum:

1. Inoculum is prepared by picking five distinct colonies of approximately 1mm from 24 hours old culture grown on Sabouraud Dextrose Agar (M063) and incubated at 35 ± 2°C. Colonies are suspended in 5ml of sterile 0.85% Saline.

2. Vortex the resulting suspension and adjust the turbidity to yield 1 x 106 - 5 x 106 cells /ml (i.e. 0.5 McFarland standard).

Test Procedure:

1. Prepare plates with Mueller Hinton Agar, Modified (as per CLSI for antifungal) for carrying out susceptibility of antifungal discs. The medium in the plates should be sterile and have a depth of about 4 mm.

2. Dip a sterile non-toxic cotton swab on a wooden applicator into the standardized inoculum (turbidity so adjusted, as to obtain semi confluent growth on the Petri plate) and rotate the soaked swab firmly against the upper inside wall of the tube to express excess fluid. Streak the entire agar surface of the plate with the swab three times, turning the plate at 60° angle between each streaking. Allow the inoculum to dry for 5 - 15 minutes with lid in place.

3. Apply the discs using aseptic technique. Deposit the discs with centers at least 24 mm apart. (Not more than 12 discs should be placed on a 150-mm plate or not more than 5 discs on a 100-mm plate

4. Invert the plates and place in an incubator set to 35 ± 2°C within 15 minutes after the discs are applied.

5. Examine each plate after 20 - 24 hours of incubation. If plate was satisfactorily streaked the resulting zones of inhibition will be uniformly circular and there will be a semi-confluent lawn of growth. Read at 48 hours only when insufficient growth is observed after 24 hours incubation.

Quality Control

Appearance
Light yellow to yellow may have slight blue tinge homogeneous free flowing powder

Gelling
Firm, comparable with 1.7% agar gel.

Colour and Clarity of prepared medium
amber coloured clear to slightly opalescent gel froms in Petri plates

Reaction
Reaction of 5.8% w/v aqueous solution at 25°C. pH : 7.3±0.1

pH
7.20-7.40

Cultural response
A luxuriant growth of test organisms was observed on Mueller Hinton Agar, Modified (as per CLSI for antifungal) in 24-48 hours at 33-37°C along with inhibition zones with respective antibiotic concentrations

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Amphotericin-B AP(100units)	Amphotericin-B AP(20 mcg)	Amphotericin-B AP(50 mcg)
Cultural response						
Candida albicans ATCC 90028	50-100	Luxuriant	>=70%	10 -17 mm	10 -15 mm	31 -42 mm
Candida parapsilosis ATCC 22019	50-100	luxuriant	>=70%	11 -20 mm	10 -17 mm	28 -37 mm
Candida tropicalis ATCC 750	50-100	luxuriant	>=70%	8 -12 mm	8 -10 mm	13 -17 mm
Candida krusei ATCC 6258		luxuriant	>=70%	9 -14 mm	8 -12 mm	16 -25 mm
Candida albicans ATCC 10231	50-100	luxuriant	>=70%	10 -18 mm	10 -16 mm	30 -40 mm
Saccharomyces cerevisiae ATCC9763	50-100	luxuriant	>=70%	11 -18 mm	8 -12 mm	29 -38 mm

Storage and Shelf Life

Store dehydrated powder below 30°C and prepared medium at 2-8°C. Use before expiry date on the label.

Reference

1.Mueller J. H. and Hinton J., 1941, Proc. Soc. Exp. Biol. Med., 48:330.
2.Method for Antifungal Disk Diffusion Susceptibilty Testing of yeasts; Approved Guideline Second Edition M44-A2 Vol.24 No.17.
3.Present Status and Future Work, WHO Sponsored collaborative study, Chicago, Oct. 1967.
4.Bauer A. W., Kirby W. M., Sherris J. L. and Turck M., 1966, Am. J. Clin. Pathol., 45:493.

Revision : 1 / 2011

Disclaimer :

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Technical Data

HiCrom™ Selective Salmonella Agar Base

M1842

Intended Use:

Recommended for the selective isolation of *Salmonella* species from food and clinical samples

Composition**

Ingredients	Gms / Litre
HI powder #	12.000
Yeast hydrolysate	5.000
Tryptose	5.000
Sodium cholate	3.000
Sodium taurocholate	5.000
Sodium deoxycholate	1.000
Chromogenic mixture	8.000
Agar	15.000
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Heart Infusion powder

Directions

Suspend 54.00 grams in 1000 ml purified/ distilled water. Gently heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C. Aseptically add the rehydrated contents of one vial of HiCrome™ Selective Salmonella Agar Supplement (FD274). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Salmonella species have been isolated from humans and almost all animals throughout the world. They cause many types of infections from mild, self-limiting gastroenteritis to life threatening typhoid fever. *Salmonella* Typhi and *Salmonella* Paratyphi A & B cause gastroenteritis, bacteremia and enteric fever, *Salmonella* Choleraesuis causes gastroenteritis and enteric fever, especially in children. *Salmonella* Typhimurium is the most frequently isolated serotype of *Salmonella* . *Salmonella* species are the major cause of food poisoning (3).

Various chromogenic media are available for the differentiation of *Salmonella* species. The original media formulated by Rambach (4) differentiates *Salmonella* based on propylene glycol utilization and presence of a chromogenic indicator. However HiCrome™ Selective Salmonella Agar Base uses chromogenic mixture for identification and differentiation of *Salmonella* species. Sodium cholate, Sodium taurocholate and Sodium deoxycholate in the medium helps to restrict the growth of other organisms. Besides the selective supplement added to the medium inhibits competing microorganisms.

HI powder, yeast hydrolysate and tryptose in the medium provides nitrogenous, carbonaceous compounds, long chain amino acids, vitamins and other essential growth nutrients. Due to the presence of chromogenic mix in the medium *Salmonella* are easily distinguishable and forms purple coloured colonies while some *Enterobacteriaceae* like *Klebsiella* and *Enterobacter* forms blue to dark blue coloured colonies.

Conventional method employes the H2S production property for *Salmonella* detection which is also exhibited by other non *Salmonella* species such as *Citrobacter, Proteus,* etc. Hence further biochemical confirmation is required for further identification.

This medium is specially employed for food samples where the sample is initially enriched in Salmonella Selective Enrichment Broth (M1843) and then isolated on HiCrome™ Selective Salmonella Agar Base. *Salmonella* species give purple coloured colonies due to the enzyme specificity.

Type of specimen

Clinical- stool samples, blood; Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2) .
For food samples, follow appropriate techniques for sample collection and processing as per guidelines (5).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Being highly selective, some strains may show poor growth. 2. Most of the *Salmonella* strains shows purple colonies except few. 3. Final confirmation of suspected colonies must be carried out by serological and biochemical tests.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Light yellow to beige homogeneous free flowing powder

Gelling
Firm, comparable with 1.5 % Agar gel.

Colour and Clarity of prepared medium
Whitish cream coloured, opaque gel forms in Petri plates

Reaction
Reaction of 5.4% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH
7.10-7.50

Cultural Response
Cultural characteristics observed with added HiCrome Selective Salmonella Agar Supplement (FD274), after an incubation at 35-37°C for 22-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	>=10^3	inhibited	0%	
Klebsiella pneumoniae ATCC 13883 (00097*)	50 -100	good	40 -50 %	blue
Salmonella Typhimurium *ATCC 14028* (00031*)	50 -100	good-luxuriant	>=50 %	purple
Salmonella Enteritidis ATCC 13076 (00030*)	50 -100	good-luxuriant	>=50 %	purple
Enterococcus faecalis ATCC 29212 (00087*)	>=10^3	inhibited	0 -0 %	

Key: (*) Corresponding WDCM numbers

Storage and Shelf Life

Store between 15-25°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

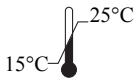
Reference

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3.Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
4.Rambach A., 1990, Appl. Environ. Microbiol., 56:301.
5. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

Revision : 03 / 2020

IVD — In vitro diagnostic medical device

CE — CE Marking



Storage temperature

Do not use if package is damaged

HiMedia Laboratories Pvt. Limited,
23 Vadhani Industrial Estate,
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DB Maarn The Netherlands,
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Iron Sulphite Agar Modified

M1852I

Intended Use:

Recommended for the enumeration of sulphite-reducing bacteria growing under anaerobic conditions. The composition and performance criteria of this media are as per the specifications laid down in ISO 15213-1:2023, ENISO 11133:2014 & A1;2018.

Composition**

ISO 15213-1:2023-Iron Sulphite Agar (ISA)

Ingredients	Gms / Litre
Peptone	15.000
Enzymatic digest of soya	5.000
Yeast extract	5.000
Sodium disulfite,anhydrous	0.500
Iron III ammonium citrate	1.000
Agar	9.0-18.0
Final pH (at 25°C)	7.6±0.2

Iron Sulphite Agar Modified **M1852I**

Ingredients	Gms / Litre
Peptone	15.000
Soya peptone	5.000
Yeast extract	5.000
Sodium disulfite	0.500
Iron III ammonium citrate	1.000
Agar	15.000
Final pH (at 25°C)	7.6±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 41.50 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and dispense into sterile tubes or pour into sterile Petri plates.

Principle And Interpretation

Iron Sulphite Agar, Modified is recommended by ISO for the enumeration of sulphite reducing bacteria (1,2). Most *Clostridia* possess sulfite reductase in their cytoplasm but they are unable to expel them to the exterior. So when H_2S is produced from sulfite, the colony becomes dark due to the formation of precipitates of iron sulfide from citrate.

Peptone and soya peptone provides carbon, nitrogen compounds, vitamins, minerals and amino acids necessary for the growth of organism. Yeast extract serves as a rich reservoir of vitamins especially B-complex vitamins. Ferric citrate ammonium citrate and Disodium sulfite serves as are H_2S indicators, wherein *Clostridium perfringens* reduces the sulfite to sulfide which in turn reacts with the iron and forms a black iron sulfide precipitate, seen as black colonies. Agar is the solidifying agent.

Enumeration with this medium can be performed using either tubes or plates. In case of Petri plates, Using a fresh sterile pipette, transfer to each dish of the first decimal dilution 10^{-1} of the test sample if the product is liquid, or of the first decimal dilution of the initial suspension 10^{-2} in the case of other products. Pour iron sulfite agar into each Petri dish. Carefully mix the inoculum with the medium by horizontal movements and allow the medium to solidify. After the medium has solidified, pour 5 to 10ml of the same medium into the dish as an overlay.

If tubes are used, inoculate a 1 ml volume from each dilution into each of two tubes of medium. Mix gently without forming bubbles, and leave the medium to solidify. After the medium has solidified, pour 2ml to 3ml of the same medium into each tube as an overlay. After solidification, incubate the medium at 36-38°C for 24-48 hours. If thermophilic bacteria are suspected, prepare a second set of Petri dishes. Incubate this set at 50°C ± 1°C. Black colonies, possibly surrounded by a black zone, are counted as sulfite-reducing bacteria.

Type of specimen

Isolated Microorganisms

Specimen Collection and Handling

For isolated microorganisms, follow appropriate techniques for sample collection, processing as per guidelines and local standards (1,2). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Light yellow to brownish yellow homogeneous free flowing powder

Gelling
Firm,comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Yellow coloured, slightly opalescent gel forms in Petri plates

Reaction
Reaction of 4.15% w/v aqueous solution at 25°C. pH : 7.6±0.2

pH
7.40-7.80

Cultural Response
Cultural characteristics observed under anaerobic atmosphere, after an incubation at 37±1°C for 24±3h to 48±2h.

Organism	Inoculum	Growth	Recovery	Colour of colony
Productivity				
Clostridium perfringens ATCC 13124 (00007)*	50-100	luxuriant	>=50%	black
Clostridium perfringens ATCC 12916 (00080)*	50-100	luxuriant	>=50%	black
Specificity				
Escherichia coli ATCC 25922 (00013)*	50-100	good	40-50%	no blackening
Escherichia coli ATCC 8739 (00012)*	50-100	good	40-50%	no blackening
Additional microbiological testing				
Clostridium botulinum ATCC 25763	50-100	luxuriant	>=50%	black
Clostridium butyricum ATCC 13732	50-100	luxuriant	>=50%	black
Clostridium sporogenes ATCC 19404 (00008)*	50-100	luxuriant	>=50%	black
Desulfotomaculum nigrificans ATCC 19998	50-100	luxuriant	>=50%	black

Key : (*) - Corresponding WDCM numbers

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. Microbiology of food and animal feeding stuffs- Horizontal method for the enumeration of sulphite reducing bacteria growing under anaerobic conditions, ISO 15213-1:2023(E).
2. Microbiology of food, animal feeding stuffs and water- Preparation, production,storage and performance testing of culture media, I.S. EN ISO 11133:2014 & A1:2018.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Revision :04/2023

HiCrome™ Chromogenic Coliform agar (CCA Agar) M1991I

Intended Use

Recommended for detection of *Escherichia coli* and coliforms in water samples. The composition and performance criteria of this medium are as per the specifications laid down in ISO 9308-1:2014.

Composition**

ISO 9308-1:2014 Specification -Chromogenic Coliform agar (CCA Agar)

Ingredients	Gms / Litre
Enzymatic digest of casein	1.000
Yeast extract	2.000
Sodium chloride	5.000
Sodium dihydrogen phosphate, $2H_2O$	2.200
Disodium hydrogen phosphate	2.700
Sodium pyruvate	1.000
Sorbitol	1.000
Tryptophan	1.000
Tergitol-7	0.150
6-chloro-3-indoxyl β-D-galactopyranoside	0.200
5-bromo-4-chloro-3-indoxyl- β-D-glucuronic acid cyclohexyl ammonium salt, monohydrate (X-beta-G-glucuronide CHX salt)	0.100
IPTG (Isopropyl-β-D-thiogalactopyranoside)	0.100
Agar	9.0 to 18.00
Final pH (at 25°C)	6.8±0.2

M1991I - HiCrome™ Chromogenic Coliform agar (CCA Agar)

Ingredients	Gms / Litre
Tryptone #	1.000
Yeast extract	2.000
Sodium chloride	5.000
Sodium dihydrogen phosphate, $2H_2O$	2.200
Disodium hydrogen phosphate	2.700
Sodium pyruvate	1.000
Sorbitol	1.000
Tryptophan	1.000
Tergitol-7	0.150
6-chloro-3-indoxyl β-D-galactopyranoside	0.200
5-bromo-4-chloro-3-indoxyl- β-D-glucuronic acid cyclohexyl ammonium salt, monohydrate (X-beta-G-glucuronide CHX salt)	0.100
IPTG (Isopropyl-β-D-thiogalactopyranoside) Agar	0.100
Final pH (at 25°C)	15.000
	6.8±0.2

**Formula adjusted, standardized to suit performance parameters
Enzymatic digest of casein

Directions

Suspend 30.92 grams (the equivalent weight of dehydrated medium per litre) in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. **DO NOT AUTOCLAVE. DO NOT OVERHEAT.** Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

HiCrome™ Chromogenic Agar is a selective medium recommended by ISO for enumeration of *Escherichia coli* and coliform bacteria (1). The medium contains three chromogenic substrates. The enzyme ß-D-galactosidase produced by coliforms cleaves 6-chloro-3-indoxy l-β-D-galactopyranoside to form pink to red coloured colonies (1). The enzyme ß-D glucuronidase produced by *E.coli*, cleaves 5-bromo-4chloro-3-indoxy l-β-D-glucuronic acid (1) Colonies of *E.coli* give dark blue to violet coloured colonies due to cleavage of both the chromogens. The presence of the third chromogen IPTG enhances the colour reaction. Addition of L-Tryptophan improves the indole reaction thereby increasing the detection reliability.

Tryptone, sodium pyruvate and sorbitol provide nitrogenous substances, fermentable carbohydrate and other essential growth nutrients for the organisms. Phosphates buffer the medium. The media formulation helps even sub-lethally injured coliforms to recover and grow rapidly. Tergitol-7 inhibits gram-positive as well as some gram-negative bacteria other than coliforms (1). The medium is inoculated either by pour plate technique or by spreading the sample on the surface of plated medium. Membrane filter technique can also be used. To confirm *E.coli,* add a drop of Kovacs reagent on the dark blue to violet colony. Formation of cherry red colour indicates a positive reaction.

Type of specimen

Water samples.

Specimen Collection and Handling:

Processing (1)

Filration:

Filter 100ml of the sample using membrane filter. The minimum volume for filtration should be 10ml (or dilution) so that to ensure even distribution of the bacteria on the membrane filter.

Incubation and differentiation:

After filtration place the membrane filter on HiCrome™ Chromogenic Coliform agar (CCA Agar), ensuring that no air is trapped undereath, invert petri dish and incubate at 36°C ± 2 for 21 ± 3 hours. Examine the colony on membrane filters for color change.

Confirmation : Biochemical and serological tests are performed for confirmation.

Warning and Precautions

Read the label before opening the container. The media should be handled by trained personnel only. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3. Further biochemical and serological test are necessary for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Light yellow coloured opalescent gel forms in Petri plates

Reaction

Reaction of 3.09% w/v aqueous solution at 25°C. pH : 6.8±0.2

pH

6.60-7.00

Cultural Response

Cultural characteristics observed after an incubation at 36°C ± 2 for 21 ± 3 hours. Recovery is considered on TSA.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony#
Productivity				
Escherichia coli ATCC 25922 (00013)*	50-100	luxuriant	>=70%	dark blue to violet
Escherichia coli ATCC 8739 (00012)*	50-100	luxuriant	>=70%	dark blue to violet
Citrobacter freundii ATCC 43864 (00006)*	50-100	luxuriant	>=70%	pink to red
##Klebsiella aerogenes ATCC 13048 (00175)*	50-100	luxuriant	>=70%	pink to red
Selectivity				
Enterococcus faecalis ATCC 19433 (00009)*	>=10^4	inhibited	-	-

Specificity

Pseudomonas aeruginosa ATCC 10145 (00024)*	50-100	growth	-	colourless

Key * : Corresponding WDCM numbers # : either on plate or membrane ## Formerly known as E*nterobacter aerogens*

Storage and Shelf Life

Store between 15-25°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

Reference

1. International Organization for Standardization. Water quality: Enumeration of *E.coli* and coliform bacteria. Part I- Membrane filtration methods for bacteria with low bacterial background flora. ISO 9308-1:2014.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W.(2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Revision : 06/2023

Cetrimide Agar

MH024

Intended use

Recommended for the selective isolation of *Pseudomonas aeruginosa* from pharmaceutical products in accordance with the microbial limit testing by harmonized methodology of USP/EP/BP/JP/IP.

Composition**

Ingredients	Gms / Litre
Gelatin peptone #	20.000
Magnesium chloride	1.400
Dipotassium sulphate	10.000
Cetrimide	0.300
Agar	13.600
pH after sterilization (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Pancreatic digest of gelatin

Directions

Suspend 45.3 grams in 1000 ml purified/distilled water containing 10 ml glycerin/glycerol. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes or as per validated cycle. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Cetrimide Agar was described by King et al (1). This media formulation is in accordance with the harmonized method of USP/EP/BP/JP/IP (2-6). It is used as a selective medium for the isolation of *Pseudomonas aeruginosa* from pharmaceutical products. This medium is also used for microbial limit testing for non- sterile products. Lowburry first reported the use of cetrimide as an agent for selective isolation of *Pseudomonas* (7). This medium is also used for determining the ability of an organism to produce fluorescein and pyocyanin. Cetrimide (N-acetyl-N,N,N-trimethylammonium bromide) is incorporated in the medium to inhibit bacteria other than *Pseudomonas aeruginosa.* This compound a cationic detergent acts as a quaternary ammonium compound, which causes nitrogen and phosphorus to be released from bacterial cells other than *Pseudomonas aeruginosa.* Magnesium chloride and potassium sulphate incorporated in the medium enhances the production of pigment pyocyanin, which is a blue-green pigment, diffusing into the medium. This improves detection of *Pseudomonas* on this medium. Presence of magnesium ions can also neutralizes EDTA, if present in the sample. Gelatin peptone provides the essential nutrients for growth of *Pseudomonas*, while glycerin serves as slow and continuous carbon source for the growing cell.

For the isolation of *Pseudomonas aeruginosa*, plates of Cetrimide Agar should be inoculated from non-selective medium such as Soybean Casein Digest Medium (MH011). If the count is high the test sample can be directly inoculated onto this medium. *Pseudomonas aeruginosa* colonies may appear pigmented greenish (under uv light also).

Type of specimen

Pharmaceutical samples

Specimen Collection and Handling

For pharmaceutical samples, follow appropriate techniques for sample collection, processing as per guidelines (2-6). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions:

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3. This medium is a selective medium, some strains may show poor growth as cetrimide is highly toxic.
4. Further biochemical tests must be carried out for complete identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.36% Agar gel

Colour and Clarity of prepared medium

Light amber coloured opalescent gel with a slight precipitate forms in Petri plates

pH

7.00-7.40

Growth Promotion Test

Growth Promotion is carried out in accordance with the harmonized method of USP/EP/BP/JP/IP. Cultural response was observed after an incubation at 30-35°C for specified time. Recovery rate is considered as 100% for bacteria growth on Soybean Casein Digest Agar.

Growth promoting properties

Growth of microorganism comparable to that previously obtained with previously tested and approved lot of medium occurs at the specified temperature for not more than the shortest period of time specified inoculating <=100 cfu (at 30-35°C for <=18 hours).

Inhibitory properties

No growth of the test microorganism occurs for the specified temp for not less than longest period of time specified inoculating >=100 cfu (at least 100 cfu) (at 30-35°C for >= 72 hours).

Cultural Response

Cultural characteristics observed after incubation at 30-35 °C for 18-72 hours. Recovery rate is considered as 100% for bacteria growth on Soyabean Casein Digest Agar.

Organism	Inoculum (CFU)	Growth	Observed Lot value (CFU)	Recovery	Incubation temperature	Incubation period
Growth promoting						
Pseudomonas aeruginosa ATCC 9027 (00026*)	50 -100	luxuriant	25 -100	>=50 %	30 -35 °C	<=18 hrs
Inhibitory						
Escherichia coli ATCC 8739 (00012*)	>=10^3	inhibited	0	0 %	30 -35 °C	>=72 hrs
Additional Microbiological testing						
Pseudomonas aeruginosa ATCC 27853(00025*)	50 -100	luxuriant	25 -100	>=50 %	30 -35 °C	18 -24 hrs
Pseudomonas aeruginosa ATCC 25668 (00114*)	50 -100	luxuriant	25 -100	>=50 %	30 -35 °C	18 -24 hrs
Stenotrophomonas maltophila ATCC 13637	>=10^3	inhibited	0	0%	30 -35 °C	>=72 hrs
Escherichia coli ATCC 25922 (00013*)	>=10^3	inhibited	0	0%	30 -35 °C	>=72 hrs
Escherichia coli NCTC 9002	>=10^3	inhibited	0	0%	30 -35 °C	>=72 hrs
Staphylococcus aureus subsp. aureus ATCC 6538 (00032*)	>=10^3	inhibited	0	0%	30 -35 °C	>=72 hrs
Staphylococcus aureus subsp. aureus ATCC 25923 (00034)*	>=10^3	inhibited	0	0%	30 -35 °C	>=72 hrs
Salmonella Typhimurium *ATCC 14028* (00031*)	>=10^3	inhibited	0	0%	30 -35 °C	>=72 hrs
Proteus mirabilis ATCC 29906 (00023)*	>=10^3	inhibited	0	0%	30 -35 °C	>=72 hrs

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,8).

Reference

1.King, Ward and Raney, 1954, J. Lab. Clin. Med., 44:301.
2.British Pharmacopoeia, 2022, The Stationery office British Pharmacopoeia
3.European Pharmacopoeia, 2022 European Dept. for the quality of Medicines.
4.Indian Pharmacopoeia, 2020, Govt. of India, Ministry of Health and Family Welfare, New Delhi
5.Japanese Pharmacopoeia, 2016
6.The United States Pharmacopoeia, 2022, The United States Pharmacopeial Convention. Rockville, MD.
7.Lowbury E J L., 1951, J.Clin.Path., 4:66.
8.Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition
9.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. , 11th Ed., 2015, Manual of Clinical Microbiology.

Revision : 05/ 2022

MacConkey Broth

MH083

Intended use

Recommended for the selective enrichment of *E.coli* from pharmaceutical products in accordance with the microbial limit testing by harmonized methodology of USP/EP/BP/JP.

Composition**

Ingredients	Gms / Litre
Gelatin peptone#	20.000
Lactose monohydrate	10.000
Dehydrated bile##	5.000
Bromo cresol purple	0.010
pH after sterilization (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Pancreatic digest of gelatin

Equivalent to Dehydrated Ox-bile

Directions

Suspend 34.51 grams (the equivalent weight of dehydrated medium per litre) in 1000 ml purified/ distilled water. Heat if necessaryto dissolve the medium completely. Dispense into test tubes with inverted Durham tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes or as per validated cycle.

Principle And Interpretation

MacConkey Broth is a modification of MacConkey Medium (1). Childs and Allen (2) demonstrated the inhibitory effect of neutral red and therefore substituted it by the less inhibitory bromocresol purple dye. BCP is more sensitive in recording pH variation in the medium. This medium is prepared in accordance with the harmonized method of USP/BP/JP (3,4,5)

Gelatin peptone provides essential growth nutrients. Lactose is the fermentable carbohydrate. Dehydrated bile inhibits gram-positive organisms. Bromocresol purple is the pH indicator in the medium, which turns yellow under acidic condition. Lactose fermenting organisms turn the medium yellow due to the acidity produced on lactose fermentation. The colour change of the dye is observed when the pH of the medium falls below 6.8. Lactose non-fermenting organisms like *Salmonella* and *Shigella* do not alter the appearance of the medium.

Transfer homogenate in Soyabean Casein Digest Medium (MH011) containing 1 gm or 1 ml of the preparation to be examined to 100 ml MacConkey Broth Incubation is carried at 43°-45°C for 24-48 hours. For further isolation, subculture on MacConkey Agar (MH081). Growth of red generally non-mucoid colonies, sometimes surrounded by a reddish precipitation zone, indicates pressure of coliforms.

Type of specimen

Pharmaceutical samples

Specimen Collection and Handling

For pharmaceutical samples, follow appropriate techniques for sample collection, processing as per guidelines (3-6).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions:

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

3.Though the medium is recommended for selective isolation, further biochemical and serological testing must be carried out for further confirmation.
4.For further isolation, subculture on MacConkey Agar (MH081) is required.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Cream to yellow with green tinge homogeneous free flowing powder

Colour and Clarity of prepared medium
Purple coloured clear to slightly opalescent solution in tubes

pH
7.10-7.50

Cultural Response
Growth Promotion is carried out in accordance with the harmonized method of USP/EP/BP/JP. For organisms not specified in pharmacopoeia, cultural response was observed after an incubation at 30-35°C for 18-48 hours.

Growth promoting properties
Clearly visible growth of microorganism comparable to that previously obtained with previously tested and approved lot of medium occurs at the specified temperature for not more than the shortest period of time specified inoculating <=100 cfu (at 42-44°C for <= 24 hours).

Inhibitory properties
No growth of the test microorganism occurs for the specified temperature for not less than longest period of time specified inoculating >=100 cfu(at 42-44°C for >= 48 hours).

Cultural Response
Cultural characteristics observed after an incubation at 30-35°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth	Acid	Gas	Incubation temperature	Incubation period
Growth promoting						
Escherichia coli ATCC 8739 (00012)*	50 -100	luxuriant	positive reaction, yellow colour	positive reaction	42 -44 °C	<=24 hrs
Inhibitory						
Staphylococcus aureus subsp. aureus ATCC 6538 (00032)*	>=10^3	inhibited			42 -44 °C	>=48 hrs
Additional Microbiological testing						
Escherichia coli ATCC 25922 (00013)*	50 -100	luxuriant	positive reaction, yellow colour	positive reaction	30 -35 °C	18 -24 hrs
Escherichia coli NCTC 9002	50 -100	luxuriant	positive reaction, yellow colour	positive reaction	30 -35 °C	18 -24 hrs
# Klebsiella aerogenes ATCC 13048 (00175)*	50 -100	luxuriant	positive reaction, yellow colour	positive reaction	30 -35 °C	18 -24 hrs
Salmonella Choleraesuis ATCC 12011	50 -100	fair-good	negative reaction	negative reaction	30 -35 °C	18 -24 hrs
Staphylococcus aureus subsp. aureus ATCC 25923 (00034)*	>=10^3	inhibited			30 -35 °C	>=48 hrs

Key :- (#) Formerly known as *Enterobacter aerogenes* (*) Corresponding WDCM numbers

Storage and Shelf Life

Store between 10- 30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (7,8).

Reference

1.MacConkey A. T., 1900, The Lancet, ii: 20.
2.Childs E. and Allen, 1953, J. Hyg: Camb. 51:468-477.
3.The United States Pharmacopoeia, 2020, The United States Pharmacopeial Convention. Rockville, MD.
4.British Pharmacopoeia, 2022, The Stationery office British Pharmacopoeia
5.Japanese Pharmacopoeia, 2016.
6.European Pharmacopoeia, 2022 European Dept. for the Quality of Medicines
7.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition
8.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Revision : 04 / 2022

Buffered Sodium Chloride-Peptone Solution pH 7.0

MH1275

Intended use

Recommended as a diluent for carrying out microbial limit testing by harmonized methodology of pharmaceutical products in accordance with USP/EP/BP/JP/IP.

Composition**

Ingredients	Gms / Litre
Potassium dihydrogen phosphate	3.600
Disodium hydrogen phosphate dihydrate	7.200
Sodium chloride	4.300
HMC Peptone #	1.000
Final pH (at 25°C)	7.00

**Formula adjusted, standardized to suit performance parameters

Peptone (meat or casein)

Directions

Suspend 14.64 grams (the equivalent weight of dehydrated medium per liter) in 1000 ml purified /distilled water. Heat if necessary to dissolve the medium completely. For preparation of non-fatty products insoluble in water, add 0.1% w/v Polysorbate 80 to assist the suspension of poorly wettable substances. Dispense in tubes or flasks or as desired and sterilize by autoclaving at 15 lbs pressure 121°C for 15 minutes or as per validated cycle.

Principle And Interpretation

The composition of this medium is in accordance with the harmonized methodology of USP/EP/BP/JP/IP (1-5). This medium is recommended for preparation of stable test strain suspension employed for validating the microbiological testing procedures of non-sterile products. The standardized stable suspensions are used so that the suitability of this test to detect microorganism in presence of product can be established. Non-fatty products insoluble in water and water-soluble products are diluted/dissolved using this solution.

HMC Peptone serves as nutrient source and maintains the cell viability. Phosphates in the medium act as good buffering agents. Sodium chloride maintains the osmotic balance and cell integrity. Polysorbates reduce surface tension and also inactivate phenolic compound, if present in the test sample.

Preparation of test strain is recommended in Buffered Sodium chloride-Peptone solution pH 7.0 (MH1275) at 30-35°C wherein there is no multiplication of organisms or there is no decrease in count for upto 4 hours.

Type of specimen

Pharmaceutical samples

Specimen Collection and Handling:

For pharmaceutical samples follow appropriate techniques for handling specimens as per established guidelines (1-5).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets

Limitations :

1. This medium contains less nutrients and is not recommended for the growth of microorganisms.
2. Further biochemical and serological testing is required for complete identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

White to cream homogeneous free flowing powder

Colour and Clarity of prepared medium

Colourless to pale yellow clear solution w/o any precipitate

pH

7.00

Growth Promotion Test

Growth Promotion is carried out in accordance with the harmonized method of ICH(USP/EP/BP/JP/IP).

Cultural response

Cultural characteristics observed after recovery on Soybean Casein Digest Agar after an incubation at 30-35°C for 18-24 hours for bacteria and Sabouraud Dextrose Agar at 30-35°C for 24-48 hours .

Organism	Inoculum (CFU)	Recovery within 2 hours of incubation	Recovery within 4 hours of incubation	Recovery within 24 hours of incubation
Preparation of test strain				
Escherichia coli ATCC 8739 (00012*)	50 -100	no decrease in colony count	no decrease in colony count	no decrease in colony count (stored at 2-8°C)
Escherichia coli ATCC 25922 (00013*)	50 -100	no decrease in colony count	no decrease in colony count	no decrease in colony count (stored at 2-8°C)
Escherichia coli NCTC 9002	50 -100	no decrease in colony count	no decrease in colony count	no decrease in colony count (stored at 2-8°C)
Staphylococcus aureus subsp. *aureus* ATCC 6538 (00032*)	50 -100	no decrease in colony count	no decrease in colony count	no decrease in colony count (stored at 2-8°C)
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	50 -100	no decrease in colony count	no decrease in colony count	no decrease in colony count (stored at 2-8°C)
Pseudomonas aeruginosa ATCC 9027 (00026*)	50 -100	no decrease in colony count	no decrease in colony count	no decrease in colony count (stored at 2-8°C)
Pseudomonas aeruginosa ATCC 27853 (00025*)	50 -100	no decrease in colony count	no decrease in colony count	no decrease in colony count (stored at 2-8°C)
Salmonella Typhimurium ATCC 14028 (00031*)	50 -100	no decrease in colony count	no decrease in colony count	no decrease in colony count (stored at 2-8°C)
Salmonella Abony *NCTC* 6017 (00029*)	50 -100	no decrease in colony count	no decrease in colony count	no decrease in colony count (stored at 2-8°C)
Bacillus subtilis subsp. *spizizennii* ATCC 6633 (00003*)	50 -100	no decrease in colony count	no decrease in colony count	no decrease in colony count (stored at

				2-8°C)
Micrococcus luteus ATCC 9341	50 -100	no decrease in colony count	no decrease in colony count	no decrease in colony count (stored at 2-8°C)
Candida albicans ATCC 10231 (00054)*	50 -100	no decrease in colony count	no decrease in colony count	no decrease in colony count (stored at 2-8°C)
Candida albicans ATCC 2091 (00055)*	50 -100	no decrease in colony count	no decrease in colony count	no decrease in colony count (stored at 2-8°C)

Key : (*) Corresponding WDCM Numbers

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use.

Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials must be decontaminated and disposed of in accordance with current laboratory techniques (6,7).

Reference

1.The British Pharmacopoeia, 2022, Medicines and Healthcare products Regulatory Agency.
2. European Pharmacopoeia, 2022, 10 th volume, European Directorate for the quality of medicines & Healthcare.
3. Indian Pharmacopoeia, 2022, Indian Pharmacopoeia Commission, Ministry of Health and Family Welfare Government of India.
4. The United States Pharmacopoeia-National Formulatory (USP-NF), 2022
5.The Japanese Pharmacopoeia, 17th edition, 2016, The Ministry of Health, Labour and welfare.
6. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
7. Jorgensen,J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Revision : 06 / 2022

Technical Data

HiCulture™ Transport Swabs w/ Cary -Blair Medium with metal stick

MS202

Recommended for recovery of aerobic, anaerobic and fastidious bacteria from Faecal specimens.

Composition**

Ingredients	Gms / Litre
Disodium phosphate	1.100
Sodium thioglycollate	1.500
Sodium chloride	5.000
Agar	5.000
Final pH (at 25°C)	8.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Remove cap from the tube. Collect sample using capped swab. Discard cap of the tube, replace with capped swab.

Principle And Interpretation

Proper collection and transportation of faecal specimens is vital for detection of faecal pathogens. Cary and Blair (1) devised this medium to provide conditions that will allow and increase survival of organisms without aiding multiplication due to minimal nutrients. Sodium thioglycollate in the medium provides a low oxidation reduction potential. An alkaline pH of the medium prevents bacterial destruction due to formation of acid. Sterile cotton swabs allow absorption of specimen material while polystyrene shaft allows semiflexibility to the swab stick, aiding in collection.

Type of specimen

Clinical samples- Faeces

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro Diagnostic use only. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

Users are recommended to validate the medium for any specific microorganisms other than mentioned in the certificate of analysis based on users unique requirement, as each lot has been tested for the organisms specified on the certificate of analysis.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Sterile Cary-Blair medium in tubes with sterile viscous swabs.

Colour

Light amber coloured medium

Quantity of Medium

8ml of medium in tubes

Reaction

8.20- 8.60

Cultural response

Viability of following organisms was established for a period of 48 hours. Organisms grew luxuriantly when recovered on Tryptone Soya Agar (M290) and incubated at 35 - 37°C for 18-24 hours.

Sterility Check
Passes release criteria
Cultural Response

Organism	Recovery
Recovery	
Enterobacter aerogenes ATCC 13048	Good - Luxuriant
Escherichia coli ATCC 25922	Good - Luxuriant
Klebsiella pneumoniae ATCC 13883	Good - Luxuriant
Neisseria meningitidis ATCC 13090	Good - Luxuriant
S. serotype Typhimurium ATCC 14028	Good - Luxuriant
Shigella flexneri ATCC 12022	Good - Luxuriant
Vibrio parahaemolyticus ATCC 11344	Good - Luxuriant
Vibrio cholerae ATCC 15748	Good - Luxuriant

Storage and Shelf Life

Store between 5 – 30°C with caps firmly screwed. DO NOT FREEZE. Use before expiry date on label.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

Reference

1. Cary and Blair, 1964, J. Bact., 88:96.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W.(2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Revision : 02 / 2022

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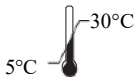
IVD ***In vitro* diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE **CE Marking**

Do not use if package is damaged

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Technical Data

HiCulture™ Transport Swabs w/ Stuart Transport Medium MS306

Intended Use:

Recommended for transportation of *Neisseria* species and other fastidious organisms from clinic to laboratory.

Composition**

Ingredients	Gms / Litre
Calcium chloride	0.100
Sodium glycerophosphate	10.000
Sodium thioglycollate	1.000
Methylene blue	0.002
Agar	3.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Using the capped swab, provided along with the media containing tube, collect the sample to be transported.Discard the cap of the tube and insert the capped swab with the sample till the bottom of the medium. Tighten the cap firmly. The specimen will be preserved during transportation and also the viability of the organisms will be maintained but it will diminish over the time. Some growth of contaminants may occur during longer period of transport. After the transportation, the specimen should be inoculated in proper medium as soon as possible. The cultures on transport swabs must not be kept at room temperature for more than 24 hours.

Principle And Interpretation

Stuart transport medium was designed by Stuart for Gonococci (3). The medium is chemically defined, semisolid, non-nutrient medium which will prevent microbial proliferation. Because of composition of medium microorganisms are able to survive for a sufficiently long period. The medium provides sufficient anaerobiosis which is monitored by means of the redox indicator methylene blue. Calcium chloride and glycerophosphate provide a good buffering capacity to the medium and also maintains osmotic equilibrium in the medium. Sterile cotton swabs allow absorption of specimen material while polylpropylene shaft allows semiflexibility to the swab stick, aiding in collection. Stuart transport medium was designed by Stuart for Gonococci (3). The medium is chemically defined, semisolid, non-nutrient medium which will prevent microbial proliferation. Because of composition of medium microorganisms are able to survive for a sufficiently long period. The medium provides sufficient anaerobiosis which is monitored by means of the redox indicator methylene blue. Calcium chloride and glycerophosphate provide a good buffering capacity to the medium and also maintains osmotic equilibrium in the medium. Sterile cotton swabs allow absorption of specimen material while polylpropylene shaft allows semiflexibility to the swab stick, aiding in collection.

Type of specimen

Clinical samples - Gonococcal specimens.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. Read the label before opening the container. Wear protective gloves/protective clothing/ eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Further recovery from this enriched medium onto selective media is required.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Sterile Stuart Transport Medium in tubes with sterile viscous swabs
Colour
Whitish to light blue coloured medium
Quantity of Medium
8ml of medium in tubes
Sterility test
Passes release criteria
Reaction
7.20-7.60
Cultural response
Viability of following organisms was established for a period of 48 hours.Organisms grew luxuriantly when inoculated on Chocolate Agar (M103) and incubated at 35 - 37°C for 18-24 hours.

Organism	Recovery
Neisseria gonorrhoeae ATCC 19424	Luxuriant
Streptococcus pneumoniae ATCC 6303	Luxuriant
Haemophilus influenzae ATCC 35056	Luxuriant

Storage and Shelf Life

Store between 5-25°C. Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. Stuart, 1946, Glasgow Med. J. 27:131

Revision : 01/2021

IVD — In vitro diagnostic medical device

CE Marking

Storage temperature

Do not use if package is damaged

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Kovacs' Indole Reagent

R008

Intended use

Kovacs' Indole Reagent is used for detection of presence of indole produced by microorganisms due to tryptophan deamination.

Composition**

Ingredients

p-dimethyl amino benzaldehyde	5.0 gm
Amyl alcohol	75.0 ml
Hydrochloric Acid	25.0 ml

**Formula adjusted, standardized to suit performance parameters

Directions

1. Take 5 ml of a 24 - 48 hours old culture of the organism under investigation.
2. Add 0.2 - 0.3 ml of Kovac's reagent.
3. Observed for a red coloured ring which indicates positive indole test.

Principle And Interpretation

Peptone Water is particularly suitable as a substrate in the study of indole production. Peptone used in Peptone Water, is rich in tryptophan content. Other peptones which contain tryptophan can be used to study indole production. Tryptone Water is also recommended by APHA for detection of indole production by coliforms, which is a key feature in differentiation of bacteria. It is used as part of the IMViC procedures. Most strains of *E. coli, P. vulgaris, P. rettgeri, M. morgani* and *Providencia* species break down the amino acid tryptophan with the release of indole. The presence of indole can be detected by the addition of Ehrlich's or Kovac's reagent (p-dimethylaminobenzaldehyde).

Kovacs reagent is a biochemical reagent consisting of isoamyl alcohol, para-dimethylaminobenzaldehyde (DMAB), and concentrated hydrochloric acid. It is used for the diagnostic test, to determine the ability of the organism to split tryptophan into indole and alpha-aminopropionic acid by hydrolytic activity of bacteria that express tryptophanase enzyme. The indole produced is indicated by formation of a red coloured ring, soluble in ether, chloroform and alcohol. This was invented by the Hungarian-Swiss Chemist, Ervin Kovac's. Indole production is used as, a test designed to distinguish among members of the family Enterobacteria.

Type of specimen

Used as biochemical reagent in diagnosis

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines.

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards. After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic Use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidleines should be followed while handling clincal specimens. Saftey guidelines may be referred in individual safety data sheets.

Limitations

1. Growth media must contain an adequate amount of tryptophan. Do not use Mueller-Hinton Agar for test, because tryptophan is destroyed during the acid hydrolysis of casein.
2. Do not used media that contain dyes (e.g., EMB, MAC).
3. Do not use medium with a nitrate disc/strip to perform the indole test, as nitrate can interfere with indole test by including false positive results.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature

Quality Control

- **Appearance :** Greenish yellow coloured solution
- **Solubility :** Immiscible with water
- **Clarity :** Clear with no insoluble particles.
- **Cultural Response :** Characteristic reactions observed when Kovac's Indole Reagent is added to growth in Tryptone Broth (M463)

Cultural Response

Organism	Indole production
**Klebsiella aerogenes* ATCC 13048 (WDCM 00175)	Negative reaction , no red ring
Escherichia coli ATCC 25922 (WDCM 00013)	Positive reaction, red ring at the interface of the medium

(*) Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques.

Reference

1. MacFaddin J., 1980, Biochemical Tests for Identification of Medical Bacteria, 2nd ed., Williams and Wilkins, Baltimore.

2. Greenberg A. E., Clesceri L. S. and Eaton A. D., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st ed., APHA, Washington, D.C.
3. MacFaddin J. F., 2000, Biochemical Tests for Identification of Medical Bacteria, 3rd Ed., Williams and Wilkins, Baltimore.
4. Isenberg, H.D. Clinical Microbiology Procedures Handb0ook. 2nd Edition.
5. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1

Storage temperature

Do not use if package is damaged

In vitro diagnostic medical device

CE Marking

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www.cepartner4u.eu

Revision **:** 02/2022

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Fermentive Peptone

RM1892

Intended use

Fermentive Peptone is recommended for fermentation applications. Also for nutritional purpose in most media formulations for culturing of fastidious organisms.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Safety guidelines may be referred in individual safety data sheets.

Limitations

1.It is biological origin product since variation in colour of powder and clarity may observed.
2.Each lot of the product has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's requirement.
3.Individual organisms differ in their growth requirement and may show variable growth patterns on the medium prepared by the product.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature

Quality Control

- **Appearance :** Light yellow to brownish yellow homogenous free flowing powder characteristic odour but not putrescent
- **Solubility :** Freely soluble in distilled/purified water, insoluble in alcohol.
- **Clarity :** 1% w/v aqueous solution remains clear without haziness after autoclaving at 15 lbs pressure (121ºC) for 15 minutes.
- **pH :** pH of 2% w/v aqueous solution at 25ºC 6.2-7.2
- **Microbial Load :**

  Bacterial Count : <= 2000 CFU/gram by plate method, when incubated at 30-35ºC for not less than 3 days
  Yeast & mould Count : <= 100 CFU/gram by plate method, when incubated at 20-25ºC for not less than 5 days.
- **Test for pathogens :** 1. *Escherichia coli*- Absent/gram of sample 2. *Salmonella* species- Absent/10 gram of sample 3. *Pseudomonas aeruginosa*- Absent/gram of sample 4. *Staphylococcus aureus*- Absent/gram of sample 5. *Candida albicans*- Absent/gram of sample 6. *Clostridia*- Absent/gram of sample
- **Indole Test :** Tryptophan content: Passes

- **Cultural Response**

  Cultural response : Cultural response observed after an incubation at 35-37ºC for 18-24 hours by preparing Nutrient Agar (M001) using Fermentative Peptone as an ingredient.

Organism	Growth
Escherichia coli ATCC 25922 (WDCM00013)	Luxuriant
Pseudomonas aeruginosa ATCC 27853 (WDCM 00025)	Luxuriant
Staphylococcus aureus subsp.*aureus* ATCC 25923(WDCM 00034)	Luxuriant
Salmonella enterica subsp. *enterica* Typhi ATCC 6539	Luxuriant
Streptococcus pyogenes ATCC 19615	Luxuriant
Salmonella enterica subsp.*enterica* Enteritidis ATCC 13076 (WDCM 00030)	Luxuriant
Salmonella enterica subsp.*enterica* Typhimurium ATCC 14028 (WDCM 00031)	Luxuriant
Yersinia enterocolitica subsp. *enterocolitica* ATCC 9610 (WDCM 00038)	Luxuriant
Yersinia enterocolitica subsp. *enterocolitica* ATCC 23715 (WDCM 00160)	Luxuriant

Chemical Analysis :

Total nitrogen : ≥14.00 %

Amino nitrogen : ≥2.50 %

Sodium chloride : ≤6.00 %

Loss on drying : ≤7.00 %

Residue on ignition : ≤14.00 %

Storage and Shelf Life

Store between 10-30°C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques.

Storage temperature

Do not use if package is damaged

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Revision : 09/2022

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CELLBIO™
in service of your CELL

Technical Datasheet

Fetal Bovine Serum

Origin: South America, EU Approved
Heat inactivated
Sterile filtered

Product Code: RM9955

Product Description:

Fetal bovine serum (FBS) is a ubiquitously used essential supplement in cell culture media. FBS is a cocktail of proteins, vitamins, carbohydrates, lipids, hormones, growth factors, minerals and trace elements and is used as an universal growth supplement effective for most types of human and animal (including insect) cells. The major functions of serum in culture media are to provide:

(i) Hormonal factors stimulating cell growth and proliferation and promoting differentiated functions.
(ii) Transport proteins carrying hormones (e.g. transcortin), minerals and trace elements and lipids (e.g. lipoproteins)
(iii) Attachment and spreading factors, acting as germination points for cell attachment.
(iv) Stabilising and detoxifying factors needed to maintain pH or to inhibit proteases either directly, such as α-antitrypsin or α2-macroglobulin, or indirectly, by acting as an unspecific sink for proteases and other (toxic) molecules.

RM9955 is heat inactivated Fetal bovine serum. Heat inactivation is done to destroy heat labile components such as complement that can lead to complement mediated cell lysis. Complement proteins, antibodies and enzymes present in the serum are inactivated by heat inactivation.

Applications of Heat inactivated Serum:

- Suitable for immunoassays, enzyme assays and cytotoxicity assays
- For culture of insect cells

***Note**: Heat inactivation process can be detrimental to the growth promoting capacity of serum. When heat inactivation of serum is done, along with the complement certain amino acids, vitamins and growth factors are subjected to temperatures that could cause degradation. Hence it is recommended that researcher should experimentally determine and document the reasons for using heat inactivated serum.*

RM9955 is sourced in countries approved for import into the European Union by European Commission. Currently this includes Central and South America, USA, Canada, Australia, New Zealand and South Africa. This serum is collected and processed in facilities registered and inspected by the competent authority in the country of origin. EU approved serum can be freely moved between EU member countries and many other countries outside of Europe where the USDA or FDA regulations are not required.

Directions for Thawing of Serum:

Thawing of the sera should be done as quickly as possible in order to minimize the period of time during which elevated salt concentration prevail in the thawed liquid.

1. Remove the bottles from the freezer and allow them to acclimatize at room temperature for 10 minutes and keep in 2-8°C overnight in refrigerator.

   Note: Do not place the serum in the water bath or incubator. Avoid exposing serum to elevated temperatures as this can lead to degradation of heat labile nutrients.

2. Swirl the bottle of serum frequently during thawing to disperse the released salts and proteins uniformly in the liquid.

Note on Cryoprecipitate:

We advise our users to follow the recommended thawing procedure. Proper thawing with periodic agitation is crucial to a serum's optimum performance. If bottle of serum is not frequently swirled during thawing, the released proteins and salts tend to form crystalline or flocculent precipitates. These cryoprecipitates are not detrimental to the performance of serum but might affect serum's appearance and consistency.

Slight turbidity or small amount of flocculent material is normal in most serum products and will not affect its performance in any manner. Filtering serum to remove cryoprecipitate is not recommended and could result in loss of nutrients.

Quality Control:

Physical and Chemical analysis:

pH	: 6.8 - 8.2
Osmolality	: 280 - 340 mOsm/Kg H_2O
Endotoxin	: Value EU/ml
Hemoglobin	: < 20mg/dl
Identity	: Typical

Protein:

Total protein	: 3.0 - 4.5 g/dl
Albumin	: value g/dl
α-Globulin	: value g/dl
β-Globulin	: value g/dl
γ-Globulin	: value g/dl
IgG	: NMT 250µg/ml

Sterility Testing:

Aerobic bacteria	: Not detected
Anaerobic bacteria	: Not detected
Fungi	: Not detected
Mycoplasma	: Not detected

Virus testing:

Bovine Virus Diarrhea Virus (BVD-V)	: Not detected
Bovine Herpes Virus 1 (BHV-1)	: Not detected
Parainfluenza Type 3 (PI-3)	: Not detected

Antibody testing:

BVD-1 Antibody titer	: Value
BVD-2 Antibody titer	: Value

Growth promotion and cytotoxicity:

Each lot of serum is tested for growth promotion and cytotoxicity. Growth promotion shows the ability of the serum to support the growth of a cell line using a standardized low inoculum in media with 10% serum over a period of 10 to 14 days.

Storage and Shelf Life:

Store at -10°C to -40°C away from bright light.
Shelf life of the product is 5 years.
Thawed serum can be stored at 2- 8°C up to four weeks.
Multiple freeze thaw cycles should be avoided.
Serum should never be stored in frost free freezers. Frost free appliance undergoes intermittent warming cycles to prevent ice deposits and this might lead to multiple thawing of serum.
To avoid multiple free thaw cycles or long periods of refrigeration, we recommend freezing small aliquots which can be thawed and used as required.
Use before expiry date given on the label.

CELLBIO™
in service of your CELL

Technical Datasheet

Fetal Bovine Serum

Origin: Brazil, EU Approved
Sterile filtered

Product Code: RM10432

Product Description:

Fetal bovine serum (FBS) is a ubiquitously used essential supplement in cell culture media. FBS is a cocktail of proteins, vitamins, carbohydrates, lipids, hormones, growth factors, minerals and trace elements and is used as an universal growth supplement effective for most types of human and animal (including insect) cells. The major functions of serum in culture media are to provide:
(i) Hormonal factors stimulating cell growth and proliferation and promoting differentiated functions.
(ii) Transport proteins carrying hormones (e.g. transcortin), minerals and trace elements and lipids (e.g. lipoproteins)
(iii) Attachment and spreading factors, acting as germination points for cell attachment.
(iv) Stabilising and detoxifying factors needed to maintain pH or to inhibit proteases either directly, such as α-antitrypsin or α2-macroglobulin, or indirectly, by acting as an unspecific sink for proteases and other (toxic) molecules.
RM10432 is sourced in Brazil which is approved for import into the European Union by European Commission. This serum is collected and processed in facilities registered and inspected by the competent authority in the country of origin. EU approved serum can be freely moved between EU member countries and many other countries outside of Europe where the USDA or FDA regulations are not required.

Directions for Thawing of Serum:

Thawing of the sera should be done as quickly as possible in order to minimize the period of time during which elevated salt concentration prevail in the thawed liquid.

1. Remove the bottles from the freezer and allow them to acclimatize at room temperature for 10 minutes and keep in 2-8°C overnight in refrigerator.

   Note: Do not place the serum in the water bath or incubator. Avoid exposing serum to elevated temperatures as this can lead to degradation of heat labile nutrients.
2. Swirl the bottle of serum frequently during thawing to disperse the released salts and proteins uniformly in the liquid.

Note on Cryoprecipitate:

We advise our users to follow the recommended thawing procedure. Proper thawing with periodic agitation is crucial to a serum's optimum performance. If bottle of serum is not frequently swirled during thawing, the released proteins and salts tend to form crystalline or flocculent precipitates. These cryoprecipitates are not detrimental to the performance of serum but might affect serum's appearance and consistency. Slight turbidity or small amount of flocculent material is normal in most serum products and will not affect its performance in any manner. Filtering serum to remove cryoprecipitate is not recommended and could result in loss of nutrients.

Quality Control:

Physical and Chemical analysis:

Appearance	: Amber liquid
pH	: 6.8 - 8.2
Osmolality	: 280 - 340mOsm/Kg H_2O
Endotoxin	: Value EU/ml
Hemoglobin	: < 20 mg/dl
Identity	: Typical

Protein:

Total protein	: 3.0 - 4.5 g/dl
Albumin	: value g/dl
α-Globulin	: value g/dl
β-Globulin	: value g/dl
γ-Globulin	: value g/dl
IgG	: < 250µg/ml

Sterility Testing:

Aerobic bacteria	: Not detected
Anaerobic bacteria	: Not detected
Fungi	: Not detected
Mycoplasma	: Not detected

Virus testing:

Bovine Virus Diarrhea Virus (BVD-V)	: Not detected
Bovine Herpes Virus 1 (BHV-1)	: Not detected
Parainfluenza Type 3 (PI-3)	: Not detected

Antibody testing:

BVD-1 Antibody titer	: Value
BVD-2 Antibody titer	: Value

Growth promotion and cytotoxicity:

Each lot of serum is tested for growth promotion and cytotoxicity. Growth promotion shows the ability of the serum to support the growth of a cell line using a standardized low inoculum in media with 10% serum over a period of 10 to 14 days.

Storage and Shelf Life:

Store at -10°C to -40°C away from bright light.
Shelf life of the product is 5 years.
Thawed serum can be stored at 2- 8°C up to four weeks.
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