TITAN BIOTECH

TITAN BIOTECH LIMITED

AN ISO 9001:2015 CERTIFIED COMPANY

TM MEDIA
Fulfilling Microbiology Needs

Corporate Office : 903-909, 9th Floor, Big Jos Tower, Netaji Subhash Place, Delhi-110034, India
Tel. : 011-27355742, 71239900 | **CIN:** L74999RJ1992PLC013387

EC Declaration of Conformity

1. **Manufacturer**: Titan Biotech Ltd.
Address: A-902-A, RIICO Industrial area, Phase-3 Bhiwadi-301019, India

2. **Authorized European Representative:** MedNet EC-REP GmbH
Address: Borkstasse 10, 48163 Muenster, Germany

SRN Number: DE-AR-000000002

3. **Product:**

S.No.	Product Name	Risk Class (Annex VIII IVDR)
1.	Dehydrated Culture Media (Prepared Culture Media) Attached Annexure	CLASS A

4. **The Product described above is in conformity with:**

Title	Document Number
In Vitro Diagnostics Regulation (IVDR)	(EU) 2017/746

5. **Additional Information:** Regulation (EU) 2017/746 of the European Parliament and of the Council of 5 April 2017 on in vitro diagnostic medical devices and repealing Directive 98/79/EC and Commission Decision 2010/227/EU (IVDR).

6. **Notified Body:** Not applicable, devices self certified

7. **Common Specifications (CS):**

Number:	Title:	Full or partial

Common specifications have not been issued for this product.

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8. Applied Standards to prove Conformity:

ISO 13485: 2016: Quality Systems –Requirement for Regulatory Purposes. (Attachment 1),

ISO 9001:2015: Quality Management System (Attachment 2),

ISO 11133 :2014: Quality Assurance- Culture Media (Attachment 3)

An undertaking by the manufacturer to fulfill the obligation imposed by the quality system approved.

9. Company undertakes to keep up to date systematic procedure to review experience gained during post production phase and to implement appropriate means to apply any necessary correctives actions taking account of the nature and risk in details in relation of the product.

10. Conformity of Assessment: Annexure II & II

11. Company undertakes to notify immediately any malfunction/deterioration of the performance of the product of the appropriate authority and shall recall such products already placed in the market.

12. Company is exclusively responsible for the declaration of conformity.

FOR TITAN BIOTECH LTD

AUTHORIZED SIGNATORY	
NAME & TITLE:	BICHITRA BARIK, DEPUTY GENERAL MANAGER
PLACE:	DELHI, INDIA
DATE:	27-05-2023
SIGNATURE:	

R.O. & Works: Unit I: A-902 A, RIICO Industrial Area, Phase - III, Bhiwadi, Alwar, Rajasthan-301019
Unit II: E-539 & 540, RIICO Industrial Area, Chopanki, Bhiwadi, Alwar, Rajasthan-301019
Unit III: F 689-690, RIICO Industrial Area, Chopanki, Bhiwadi, Alwar, Rajasthan-301019
Media Sales Division: marketing@titanbiotechltd.com | **Nutraceutical Sales Division:** info@titanbiotechltd.com
Legal: hrd@titanbiotechltd.com | **CS Dept:** cs@titanbiotechltd.com | **Accounts:** accounts@titanbiotechltd.com
Website: www.titanbiotechltd.com | www.tmmedia.in

TITAN BIOTECH LIMITED
AN ISO 9001:2015 CERTIFIED COMPANY
TM MEDIA
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Corporate Office : 903-909, 9th Floor, Big Jos Tower, Netaji Subhash Place, Delhi-110034, India
Tel. : 011-27355742, 71239900 | CIN: L74999RJ1992PLC013387

ANNEXURE

Prepared Culture Media:

Product Code	Product Name
TS 205	CHOROMOGENIC LISTERIA SELECTIVE SUPPLEMENT
TM 2073	EUGONIC LT 100 BROTH BASE W/OTWEEN 80
TM 332	SOYA CASEIN DIGEST MEDIUM (TRYPTONE SOYA BROTH)
TM 388	SABOURAUD DEXTROSE BROTH
TM 350	NUTRIENT BROTH
TM 805	PEPTONE WATER (as per BIS)
TMH 109	MacCONKEY BROTH (as per USP/EP/JP/BP)
TM 307	BUFFERED PEPTONE WATER (as per ISO)
TM 1837	BUFFERED PEPTONE WATER (as per EP)
TM 1310	TRYPTONE SALT BROTH
TM 341	NUTRIENT AGAR
TMH 114	MANNITOL SALT AGAR BASE (as per USP/BP/EP/JP)
TM 336	EMB AGAR
TM 379	MacCONKEY AGAR (W/ 0.15% BILE SALTS, CV & NaCl)
TM 365	BRILLIANT GREEN BILE BROTH 2%
TM 387	SABOURAUD DEXTROSE AGAR
TM 344	POTATO DEXTROSE AGAR
TM 362	BRAIN HEART INFUSION BROTH
TM 360	BLOOD AGAR BASE (INFUSION AGAR)
TM 426	VIOLET RED BILE AGAR
TM 339	MUELLER HINTON AGAR
TM 060	CETRIMIDE AGAR BASE
TM 386	SS AGAR (SALMONELLA SHIGELLA AGAR)
TM 345	SOYA CASEIN DIGEST AGAR (TRYPTONE SOYA AGAR)
TM 424	TRIPLE SUGAR IRON AGAR
TM 483	VIOLET RED BILE GLUCOSE AGAR W/O LACTOSE
TM 103	ETHYL VIOLET AZIDE BROTH (E.V.A BROTH)
TM 1556	LACTOBACILLUS MRS AGAR

TITAN BIOTECH LTD.

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Unit III: F 689-690, RIICO Industrial Area, Chopanki, Bhiwadi, Alwar, Rajasthan-301019
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Fulfilling Microbiology Needs

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Tel. : 011-27355742, 71239900 | **CIN:** L74999RJ1992PLC013387

Product Code	Product Name
TM 531	MANNITOL MOTILITY NITRATE MEDIUM
TM 121	HEKTOEN ENTERIC AGAR
TM 799	OXYTETRA GLUCOSE YEAST AGAR BASE (OGYE AGAR BASE)
TM 713	DEV LACTOSE PEPTONE BROTH
TM 1362	KING'S MEDIUM A BASE
TM 1363	KING'S MEDIUM B BASE
TM 1251	LACTOSE TTC AGAR
TM 147	LACTOBACILLUS MRS BROTH (MRS BROTH)
TMH 116	COLUMBIA AGAR (as per USP/EP/JP/BP)
TM 325	MUELLER HINTON BROTH
TM 363	PLATE COUNT AGAR
TM 412	AZIDE DEXTROSE BROTH
TM 765	LIVER MEAT AGAR
TM 118	GIOLITTI -CANTONI BROTH BASE (ISO 6888)
TM 1804	EE BROTH, MOSSEL (as per ISO)
TM 358	BAIRD PARKER AGAR BASE
TM 269	R-2A AGAR
TM 389	SELENITE BROTH (SELENITE F BROTH) (DOUBLE PACK)
TM 270	RAPPAPORT VASSILIADIS MEDIUM
TM 622	SABOURAUD CHLORAMPHENICOL AGAR
TM 440	TERGITOL - 7 AGAR BASE (as per BIS)
TM 1405	SLANETZ AND BARTLEY MEDIUM
TM 038	BILE ESCULIN AZIDE AGAR
TM 1634	CHROMOGENIC LISTERIA AGAR BASE
TM 1339	CHROMOGENIC E. COLI AGAR
TM 1199	CHROMOGENIC UTI AGAR
TM 1338	CHROMOGENIC COLIFORM AGAR W/SLS
TM 498	CHLORAMPHENICOL YEAST GLUCOSE AGAR

TITAN BIOTECH LTD

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Unit III: F 689-690, RIICO Industrial Area, Chopanki, Bhiwadi, Alwar, Rajasthan-301019
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Tel. : 011-27355742, 71239900 | **CIN:** L74999RJ1992PLC013387

Product Code	Product Name
1207	BILE SALT POWDER
1201	AGAR AGAR POWDER
TM 1843	MANNITOL EGG YOLK POLYMYXIN AGAR
TM 899	TRYPTOPHAN BROTH
TM 141	KLIGLER IRON AGAR
TM 318	FLUID THIOGLYCOLLATE MEDIUM (as per USP/EP/BP/JP)
TM 236	MUELLER HINTON AGAR NO.2
TS 058	POLYMYXIN B SUPPLEMENT
1262	CASEIN ACID HYDROLYSATE
1512	CASEIN ENZYMATIC HYDROLYSATE (TYPE-I)
TM 1824	CHROMOGENIC SALMONELLA AGAR, MODIFIED
1214	MALT EXTRACT POWDER
1217	MEAT EXTRACT POWDER
1504	MEAT PEPTONE
1506	PEPTONE-R
1505	PEPTONE-TBL
1510	SOYATONE (Soya Peptone)
1264	YEAST EXTRACT (STD) TBL POWDER
TM 087	DEOXYCHOLATE AGAR
TM 492	XLD AGAR

TITAN BIOTECH LTD.

R.O. & Works: Unit I: A-902 A, RIICO Industrial Area, Phase - III, Bhiwadi, Alwar, Rajasthan-301019
Unit II: E-539 & 540, RIICO Industrial Area, Chopanki, Bhiwadi, Alwar, Rajasthan-301019
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Bezirksregierung Münster

Freiverkaufszertifikat
nach Artikel 55 auch i.V.m. Artikel 110 Abs. 3 und Abs. 4 der Verordnung (EU) 2017/746 und
§ 10 des Medizinprodukterecht-Durchführungsgesetzes in der jeweils geltenden Fassung

zur Vorlage bei den zuständigen Behörden / Stellen von

Demokratische Sozialistische Republik Sri Lanka

Es wird bescheinigt, dass der

Hersteller:
Titan Biotech Ltd.
A-902-A, RIICO Industrial Area, Phase III
Bhiwadi-301019
Indien

Bevollmächtigte:
MedNet EC-REP GmbH
Borkstrasse 10
48163 Münster
Deutschland

seine eingetragene Niederlassung in Deutschland hat und dass die gemäß der

Verordnung (EU) 2017/746
vom 05. April 2017
über In-vitro-Diagnostika

in der jeweils geltenden Fassung mit einem CE-Kennzeichen versehenen Produkte in der Union gehandelt werden dürfen:

Produkt/e:
Antibiotika-Empfindlichkeitsscheiben
(siehe Anhang)

Münster, den 07.04.2025
Bezirksregierung Münster
Im Auftrag
(S. Wenge)

BEZIRKSREGIERUNG 265 MÜNSTER

Free Sale Certificate
according to Article 55 even in conjunction with Article 110 para. 3 and para. 4 of Regulation (EU) 2017/746 and section 10 of the Medical Devices Law Implementing Act as amended

for presentation to the competent authorities / bodies of

Democratic Socialist Republic of Sri Lanka

It is also certified that the

Manufacturer:
Titan Biotech Ltd.
A-902-A, RIICO Industrial Area, Phase III
Bhiwadi-301019
Indien

Authorised Representative:
MedNet EC-REP GmbH
Borkstrasse 10
48163 Muenster
Germany

has its registered place of business in Germany and the devices bearing the CE marking in accordance with the

Regulation (EU) 2017/746
of 05 April 2017
on in vitro diagnostic medical devices

as amended may be marketed in the Union:

Product/s:
Antibiotic Sensitivity Discs
(see attachment)

Anlage / Annex FSC

Artikel- oder Katalognummer / Article or catalogue number	Produktname / Device name	Basis-UDI-DI (gem. Art. 26 IVDR) / Basic-UDI-DI (acc. Art. 26 IVDR)	Nummer. der Bescheinigung der Benannten Stelle / Number of the certificate by the notified body,
TBD 001	AMIKACIN	8903893TBD001XF	
TBD 002	AMOXICILLIN	8903893TBD002XH	
TBD 003	AMOXICLAV (Amoxiclllin/ Clavulanic Acid)	8903893TBD003XK	
TBD 004	AMPICILLIN	8903893TBD004XM	
TBD 005	AMPICILLIN/ SULBACTAM	8903893TBD005XP	
TBD 006	AZITHROMYCIN	8903893TBD006XR	
TBD 007	CEFACLOR	8903893TBD007XT	
TBD 008	CEFADROXIL (CEPHADROXIL)	8903893TBD008XV	
TBD 009	CEFAZOLIN	8903893TBD009XX	
TBD 010	CEFIXIME	8903893TBD010XG	
TBD 011	CEFOPERAZONE	8903893TBD011XJ	
TBD 012	CEFOTAXIME (CEPHOTAXIME)	8903893TBD012XL	
TBD 013	CEFTRIAXONE	8903893TBD013XN	
TBD 014	CEFTAZIDIME	8903893TBD014XQ	
TBD 015	CEFUROXIME	8903893TBD015XS	
TBD 016	CEPHALOTHIN	8903893TBD016XU	
TBD 017	CHLORAMPHENICOL	8903893TBD017XW	
TBD 018	CIPROFLOXACIN	8903893TBD018XY	
TBD 019	CLARITHROMYCIN	8903893TBD019Y2	
TBD 020	CLINDAMYCIN	8903893TBD020XK	
TBD 021	CLOXACILLIN	8903893TBD021XM	
TBD 022	Co-TRIMOXAZOLE (Sulphamethoxazole / Trimethoprim)	8903893TBD022XP	
TBD 023	DOXYCYCLINE HCI	8903893TBD023XR	
TBD 024	ERYTHROMYCIN	8903893TBD024XT	
TBD 025	GENTAMICIN	8903893TBD025XV	
TBD 026	KANAMYCIN	8903893TBD026XX	
TBD 027	LOMEFLOXACIN	8903893TBD027XZ	
TBD 028	MEROPENEM	8903893TBD028Y3	
TBD 029	NALIDIXIC ACID	8903893TBD029Y5	
TBD 030	NETILLIN (Netimicin Sulphate)	8903893TBD030XN	
TBD 031	NITROFURANTOIN	8903893TBD031XQ	

TBD 032	NORFLOXACIN	8903893TBD032XS	
TBD 033	OFLOXACIN	8903893TBD033XU	
TBD 034	PENICILLIN-G	8903893TBD034XW	
TBD 035	PIPERACILLIN	8903893TBD035XY	
TBD 036	POLYMYXIN-B	8903893TBD036Y2	
TBD 037	RIFAMPICIN	8903893TBD037Y4	
TBD 038	SPARFLOXACIN	8903893TBD038Y6	
TBD 039	STREPTOMYCIN	8903893TBD039Y8	
TBD 040	TETRACYCLINE	8903893TBD040XR	
TBD 041	TICARCILLIN/ CLAVULANIC ACID	8903893TBD041XT	
TBD 042	TOBRAMYCIN	8903893TBD042XV	
TBD 043	TRIMETHOPRIM	8903893TBD043XX	
TBD 044	VANCOMYCIN	8903893TBD044XZ	
TBD 045	AMOXICILLIN	8903893TBD045Y3	
TBD 046	AZTREONAM	8903893TBD046Y5	
TBD 047	CARBENICILLIN	8903893TBD047Y7	
TBD 048	CEFDINIR	8903893TBD048Y9	
TBD 049	CEFEPIME	8903893TBD049YB	
TBD 050	CEFPODOXIME	8903893TBD050XU	
TBD 051	CEFPROZIL	8903893TBD051XW	
TBD 052	CEFTAZIDIME/ CLAVULANIC ACID	8903893TBD052XY	
TBD 053	CEFTIZOXIME	8903893TBD053Y2	
TBD 054	COLISTIN (METHANE SULPHATE)	8903893TBD054Y4	
TBD 055	ERTAPENEM	8903893TBD055Y6	
TBD 056	FAROPENEM	8903893TBD056Y8	
TBD 057	FLUCONAZOLE (Antifungal)	8903893TBD057YA	
TBD 058	GATIFLOXACIN	8903893TBD058YC	
TBD 059	GEMIFLOXACIN	8903893TBD059YE	
TBD 060	GENTAMICIN	8903893TBD060XX	
TBD 061	IMIPENEM	8903893TBD061XZ	
TBD 062	LEVOFLOXACIN	8903893TBD062Y3	
TBD 063	LINEZOLID	8903893TBD063Y5	
TBD 064	MINOCYCLINE	8903893TBD064Y7	
TBD 065	MOXIFLOXACIN	8903893TBD065Y9	
TBD 066	OXACILLIN	8903893TBD066YB	
TBD 067	PEFLOXACIN	8903893TBD067YD	
TBD 068	PIPERACILLIN / TAZOBACTUM	8903893TBD068YF	
TBD 069	PRULIFLOXACIN (ULIFLOXACIN)	8903893TBD069YH	
TBD 070	SPECTINOMYCIN	8903893TBD070Y2	

TBD 071	STREPTOMYCN	8903893TBD071Y4	
TBD 072	TEICOPLANIN	8903893TBD072Y6	
TBD 073	TICARCILLIN	8903893TBD073Y8	
TBD 074	VORICONAZOLE (Antifungal)	8903893TBD074YA	
TBD 075	CEFOXITIN	8903893TBD075YC	


BEZIRKSREGIERUNG
STMK
265

Bezirksregierung Münster

Freiverkaufszertifikat
nach Artikel 55 auch i.V.m. Artikel 110 Abs. 3 und Abs. 4 der Verordnung (EU) 2017/746 und § 10 des Medizinprodukterecht-Durchführungsgesetzes in der jeweils geltenden Fassung

zur Vorlage bei den zuständigen Behörden / Stellen

Es wird bescheinigt, dass der

Hersteller:
Titan Biotech Ltd.
A-902A, RIICO Industrial Area Phase-III,
Bhiwadi - 301019 (Raj.) India

Bevollmächtigte:
MedNet EC-REP GmbH
Borkstrasse 10
48163 Münster
Deutschland

seine eingetragene Niederlassung in Deutschland hat und dass die gemäß der

Verordnung (EU) 2017/746
vom 05. April 2017
über In-vitro-Diagnostika

in der jeweils geltenden Fassung mit einem CE-Kennzeichen versehenen Produkte in der Union gehandelt werden dürfen:

Produkt/e:
Zusatzstoffe für DCM
Modelle: siehe Anhang

Dehydrierte Nährmedien
Modelle: siehe Anhang

Münster, den 05.02.2024
Bezirksregierung Münster
Im Auftrag

(S. Wenge)

BEZIRKSREGIERUNG 265 MÜNSTER

Free Sale Certificate
according to Article 55 even in conjunction with Article 110 para. 3 and para. 4 of Regulation (EU) 2017/746 and section 10 of the Medical Devices Law Implementing Act as amended

for presentation to the competent authorities / bodies

It is also certified that the

Manufacturer:
Titan Biotech Ltd.
A-902A, RIICO Industrial Area Phase-III,
Bhiwadi - 301019 (Raj.) India

Authorised Representative:
MedNet EC-REP GmbH
Borkstrasse 10
48163 Münster
Germany

has its registered place of business in Germany and the devices bearing the CE marking in accordance with the

Regulation (EU) 2017/746
of 05 April 2017
on in vitro diagnostic medical devices

as amended may be marketed in the Union:

Product/s:
Additives for DCM
Models: see attachment

Dehydrated culture media
Models: see attachment

Anlage / Annex FSC

Artikel- oder Katalognummer / Article or catalogue number	Produktname / Device name	Basis-UDI-DI (gem. Art. 26 IVDR) / Basic-UDI-DI (acc. Art. 26 IVDR)	Nummer. der Bescheinigung der Benannten Stelle / Number of the certificate by the notified body,
TM 611	CASMAN BROTH BASE	8903893002798	
TM 030	B.A.G.G BROTH BASE (BUFFERED AZIDE GLUCOSE GLYCEROL BROTH BASE)	8903893002644	
TM 1116	YEP AGAR	8903893002477	
TM 1137	AEROMONAS STARCH DNA AGAR BASE	8903893002484	
TM 1147	BORDET GENGOU AGAR BASE W/ 1.6% AGAR	8903893002491	
TM 1152	CAL AGAR (CEUOBIOSE ARGININE LYSINE AGAR)	8903893002507	
TM 1153	CAL BROTH (CELLOBIOSE ARGININE LYSINE BROTH)	8903893002514	
TM 1154	C. BOTULINUM ISOLATION AGAR BASE	8903893002521	
TM 1165	DEXTROSE PROTEOSE PEPTONE AGAR BASE	8903893002538	
TM 1366	KIRCHNER MEDIUM BASE, MODIFIED	8903893002651	
TM 1408	SPECIMEN PRESERVATIVE MEDIUM BASE (SP HAJNA)	8903893002545	
TM 280	SBG ENRICHMENT BROTH	890389300266	
TM 542	PIKE STREPTOCOCCAL BROTH BASE	8903893002552	
TM 581	BRAIN HEART CC AGAR	8903893002569	
TM 845	SF BROTH, MODIFIED	8903893002576	
TM 884	TRANSPORT CHARCOAL MEDIUM	8903893002583	
TM 905	MCBRIDE LISTERIA AGAR BASE	8903893002590	
TM 970	COLUMBIA C.N.A. AGAR BASE (1% AGAR)	8903893002606	
TMV 268	PSEUDOMONAS ISOLATION AGAR (VEG.)	8903893002613	
TMV 274	ROGOSA SL AGAR {VEG.)	8903893002620	
TMV 275	ROGOSA SL BROTH (VEG.)	8903893002637	
TM 008	ALKALINE PEPTONE WATER (pH 9.0)	8903893000121	
TM 009	AMIES TRANSPORT MEDIUM W/ CHARCOAL	8903893000909	
TM 010	ANAEROBIC AGAR	8903893000138	
TM 011	ANAEROBIC AGAR (BREWER)	8903893000145	
TM 028	AZIDE BLOOD AGAR BASE	8903893000152	
TM 029	AZIDE DEXTROSE BROTH W/ BCP	8903893000169	
TM 035	B.C.G. DEXTROSE AGAR (SNYDER TEST AGAR)	8903893000916	
TM 039	BISMUTH SULPHITE AGAR	8903893000176	
TM 040	BLOOD AGAR BASE W/ LOW pH	8903893000183	

M 041	BLOOD AGAR BASE No. 2	8903893000190	
TM 044	BORDET GENGOU AGAR BASE	8903893000206	
TM 045	BPL AGAR (BRILLIANT GREEN PHENOL RED LACTOSE AGAR	8903893000213	
TM 047	BRILLIANT GREEN AGAR BASE W/ 1.2% AGAR	8903893000220	
TM 056	CAMPYLOBACTER AGAR BASE	8903893000923	
TM 060	CETRIMIDE AGAR BASE	8903893000237	
TM 064	CHOCOLATE AGAR BASE	8903893000244	
TM 068	CLOSTRIDIUM DIFFICILE AGAR BASE	8903893000251	
TM 073	COLUMBIA BROTH BASE	8903893000268	
TM 074	COLUMBIA C.N.A. AGAR BASE	8903893000275	
TM 078	CYSTINE HEART AGAR BASE	8903893000282	
TM 082	D.C.L.S. Agar	8903893000299	
TM 087	DEOXYCHOLATE AGAR	8903893000930	
TM 090	DEXTROSE AGAR BASE, EMMONS (SABOURAUD DEXTROSE AGAR BASE, MODIFIED)	8903893000084	
TM 099	DUBOS BROTH BASE	8903893000091	
TM 1048	MONSUR MEDIUM BASE	8903893000947	
TM 1090	STAPHYLOCOCCUS AGAR N0.110 W/ AZIDE	8903893000954	
TM 1109	TRYPTONE TELLURITE AGAR BASE	8903893000589	
TM 1136	AEROMONAS ISOLATION MEDIUM BASE	8903893000961	
TM 1145	BLOOD FREE CAMPYLOBACTER BROTH BASE	8903893000596	
TM 1155	CVTR MEDIUM {VIRAL TRANSPORT MEDIUM W/ CHARCOAL	8903893000602	
TM 116	GC AGAR BASE	8903893000107	
TM 1197	CHROMOGENIC CANDIDA AGAR	8903893000619	
TM 1199	CHROMOGENIC UTI AGAR	8903893000671	
TM 121	HEKTOEN ENTERIC AGAR (as per ISO)	8903893000114	
TM 1223	LISTERIA ENRICHMENT BROTH (DOUBLE PACK)	8903893000978	
TM 1225	LISTERIA ENRICHMENT MEDIUM BASE (UVM)	8903893000985	
TM 1229	LISTERIA OXFORD MEDIUM BASE (ISO)	8903893000893	
TM 1286	SALMONELLA DIFFERENTIAL AGAR (DOUBLE PACK)	8903893000992	
TM 1307	TRICHOMONAS AGAR BASE	8903893000886	
TM 1312	VAGINALIS AGAR BASE	8903893000879	
TM 1335	CAMPYLOBACTER CEFEX BROTH BASE	8903893000862	
TM 1337	CHROMOGENIC STAPHYLOCOCCUS AUREUS AGAR BASE	8903893000855	
TM 1340	CHROMOGENIC ECC AGAR	8903893000848	
TM 1341	CHROMOGENIC ECC SELECTIVE AGAR BASE	8903893000831	
TM 1352	HAEMOPHILUS TEST AGAR BASE	8903893000824	

M 1357	ITC BROTH BASE (TTC BROTH BASE) (IRGASAN TICARCILLIN AND POTASSIUM CHLORATE BROTH BASE)	8903893000817	
TM 1426	CHROMOGENIC SALMONELLA AGAR	8903893000800	
TM 1454	MANNITOL SELENITE BROTH (DOUBLE PACK)	8903893001005	
TM 1497	ANAEROBIC BASAL AGAR	8903893001012	
TM 1498	ANAEROBIC BASAL BROTH	8903893001029	
TM 1523	CHROMOGENIC BACILLUS AGAR	8903893000794	
TM 1539	FLUIDSELENITE CYSTINE MEDIUM (DOUBLE PACK)(as per USP)(DOUBLE PACK)	8903893001838	
TM 1540	FLUID SELENITE CYSTINE MEDIUM (DOUBLE PACK)(as perIP)(DOUBLE PACK)	8903893001845	
TM 1545	GBS MEDIUM BASE	8903893001852	
TM 1561	MeReSA AGAR BASE	8903893000787	
TM 1588	CHROMOGENIC CANDIDA DIFFERENTIAL AGAR MODIFIE	8903893000770	
TM 1635	CHROMOGENIC MeReSA AGAR BASE	8903893000763	
TM 1636	CHROMOGENIC MM AGAR	8903893000756	
TM 1639	CHROMOGENIC UTI AGAR,MODIFIED	8903893000749	
TM 1640	CHROMOGENIC VIBRIO AGAR	8903893000732	
TM 1824	CHROMOGENIC SALMONELLA AGAR, MODIFIED	8903893000725	
TM 1825	CHROMOGENIC UTI SELECTIVE AGAR	8903893000718	
TM 1833	CHROMOGENIC CLEO AGAR BASE	8903893000701	
TM 1839	CHROMOGENIC SALMONELLA AGAR	8903893000695	
TM 1841	CHROMOGENIC A. RAMBACH AGAR	8903893000688	
TM 1842	BLOOD AGAR BASE NO. 2 (as per ISO)	8903893000664	
TM 206	MANNITOL SALT AGAR BASE	8903893000305	
TM 213	MIDDLEBROOK 7H9 BROTH BASE	8903893000312	
TM 214	MIDDLEBROOK 7H10 AGAR BASE	8903893000329	
TM 233	MYCOPLASMA AGAR BASE (PPLO AGAR BASE)	8903893001869	
TM 235	MYCOPLASMA BROTH BASE W/ CV (PPLO BROTH BASE W/ CV)	8903893001876	
TM 236	MUELLER HINTON AGAR N0.2	8903893001883	
TM 268	PSEUDOMONAS ISOLATION AGAR	8903893001890	
TM 274	ROGOSA SL AGAR	8903893001906	
TM 275	ROGOSA SL BROTH	8903893001913	
TM 294	FLUID SELENITE CYSTINE MEDIUM (SELENITE CYSTINE MEDIUM)(as per ISO)(DOUBLE PACK)	8903893001920	
TM 324	GLUCOSE PHOSPHATE BROTH (BUFFERED GLUCOSE BROTH) (MR-VP MEDIUM)	8903893001937	
TM 332S	TRYPTONE SOYA BROTH W/ SPS	8903893000336	
TM 336	EMB AGAR	8903893000343	
TM 339	MUELLER HINTON AGAR	8903893000350	
TM 341	NUTRIENT AGAR	8903893000367	
TM 350	NUTRIENT BROTH	8903893000374	

M 360	BLOOD AGAR BASE (INFUSION AGAR)	8903893000381	
M 362	BRAIN HEART INFUSION BROTH	8903893000398	
TM 364	BRILLIANT GREEN AGAR BASE, MODIFIED	8903893000404	
TM 374	HARTLEY'S DIGEST BROTH	8903893001944	
TM 386	SS AGAR {SALMONELLA SHIGELLA AGAR)	8903893000411	
TM 389	SELENITE BROTH (SELENITE F BROTH) (DOUBLE PACK)	8903893000428	
TM 394	UREA AGAR BASE (CHRISTENSEN) (AUTOCLAVABLE)	8903893000435	
TM 395	VOGEL-JOHNSON AGAR BASE W/O TELLURITE (V. J. AGAR BASE)	8903893000442	
TM 405	C.L.E.D. AGAR (W/ BROMO THYMOL BLUE) (BROLACIN AGAR)	8903893000459	
TM 415	TRANSPORT MEDIUM W/O CHARCOAL (CARY-BLAIR MEDIUM BASE)	8903893000466	
TM 418	SELENITE F BROTH (SELENITE F BROTH) (DOUBLE PACK) (as perIP)	8903893001951	
TM 423	TETRATHIONATE BROTH BASE W/O IODINE & BG (FLUID TETRATHIONATE MEDIUM W/O IODINE & BG)	8903893000473	
TM 456	TRANSPORT MEDIUM,AMIES W/O CHARCOAL	8903893000480	
TM 492	XLD AGAR	8903893000497	
TM 501	YERSINIA SELECTIVE AGAR BASE (CIN AGAR)	8903893000503	
TM 513	CASMAN AGAR	8903893001968	
TM 522	HOYLE MEDIUM BASE	8903893000510	
TM 612	LISTERIA SELECTIVE AGAR (DOUBLE PACK)	8903893001975	
TM 664	ASPARAGINE BROTH	8903893001982	
TM 707	CYSTINE TELLURITE AGAR BASE	8903893000527	
TM 710	DNASE TEST AGAR BASE (W/O INDICATOR)	8903893001999	
TM 768	LOEFFLER MEDIUM BASE	8903893002002	
TM 794	MYCOPLASMA BROTH BASE W/O CV (PPLO BROTH BASE W/O CV)	8903893002019	
TM 844	SF BROTH	8903893001036	
TM 853	SELENITE BROTH BASE W/O BISELENITE	8903893001043	
TM 917	WILSON BLAIR AGAR W/ BG (BRILLIANT GREEN)	8903893000534	
TM 927	ANAEROBIC BLOOD AGAR BASE	8903893001050	
TM 933	THAYER MARTIN MEDIUM BASE	8903893000541	
TM 946	BISMUTH SULPHITE AGAR (as per USP)	8903893001067	
TM 951	BRILLIANT GREEN AGAR, MODIFIED (BRILLIANT GREEN AGAR MEDIUM)(as per USP)	8903893001074	
TM 955	EDWARD'S MEDIUM BASE, MODIFIED	8903893000558	
TM 974	DNASE TEST AGAR W/ METHYL GREEN	8903893001197	

M 977	DEOXYCHOLATE CITRATE AGAR (AGAR MEDIUM J)(as per BP/EP/IP)	8903893000565	
TM 984	DIPHTHERIA VIRULENCE AGAR BASE	8903893000572	
TMV 039	BISMUTH SULPHITE AGAR (VEG.)	8903893001203	
TMV 060	CETRIMIDE AGAR BASE (VEG.)	8903893001210	
TMV 090	DEXTROSE AGAR BASE, EMMONS (SABOURAUD DEXTROSE AGAR BASE, MODIFIED) (VEG.)	8903893000657	
TMV 294	FLUID SELENITE CYSTINE MEDIUM (SELENITE CYSTINE MEDIUM)(VEG)(as per ISO)(DOUBLE PACK)	8903893001081	
TMV 324	GLUCOSE PHOSPHATE BROTH (BUFFERED GLUCOSE BROTH) (MR-VP MEDIUM)(VEG)	8903893001098	
TMV 339	MUELLER HINTON AGAR (VEG.)	8903893001104	
TMV 341	NUTRIENT AGAR (VEG.)	8903893001111	
TMV 350	NUTRIENT BROTH (VEG.)	8903893001128	
TMV 360	BLOOD AGAR BASE (INFUSION AGAR) (VEG.)	8903893001135	
TMV 362	BRAIN HEART INFUSION BROTH (VEG.)	8903893000640	
TMV 374	HARTLEY'S DIGEST BROTH (VEG)	8903893001142	
TMV 386	SS AGAR (SALMONELLA SHIGELLA AGAR) (VEG.)	8903893001159	
TMV 389	SELENITE BROTH (SELENITE F BROTH) (DOUBLE PACK) (VEG.)	8903893001166	
TMV 394	UREA AGAR BASE (CHRISTENSEN) (AUTOCLAVABLE) (VEG.)	8903893000633	
TMV 395	VOGEL JOHNSON AGAR BASE W/O TELLURITE (V. J. AGAR BASE) (VEG.)	8903893000626	
TMV 405	C.L.E.D. AGAR (W/BROMOTHYMOL BLUE) (BROLACIN AGAR) (VEG.)	8903893001173	
TMV 492	XLD AGAR (VEG.)	8903893001180	

Additives for DCM (Growth supplements, selective agents, ...)			
TS 012	BRODETELLA SELECTIVE SUPPLEMENT	8903893002804	
TS 014	HORSE SERUM	8903893002811	
TS 021	HAEMOGLOBIN POWDER	8903893002828	
TS 024	CLOSTRIDIUM DIFFICILE SUPPLEMENT	8903893002903	
TS 073	PARK AND SENDER'S SELECTIVE SUPPLEMENT A	8903893002897	
TS 074	PARK AND SENDER'S SELECTIVE SUPPLEMENT B	8903893002835	
TS 096	MCBRIDE LISTERIA SUPPLEMENT	8903893002842	
TS 104	C.B.I. SUPPLEMENT	8903893002859	
TS 134	K L VIRULENCE ENRICHMENT (20ml /vi)	8903893002866	
TS 178	ALBUMIN GLUCOSE SUPPLEMENT	8903893002873	

291	STERILE CHARCOAL SUPPLEMENT FOR LEGIONELLA AGAR	8903893002880	
TS 010	CAMPYLOBACTER GROWTH SUPPLEMENT	8903893002675	
TS 013	SULPHA SUPPLEMENT	8903893002682	
TS 020	NALIDIXIC SELECTIVE SUPPLEMENT	8903893002699	
TS 043	VANCLO T SUPPLEMENT (VANCOMYCIN-COLISTIN-AMPHOTERICIN-B TRIMETHOPRIM)	8903893002705	
TS 052	MYCOPLASMA ENRICHMENT SUPPLEMENT	8903893002712	
TS 099	AEROMONAS SELECTIVE SUPPLEMENT	8903893002729	
TS 095	NEOMYCIN SUPPLEMENT	8903893002736	
TS 121	LISTERIA MOXALACTAM SUPPLEMENT	8903893002743	
TS 132	POTASSIUM CHLORATE SUPPLEMENT	8903893002750	
TS 144	HAEMOPHILUS GROWTH SUPPLEMENT	8903893002767	
TS 206	CHROMOGENIC MeReSa SELECTIVE SUPPLEMENT	8903893002774	
TS 213	CHROMOGENIC CANDIDA SELECTIVE SUPPLEMENT	8903893002781	
TS 001	EGG YOLK TELLURITE EMULSION (100 ml/vi)	8903893001227	
TS 002	EGG YOLK EMULSION (100 ml/vi)	8903893001234	
TS 003	POTASSIUM TELLURITE 3.5% (10ml/vl)	8903893001241	
TS 005	POTASSIUM TELLURITE 1% (lml /vi)	8903893001258	
TS 006	BRUCELLA SELECTIVE SUPPLEMENT	8903893001265	
TS 007	CAMPYLOBACTER SUPPLEMENT-I (BLASER-WANG)	8903893001272	
TS 008	CAMPYLOBACTER SUPPLEMENT-II (BUTZLER)	8903893001289	
TS 009	CAMPYLOBACTER SUPPLEMENT-III (SKIRROW)	8903893001296	
TS 011	STREPTO SUPPLEMENT	8903893001302	
TS 022	VITAMINS GROWTH SUPPLEMENT VITAMINS AND AMINO ACIDS MIXTURE (DOUBLE PACK)	8903893001319	
TS 023	YEAST AUTOLYSATE SUPPLEMENT	8903893001326	
TS 030	UREA 40% (5 ml/vl)	8903893001333	
TS 036	GC SUPPLEMENT W/ ANTIBIOTICS	8903893001340	
TS 038	V.C.N. SUPPLEMENT	8903893001357	
TS 039	V.C.N.T. SUPPLEMENT	8903893001364	
TS 041	LINCO T SUPPLEMENT (LINCOMYCIN-COLISTIN-AMPHOTERICIN-B TRIMETHOPRIM) YEAST	8903893002385	
TS 050	MIDDLEBROOK ADC GROWTH SUPPLEMENT	8903893001371	
TS 057	YERSINIA SELECTIVE SUPPLEMENT	8903893001388	
TS 058	POLYMYXIN B SELECTIVE SUPPLEMENT	8903893001395	

060	MIDDLEBROOK OADC GROWTH SUPPLEMENT	8903893001401	
TS 097	AMPICILLIN SUPPLEMENT	8903893002392	
TS 101	CCDA SELECTIVE SUPPLEMENT	8903893001418	
TS 120	OXFORD LISTERIA SUPPLEMENT	8903893001425	
TS 131	TICARCILLIN SUPPLEMENT	8903893002408	
TS 133	TRICHOMONAS SELECTIVE SUPPLEMENT 11	8903893002415	
TS 184	GBS SUPPLEMENT	8903893002422	
TS 187	CHROMOGENIC ECC SELECTIVE SUPPLEMENT	8903893002439	
TS 207	DMACA REAGENT (10 ml/vi)	8903893002446	
TS 208	TDA REAGENT (10 ml/vi)	8903893002453	
TS 219	CEFOXITIN SUPPLEMENT	8903893001432	
TS 231	MeReSa SELECTIVE SUPPLEMENT	8903893002460	
428	SODIUM BISELENITE	8903893002460	


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CERTIFICATE OF COMPLIANCE

INTERNATIONAL CERTIFICATION SERVICES PVT. LTD.

This is to certify that the
QUALITY ASSURANCE SYSTEM of

TITAN BIOTECH LIMITED

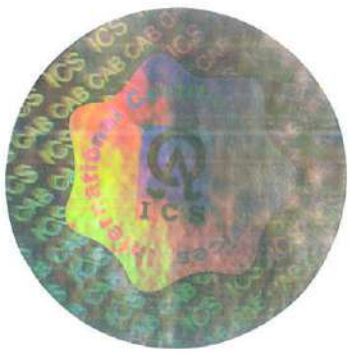
A-902, A, RIICO Industrial Area, Phase – III, Bhiwadi – 301 019, Rajasthan, India.

has been assessed and registered as complying with the requirements of the following International Standard:

ISO 11133 : 2014

The Microbiology of Food, Animal feed and Water – preparation, production, storage and performance testing of culture media applicable to :

Scope: **Manufacturing, Supply and Export of Microbiological Dehydrated Culture Media and Supplements, Animal Cell Culture Media and Plant Tissue Culture Media, Ready to use Media, Biological media Bases , Antimicrobial Susceptibility Discs , Bacteriological Differentiation Reagents and Kits, Viral Transport Kit With Swab Sticks and Related Products.**



Registration No.	: **RQMF91/9610**
Registered Date	: **02nd June, 2017**
Reassessment Date	: **11th July, 2023**
Issue Date	: **13th July, 2023**
Expiry Date	: **01st June, 2026**

Invalid After 30/05/2024 Unless Hologram Pasted

Invalid After 30/05/2025 Unless Hologram Pasted

Director (Technical)
International Certification Services Pvt. Ltd.

Validity of this certificate is based on periodic audits of the management system defined by the above scope and is contingent upon prompt, written notification of significant changes to the management system and/or its components thereof shall be immediately communicated to ICS.
Further clarifications regarding the scope of this certificate and the applicability of ISO 11133:2014 requirements may be obtained at www.icsasian.com/ www.icspl.org

22/23, Goodwill Premises, Swastik Estate, 178 CST Road, Kalina, Santacruz (E), Mumbai – 400 098, Maharashtra, India. Tel.: 022-00900

CERTIFICATE OF COMPLIANCE

INTERNATIONAL CERTIFICATION SERVICES PVT. LTD.

This is to certify that the
QUALITY MANAGEMENT SYSTEM of

TITAN BIOTECH LIMITED

A-902A, RIICO Industrial Area, Phase III, Bhiwadi - 301019, Rajasthan, India.

has been assessed and registered as complying with the requirements of the following International Standard:

ISO 13485 : 2016

The Quality Management System for Medical Devices applicable to :

Scope : **Manufacturing, Supply and Export of Microbiological Dehydrated Culture Media, Ready to use Plate, Ready to use Media, Antimicrobial Susceptibility Discs, Bacteriological Differentiation Reagents, Viral Transport Kit with Swab Stick, Molecular Transport Kit with Swab Stick, Associated Chemicals and Reagents.**

Registration No.	**: RQMD91/6791**
Registered Date	**: 27th December, 2010**
Reassessment Date	**: 31st December, 2022**
Issue Date	**: 06th January, 2023**
Expiry Date	**: 26th December, 2025**

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Managing Director
International Certification Services Pvt. Ltd.

Accredited by National Accreditation Board For Certification Bodies, India.

Validity of this certificate is based on periodic audits of the management system defined by the above scope and is contingent upon prompt, written notification of significant changes to the management system and/or its components thereof shall be immediately communicated to ICS.
Further clarifications regarding the scope of this certificate and the applicability of ISO 13485:2016 requirements may be obtained at www.icsasian.com/ www.icspl.org

22/23, Goodwill Premises, Swastik Estate, 178 CST Road, Kalina, Santacruz (E), Mumbai – 400 098, Maharashtra, India. Tel.: 022-42200900

CERTIFICATE OF COMPLIANCE

INTERNATIONAL CERTIFICATION SERVICES PVT. LTD.

This is to certify that the

QUALITY MANAGEMENT SYSTEM of

TITAN BIOTECH LIMITED

A- 902 A, Riico Industrial Area, Phase - III, Bhiwadi, Rajasthan, 301019, India.

has been assessed and registered as complying with the requirements of the following International Standard:

ISO 9001:2015

The Quality Management System applicable to:

Scope: **Manufacturing, Supply and Export of Protein Hydrolysate, Peptone, Biological Extract, Microbiological Dehydrated Culture Media, Plant Tissue Culture, Animal Cell Culture, Ready to Use Plate, Ready to Use Media, Antimicrobial Susceptibility Discs, Bacteriological Differentiation Reagents, Viral Transport Kit with Swab Stick Molecular Transport Kit With Swab Stick, Food Grade Chemicals and Nutraceuticals and Associated Chemical and Reagents.**

Registration No.	**: RQ91/1222**
Registered Date	**: 25th October, 2002**
Reassessment Date	**: 03rd November, 2023**
Issue Date	**: 04th November, 2023**
Expiry Date	**: 24th October, 2026**

JAS-ANZ

www.jas-anz.org/register

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Director (Technical)
International Certification Services Pvt. Ltd.

Accredited by Joint Accreditation System of Australia and New Zealand

Validity of this certificate is based on periodic audits of the management system defined by the above scope and is contingent upon prompt, written notification of significant changes to the management system and/or its components thereof shall be immediately communicated to ICS.
Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2015 requirements may be obtained at www.icsasian.com/www.icspl.org

22/23, Goodwill Premises, Swastik Estate, 178 CST Road, Kalina, Santacruz (E), Mumbai – 400 098, Maharashtra, India. Tel.: 022-42200900

CERTIFICATE OF VERIFICATION

INTERNATIONAL CERTIFICATION SERVICES PVT. LTD.

This is to certify that the

GOOD MANUFACTURING PRACTICES of

TITAN BIOTECH LIMITED

A-902 A, RIICO Industrial Area, Phase III, Bhiwadi - 301019, Rajasthan, India.

has been assessed and registered as complying with the requirements of the following International Standard:

GOOD MANUFACTURING PRACTICE (GMP)

Codex Alimentarius Commission Recommended International Code of Practice
General Principles of Food Hygiene – CAC/RCP 1-1969, Rev.4 (2003)GMP

The Good Manufacturing Practices is applicable to:

Scope : Manufacturing, Supply and Export of Pharmaceutical and Nutritional Supplements, Food Ingredients and Veterinary Products, Laboratory and Food Grade Chemicals, Lab Consumables, Biological Media Bases, Dehydrated Culture Media, Plant Tissue Culture & Animal Cell Culture Media, Ready To Use Culture Media & Plate, Media Supplements, Antimicrobial Susceptibility Discs, Viral Transport Kit With Swab Sticks, Bacteriological Differentiation Reagents and Related Products.

Registration No.	**: RG91/6520**
Registered Date	**: 17th March, 2010**
Reassessment Date	**: 09th April, 2025**
Issue Date	**: 12th April, 2025**
Expiry Date	**: 16th March, 2028**

Director (Technical)
International Certification Services Pvt. Ltd.

Validity of this certificate is based on periodic audits of the management system defined by the above scope and is contingent upon prompt, written notification of significant changes to the management system and/or its components thereof shall be immediately communicated to ICS.
Further clarifications regarding the scope of this certificate and the applicability of Good Manufacturing Practices requirements may be obtained at www.icsasian.com/www.icspl.org

22/23, Goodwill Premises, Swastik Estate, 178 CST Road, Kalina, Santacruz (E), Mumbai – 400 098. Maharashtra, India. Tel : 022-42200900

1505 - PEPTONE-TBL
(Culture Media Ingredient)

INTENDED USE

Peptone-TBL used in the preparation of culture media employed for cultivation of a wide variety of microorganisms.

PRODUCT SUMMARY AND EXPLANATION

Peptone-TBL is used in preparing microbiological culture media and in producing bacterial toxins and also usable in synthetic media in acclimatization of microorganisms in bioreactor studies. It's support to growth of Staphylococci, Streptococci, Pneumococci and also suitable for isolating and cultivating Haemophilus and Neisseria. It is off white to Creamish yellow colour, free flowing powder having characteristic odour but not pungent smell. It is completely soluble in distilled Water, Clear. Insoluble in alcohol.

PRINCIPLE

Peptone-TBL is enzymatic digest of protein used in preparing microbiological culture media and in producing bacterial toxins. Proteose peptone provide nitrogen in a form that is readily available for bacterial growth. It is superior in nutritious of fastidious microorganism.

INSTRUCTION FOR USE

Peptone-TBL is used in media for the production of bacterial toxins. It is used in preparing chocolate agar for propagating of Neisseria species. It is also used for the cultivation of bacteria with high nutritional requirements, as for example Haemophilus , Salmonella, staphylococcus etc. species.

QUALITY CONTROL SPECIFICATIONS

Appearance	**:**	Light yellowish to brownish yellow colour, free flowing powder having characteristic odour but not pungent smell.
Solubility (2% Soln. at 25ºC)	**:**	Completely soluble in distilled Water, Clear. Insoluble in alcohol.
pH (2% Soln. at 25 ºC)	:	6.5 – 7.5
Loss on drying (at 105 ºC)	:	NMT – 5.0%
Total Nitrogen (DWB)	:	NLT – 12.0%
α-Amino Nitrogen	:	NLT – 2.0%
Total Ash	:	NMT – 15.0%
Chloride (as NaCl)	:	NMT – 5.0%
Indole Test	:	Positive
Microbial Parameter	:	Passes Test
Growth Promotion Test	:	Passes Test

INTERPRETATION

Cultural Characteristic observed after incubation at 35-37°C for 24 hours by using 2% peptone,0.5% sodium chloride and 1.5% agar in water,pH 7.2-7.4

Microorganism	ATCC	Inoculum (CFU/ml)	Growth
Escherichia col	8739	50-100	Luxuriant
Pseudomonas aeruginosa	9027	50-100	Luxuriant
Enterobacter aerogenes	13048	50-100	Luxuriant

Salmonella Typhi	6539	50-100	Luxuriant
Staphylococcus aureus	6538	50-100	Good - Luxuriant
Streptomyces albus	3004	50-100	Good - Luxuriant
Streptococcus pyogenes	19615	50-100	luxuriant w/ beta haemolysis (With addition of sterile 5% sheep blood to above medium, after an incubation at 35-37°C for 48 hours.
Neisseria gonorrhoeae	19624	50-100	luxuriant w/ beta haemolysis (With addition of sterile 10% sheep blood to above medium heated to 80-90°C until blood has turned to chocolate brown and incubated in 10% CO2 atmosphere at 35-37°C for 48 hours).

PACKAGING:
Standard packing is 500gm in plastic bottle. After packing tightly closed in a dry and well-ventilated place.

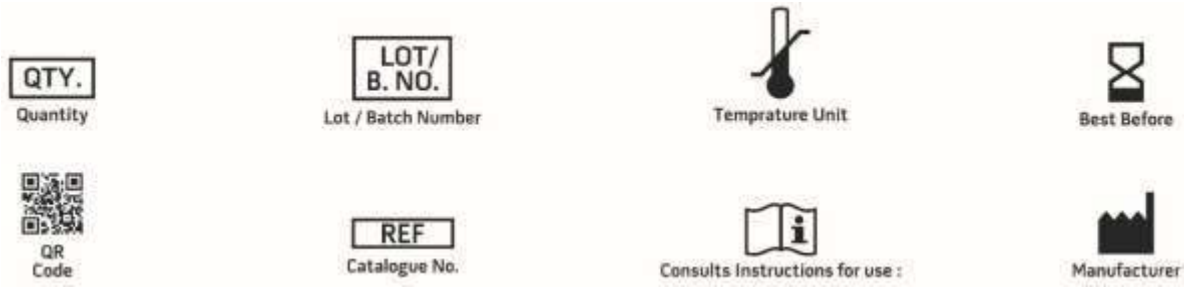
STORAGE
Keep plastic bottle tightly closed in a dry and well-ventilated place, Store in cool place. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the plastic bottle after use.

Product Deterioration: Do not use product if any contamination, discoloration or other sign of deterioration is found.

DISPOSAL
After use, contact a licensed professional waste disposal service to dispose of this material. Dispose of as unused product.

REFERENCES

1.Kirkbride, Berthelsen and Clark. 1931. Comparative studies of infusion and infusion-free diphtheria toxin in antitoxin production and in standardization by the flocculation, subcutaneous, and intracutaneous tests. J. Immunol. 21:1-20.
2. Hazen and Heller. 1931. Further studies upon the effect of various carbohydrates on production of diphtheria toxin with special reference to its flocculating titer and final pH. J. Bacteriol. 23:195-209.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
Revision: 05th Oct. 2019

TBL 029 - ONPG DISCS

INTENDED USE

Testing for ONPG.

PRODUCT SUMMARY AND PRINCIPLE

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 especially 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 possess betagalactosidase. These organisms are late lactose fermenters.

INSTRUCTION FOR USE

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

QUALITY CONTROL SPECIFICATIONS

Appearance : Filter paper discs of 6 mm diameter bearing letters "On" in continuous printing Style.

INTERPRETATION

ONPG reaction observed in 0.85% sodium chloride solution of following culture containing ONPG (TBL029) disc after an incubation of Upto 4 hours at 35-37°C.

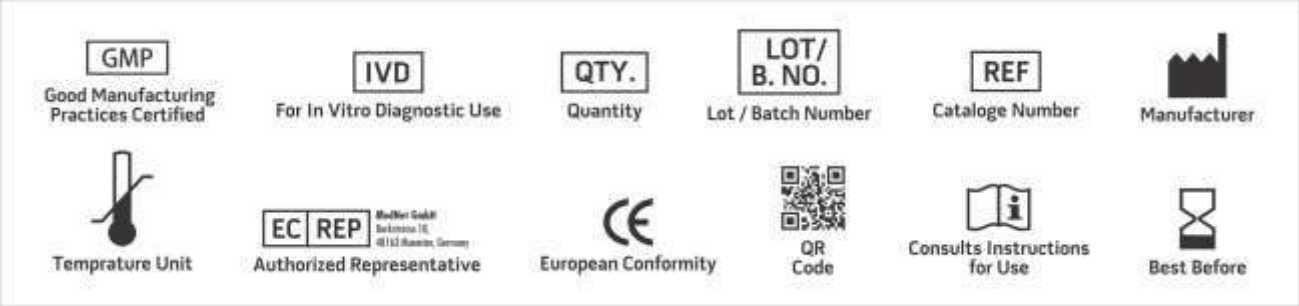
Microorganism	ATCC	ONPG
Citrobacter freundii	8090	Positive reaction: yellow colour
Enterobacter aerogenes	13048	Positive reaction: yellow colour
Escherichia coli	8739	Positive reaction: yellow colour

Salmonella Choleraesuis	12011	Positive reaction: yellow colour
Proteus vulgaris	13315	Negative reaction: no colour change
Salmonella Typhimurium	14028	Negative reaction: no colour change

PACKAGING:
In pack size of 50 Discs/vl.

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

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



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019

TK 004– GRAM'S STAIN KIT

REF NO: TBL/QA/SS/LC/TK 004	**STANDARD SPECIFICATION FOR GRAM'S STAIN KIT**	**Rev. No:** 03
Issue No: 04		**Review Date:** 29/10/2024
Issue Date: 30/10/2021		**Product code:** TK 004

PRODUCT PROPERTIES

C.A.S Number	NA
Chemical Formula	NA
Formula weight	NA
Functional Uses	Gram's Stain Kit is used for differentiation of bacteria on the basis of their gram nature
Standard Packaging	1 Kit
Key Ingredients	i) Crystal violet gram 15-125 ml ii) Decolourizer gram 15-125 ml iii) Iodine gram 15-125 ml iv) Safranine 0.5% w/v -125 ml or basic fuchsin 0.1%-125 ml

PHYSICAL PARAMETERS

PRODUCT PARAMETER	SPECIFICATION
Sensitivity test	This product has been tested and conforms to quality standard.

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

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Location: Moldova
MOLDOVA EUROPEANĂ

TM 008 -ALKALINE PEPTONE WATER (pH 8.6) (ISO 21872-1 & 2:2007)

INTENDED USE

For detection and enrichment of *Vibrio species*.

PRODUCT SUMMARY AND EXPLANATION

Alkaline Peptone Water is a pre-enrichment medium specially standardized for *Vibrio* species. The original formula of Alkaline Peptone Water was developed by Shread, Donovan and Lee to be used as an enrichment broth for the cultivation of *Aeromonas* species and Cruickshank reported that when the pH is increased, the medium can be used to cultivate *Vibrio* species. This medium is recommended by APHA for enrichment of *Vibrio* species from seafood, infectious materials and other Clinical samples like swabs and faeces in food and water samples can be added directly to the medium. A slight modification of this medium has recently been approved by the ISO Committee for detection of *Vibrio* species.

COMPOSITION

Ingredients	Gms / Ltr
Sodium chloride	30.000
Peptic digest of animal tissue	20.000

PRINCIPLE

The peptic digest of animal tissue makes this media nutritious by providing amino acids and other nitrogenous substances for the growth of microorganisms. Sodium chloride maintains the osmotic balance.

INSTRUCTION FOR USE

- Dissolve 50 grams in 1000ml distilled water.
- Gently heat to boiling with swirling to dissolve the medium completely.
- Dispense in tubes.
- Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.
- Cool to 45-50°C before use.

QUALITY CONTROL SPECIFICATIONS

Appearance of Dehydrated powder	:	Cream to yellow colour, Homogeneous free flowing powder
Appearance of Prepared medium	:	Light yellow colour, clear solution without any precipitate
pH (at 25°C)	:	8.6± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Vibrio cholerae	15748	50-100	Luxuriant	>=70%	35 - 37°C	18 – 24 Hours
Vibrio parahaemolyticus	17802	50-100	Luxuriant	>=70%	35 - 37°C	18 – 24 Hours

PACKAGING

In 500 gm packaging size.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use, if powder show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Gilligan, Janda, Karmali and Miller, 1992, Cumitech 12A, Laboratory Diagnosis of Bacterial Diarrhea, Coord. Ed., Nolte, American Society for Microbiology, Washington, D.C.
2. Forbes B. A., Sahm A. S., and Weissfeld D. F., Bailey & Scotts Diagnostic Microbiology, 10th Ed., 1998, Mosby, Inc., St. Louis, Mo.
3. Isenberg, (Ed.), 1992, Clinical Microbiology Procedures Handbook, Vol. I, American Society for Microbiology, Washington, D.C.
4. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
5. Cruikshank R., 1968, Medical Microbiol., 11th Ed., Livingstone Ltd., London.
6. International Organization for Standardization (ISO), 1990, Draft ISO/DIS 8914.
7. Finegold S. M. and Martin W. J., 1982, W. J. Bailey and Scotts Diagnostic Microbiol, 6th Ed., C.V. Mosby Co., St. Louis, p. 242.
8. R. Cruickshank, Medical Microbiol., 11th ed., Livingstone Ltd., London (1968).
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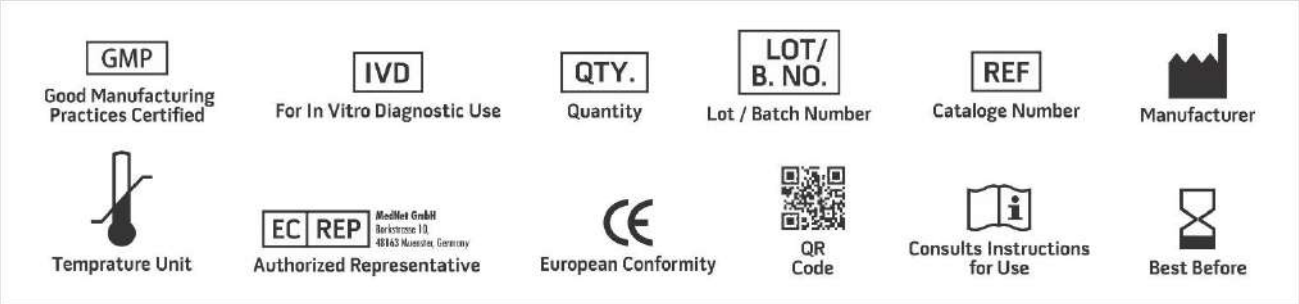


NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 10th June. 2020.

TM 054 – C.L.E.D. AGAR W/ ANDRADE INDICATOR (CYSTINE LACTOSE ELECTROLYTE DEFICIENT AGAR)

INTENDED USE

For isolation and differentiation of microorganisms based on lactose fermentation.

PRODUCT SUMMARY AND EXPLANATION

Sandys reported a new technique where the swarming of *Proteus* on an agar medium could be prevented by restricting the electrolyte content in the culture medium. Sandys Medium was modified by Mackey and Sandys, by replacing mannitol with lactose and sucrose and elevating the concentration of agar and bromothymol blue. The same authors further modified this medium by retaining the lactose (deleting sucrose) and by including L-cystine for promoting the growth of cystine-dependent dwarf coliform colony. This later modified medium was designated as C.L.E.D. (Cystine-LactoseElectrolyte-Deficient) Medium. This medium is recommended for use in urinary bacteriology, promoting the growth of all urinary pathogens. C.L.E.D. Medium is also recommended for dip stick procedures and as dip inoculum transport medium for urine specimens. C.L.E.D. Medium was further modified by Bevis by incorporation of Andrades indicator. This medium provides sharper differentiation between lactose-fermenters (LF) and lactose-non-fermenters (NLF). Addition of Andrades indicator enhances the appearance of colony and aids in the identification of microorganisms.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	4.000
Beef extract	3.000
Tryptone	4.000
Lactose	10.000
L-Cystine	0.128
Bromothymol blue	0.020
Andrade indicator	0.100
Agar	15.000

PRINCIPLE

The essential nutrients are supplied by peptone, tryptone and beef extract. Lactose is the carbohydrate source. L-cystine permits the growth of "dwarf colony" coliforms. Addition of Andrade indicator the appearance of colony and aids in the identification of microorganisms. At different pH values, the colour of the medium varies from the standard medium.

INSTRUCTION FOR USE

- Dissolve 36.25 grams in 1000 ml of purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to greyish yellow homogeneous free flowing powder.
Appearance of prepared medium : Greenish blue clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.5±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Klebsiella aerogenes	13048	50-100	Good-luxuriant	>=50%	Greyish green, mucoid	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	Good-luxuriant	>=50%	Bright pink with pink halo	35-37°C	18-24 Hours
Enterococcus faecalis	29212	50-100	Good-luxuriant	>=50%	Orange-yellow or greenish	35-37°C	18-24 Hours
Proteus mirabilis	25933	50-100	Good-luxuriant	>=50%	Blue-green	35-37°C	18-24 Hours
Staphylococcus aureus subsp. aureus	25923	50-100	Good-luxuriant	>=50%	Golden-yellow	35-37°C	18-24 Hours
Streptococcus pyogenes	19615	50-100	Good-luxuriant	>=50%	Greyish-green	35-37°C	18-24 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

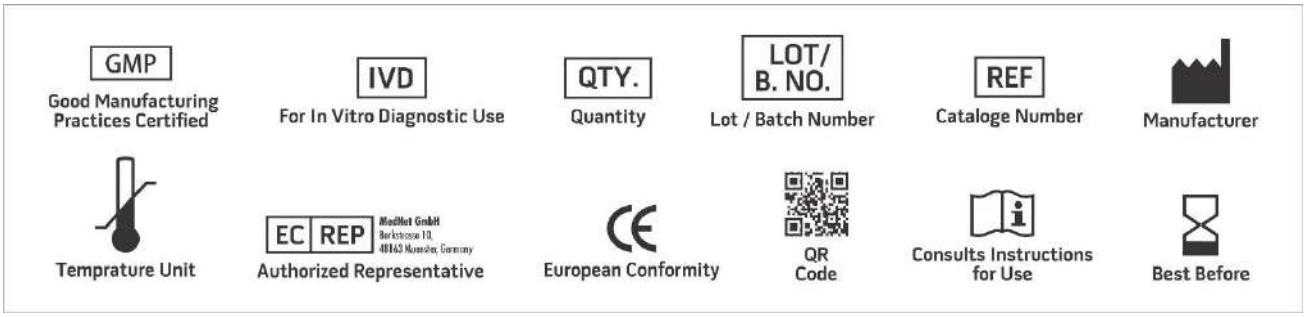
DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Bevis T. D., 1968, J. Med. Lab. Technol., 25:38.
2. Dixson J. M. S. and Clark M. A., 1968, Conc. Med. Assoc. J., 99 (15)
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. Mackey and Sandys, 1965, Br. Med. J., 2:1286.
6. Mackey and Sandys, 1966, Br. Med. J., 1:1173.
7. Sandys, 1960, J. Med. Lab. Technol., 17:224.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 08 Nov., 2019

TM 266 – PSUEDOMONAS AGAR P (FOR FLUORESCEIN)

INTENDED USE

For detection of fluorescein production by *Pseudomonas* species

PRODUCT SUMMARY AND EXPLANATION

Pseudomonas Agar (For Fluorescein) is based on the formula described by King et al and as modified in the U.S. Pharmacopeia for the detection of fluorescein production a water soluble, chloroform insoluble fluorescent pigment by *Pseudomonas* species. The medium enhances the elaboration of fluorescein by *Pseudomonas* and inhibits the pyocyanin formation. The fluorescein pigment diffuses from the colonies of *Pseudomonas* into the agar and shows yellow fluorescent colouration. Some *Pseudomonas* strains produce small amounts of pyocyanin resulting in a yellow-green colouration.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	10.000
Proteose peptone	10.000
Dipotassium hydrogen phosphate	1.500
Magnesium sulphate	1.500
Agar	15.000

PRINCIPLE

Tryptone and proteose peptone provide the essential nitrogenous nutrients, carbon, sulphur and trace elements for the growth of *Pseudomonas*. Dipotassium hydrogen phosphate buffers the medium while magnesium sulphate provides necessary cations for the activation of fluorescein production. Salt concentration exceeding 2% affects pigment production. UV illumination may be bactericidal, so make sure that there is good growth before placing culture under UV light. A pyocyanin-producing Pseudomonas strain will usually also produce fluorescein. It must, therefore, be differentiated from other simple fluorescent Pseudomonads by other means. Temperature can be a determining factor as most other fluorescent strains will not grow at 35°C. Rather, they grow at 25-30°C.

INSTRUCTION FOR USE

- Dissolve 38 grams in 1000 ml purified / distilled water containing 10 ml glycerol**.**
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder
Appearance of prepared medium : Yellow coloured clear to slightly opalescent gel forms in Petri plates
pH (at 25°C) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

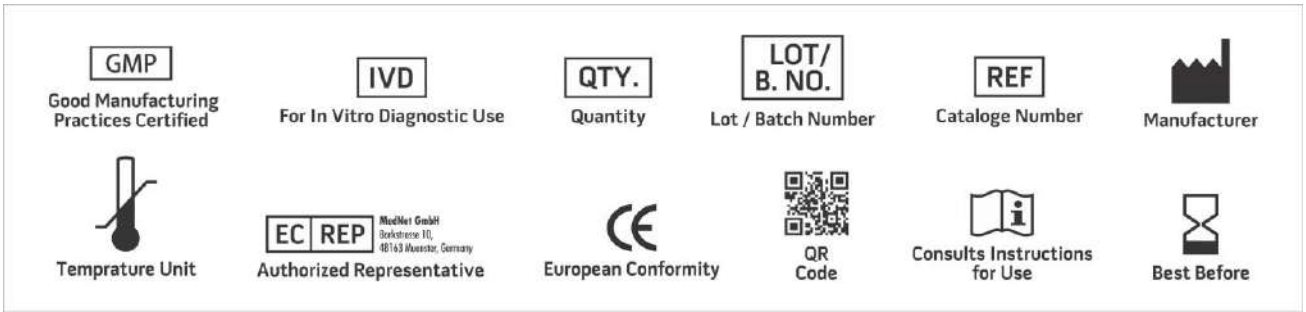
Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Color of the colony	Incubation Temperature	Incubation Period
Pseudomonas aeruginosa	17934	50-100	Luxuriant	>=70%	Greenish yellow	35-37°C	18-24 Hours
Pseudomonas aeruginosa	27853	50-100	Luxuriant	>=70%	Greenish yellow	35-37°C	18-24 Hours
Pseudomonas aeruginosa	9027	50-100	Luxuriant	>=70%	Greenish yellow	35-37°C	18-24 Hours

PACKAGING:
In pack size of 100 and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
1. King, Ward and Raney, 1954, J. Lab. Clin. Med., 44 : 301.
2. The United States Pharmacopoeia, 2006, USP29/NF24, The United States Pharmacopeial Convention, Rockville, MD.
3. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019

TM 269 – R-2A AGAR

INTENDED USE

For heterotrophic plate count of treated potable water using longer incubation time.

PRODUCT SUMMARY AND EXPLANATION

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 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. Stressed or injured organisms during water treatment are unable to grow on high nutrient media, since the faster growing organisms outgrow the former. 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.

COMPOSITION

Ingredients	Gms / Ltr
Casein Acid Hydrolysate	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

PRINCIPLE

This medium consists of Casein acid hydrolysate, proteose peptone and yeast extract which 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.

INSTRUCTION FOR USE

- Dissolve 18.12 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 min. DO NOT OVERHEAT. Cool to 45-50°C.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light yellow coloured clear to slightly opalescent gel forms in petri plates.
pH (at 25°C) : 7.2 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation. (In case of water samples from fields it is suggested to incubate further for upto 7 days to ascertain the absence of organisms).

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Candida albicans	10231	10-100	Good-luxuriant	>=50%	30-35°C	24-72 Hours
Escherichia coli	25922	50-100	Good-luxuriant	>=50%	30-35°C	24-72 Hours
Salmonella Enteritidis	13076	50-100	Good-luxuriant	>=50%	30-35°C	24-72 Hours
Pseudomonas aeruginosa	9027	50-100	Good-luxuriant	>=50%	30-35°C	24-72 Hours
Staphylococcus aureus subsp. aureus	6538	50-100	Good-luxuriant	>=50%	30-35°C	24-72 Hours
Bacillus subtilis subsp. spizizenii	6633	50-100	Good-luxuriant	>=50%	30-35°C	24-72 Hours
Aspergillus brasiliensis	16404	10-100	Good-luxuriant	>=50%	30-35°C	24-72 Hours
Enterococcus faecalis	29212	50-100	Good-luxuriant	>=50%	30-35°C	24-72 Hours

Salmonella Typhi	6539	50-100	Good-luxuriant	>=50%	30-35°C	24-72 Hours

PACKAGING:
In pack size of 100 gm and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
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.
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4. Collins V. J. and Willoughby J. G., 1962, Arch. Microbiol., 43:294.
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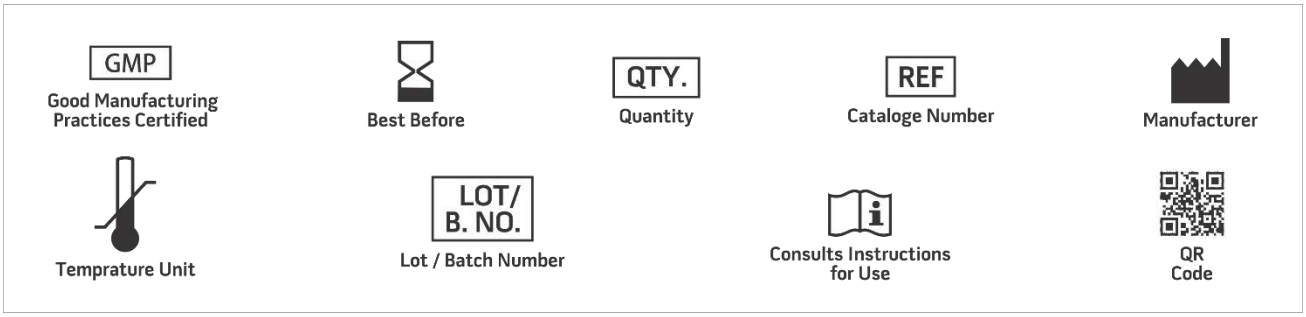

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019

TM 318 – THIOGLYCOLLATE MEDIUM, FLUID (FLUID THIOGLYCOLLATE MEDIUM) (as per USP)

INTENDED USE

For sterility testing of biologicals and for cultivation of aerobes, anaerobes and microaerophiles.

PRODUCT SUMMARY AND EXPLANATION

Brewer 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 USP, BP, EP and AOAC 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

COMPOSITION

Ingredients	Gms / Ltr
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

PRINCIPLE

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. 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. 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. Any increase in the oxygen content is indicated by a colour change of redox indicator, resazurin to red. The small amount of agar helps in maintaining low redox potential for stabilizing the medium.

INSTRUCTION FOR USE

- Dissolve 29.75 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi 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.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light straw coloured, clear to slightly opalescent solution with upper 10% or less medium pink-purple on standing.
pH (at 25°C) : 7.1±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Clostridium sporogenes	19404	50 -100	Luxuriant	>=70%	30-35°C	Not more than 3 Days
Clostridium sporogenes	11437	50 -100	Luxuriant	>=70%	30-35°C	Not more than 3 Days
Clostridium perfringens	13124	50 -100	Luxuriant	>=70%	30-35°C	Not more than 3 Days
Bacteroides fragilis	23745	50 -100	Luxuriant	>=70%	30-35°C	Not more than 3 Days
Bacteroides vulgatus	8482	50 -100	Luxuriant	>=70%	30-35°C	Not more than 3 Days
Staphylococcus aureus subsp. aureus	25923	50 -100	Luxuriant	>=70%	30-35°C	Not more than 3 Days
Staphylococcus aureus subsp. aureus	6538	50 -100	Luxuriant	>=70%	30-35°C	Not more than 3 Days
Pseudomonas aeruginosa	27853	50 -100	Luxuriant	>=70%	30-35°C	Not more than 3 Days
Pseudomonas aeruginosa	9027	50 -100	Luxuriant	>=70%	30-35°C	Not more than 3 Days
Streptococcus pneumoniae	6305	50 -100	Luxuriant	>=70%	30-35°C	Not more than 3 Days
Escherichia coli	8739	50 -100	Luxuriant	>=70%	30-35°C	Not more than 3 Days
Salmonella Typhimurium	14028	50 -100	Luxuriant	>=70%	30-35°C	Not more than 3 Days

Bacillus subtilis subsp. spizizenii	6633	50 -100	Luxuriant	>=70%	30-35°C	Not more than 3 Days

PACKAGING:
In pack size of 100 gm and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
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2. British Pharmacopoeia, 2020, The Stationery office British Pharmacopoeia
3. European Pharmacopoeia, 2020, European Dept. for the quality of Medicines.
4. Federal Register, 1992, Fed. Regist., 21:640.
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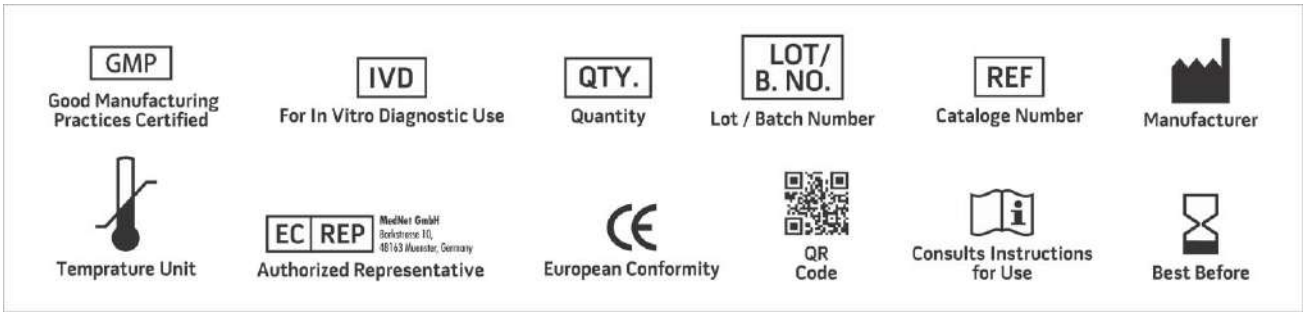
11. Quastel and Stephenson, 1926, J.Biochem., 20
12. The United States Pharmacopoeia, 2019, The United States Pharmacopoeial Convention, Rockville, MD. 13. Williams H., (Ed.), 2005, Official Methods of Analysis of the Association of Official Analytical Chemists, 19th Ed., AOAC,Washington, D.C



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019

TM 330 – PEPTONE WATER

INTENDED USE
General purpose growth medium and used as the base of carbohydrate fermentation media.

PRODUCT SUMMARY AND EXPLANATION
Peptone Water is particularly 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 also 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 recommended 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. Peptone Water with pH adjusted to 8.4 is suitable for the cultivation and enrichment of Vibrio species.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	10.000
Sodium chloride	5.000

PRINCIPLE
The medium consists of peptone which provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins provides essential nutrients. Sodium chloride maintains the osmotic balance of the medium.

INSTRUCTION FOR USE
- Dissolve 15.0 grams in 1000 ml 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 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS
Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light amber coloured clear solution without any precipitate.
pH (at 25°C) : 7.2 ± 0.2

INTERPRETATION
Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Indole test	Incubation Temperature	Incubation Period
Staphylococcus aureus subsp. aureus	25923	50-100	Luxuriant	Negative reaction, no red ring at the interface of the medium on addition of Kovac's reagent	35-37°C	18-24 Hours

Escherichia coli	25922	50-100	Luxuriant	Positive reaction, red ring at the interface of the medium on addition of Kovac's reagent	35-37°C	18-24 Hours
Salmonella Typhimurium	14028	50-100	Luxuriant	Negative reaction, no red ring at the interface of the medium on addition of Kovac's reagent	35-37°C	18-24 Hours

PACKAGING:
In pack size of 100 gm and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

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.
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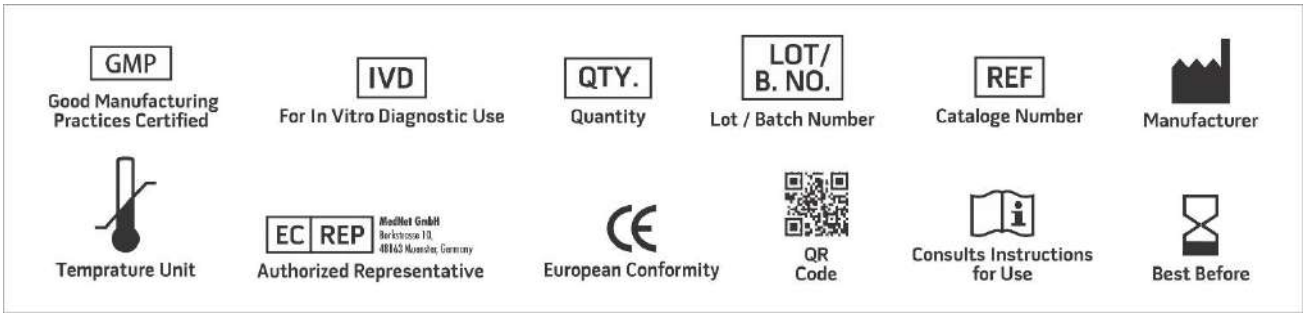


NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 08 Nov., 2019

TM 332 - SOYA CASEIN DIGEST MEDIUM (ANTIBIOTIC ASSAY MEDIUM NO.37) (TRYPTONE SOYA BROTH) CASO BROTH

INTENDED USE

For sterility testing and cultivation of fastidious and non-fastidious microorganisms.

PRODUCT SUMMARY AND EXPLANATION

Grove and Randall have elucidated the antibiotic assays and medias in their comprehensive treatise on antibiotic assays. Antibiotic Assay Medium No. 37 can be used as a general medium for sterility checking of pharmaceutical products and cultivation of fastidious and non-fastidious organisms and is formulated as per CFR and USP. It is also used for the sensitivity testing by the tube dilution method for antimicrobial agents.

Turbidimetric antibiotic assay is based on the change or inhibition of growth of a test microorganims in a liquid medium containing a uniform concentration of an antibiotic. After incubation of the test orgainism in the working dilutions of the antibiotics, the amount of growth is determined by measuring the light transmittance using spectrophotometer. The concentration of antibiotic is determined by comparing amounts of growth obtained with that given by the reference standard solutions. Use of this method is appropriate only when test samples are clear.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	17.000
Papaic digest of soyabean meal	3.000
Dextrose	2.500
Sodium chloride	5.000
Dipotassium phosphate	2.500

PRINCIPLE

The combination of casein enzymic hydrolysate and papaic digest of soyabean meal makes this medium nutritious by providing amino acids and long chain peptides for the growth of microorganisms. Dextrose serves as the carbohydrate source and dipotassium phosphate faclitates buffering in the medium. Sodium chloride maintains the osmotic balance of the medium.

INSTRUCTION FOR USE

- Dissolve 30 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 25°C and store in a cool dark place preferably below 25°C.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light yellow coloured clear solution without any precipitate.
pH (at 25°C) : 7.3±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

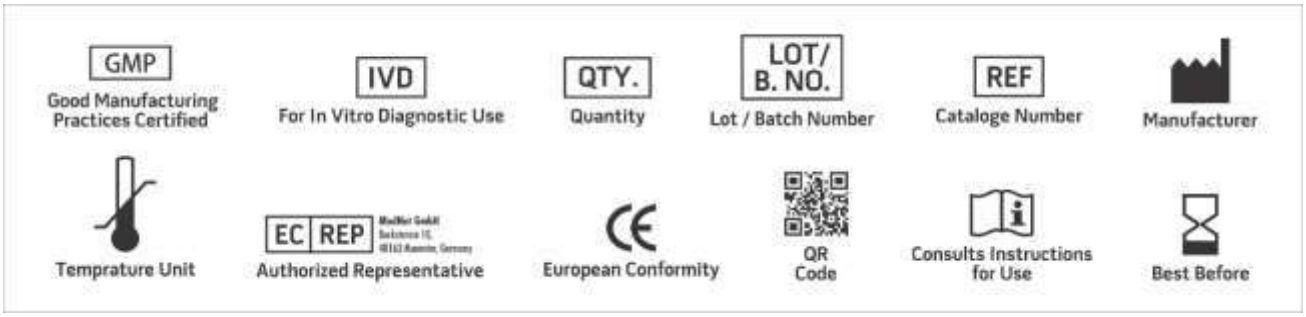
Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Escherichia coli	25922	50 -100	Luxuriant	30-35°C	<= 3 days
Escherichia coli	8739	50 -100	Luxuriant	30-35°C	<= 3 days
Salmonella Ebony	6017	50 -100	Luxuriant	30-35°C	<= 3 days
Salmonella Typhimurium	14028	50 -100	Luxuriant	30-35°C	<= 3 days
Bacillus subtilis	6633	50 -100	Luxuriant	30-35°C	<= 3 days
Staphylococcus aureus	25923	50 -100	Luxuriant	30-35°C	<= 3 days
Micrococcus luteus	9341	50 -100	Luxuriant	30-35°C	<= 3 days
Streptococcus pneumoniae	6305	50 -100	Luxuriant	30-35°C	<= 3 days
Pseudomonas aeruginosa	27853	50 -100	Luxuriant	30-35°C	<= 3 days
Candida albicans	10231	10 -100	Luxuriant	20-25°C	<= 5 days
Aspergillus brasiliensis	16404	10 -100	Luxuriant	20-25°C	<= 5 days

PACKAGING:
In pack size of 100 gm and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
1. Grove and Randall, 1955, Assay Methods of Antibiotics, Medical Encyclopedia, Inc. New York
2. Tests and Methods of Assay of Antibiotics and Antibiotic Containing Drugs, FDA, CFR, 1983 Title 21, Part 436, Subpart D, Washington, D.C.: U.S. Government Printing Office, paragraphs 436, 100-436, 106, p. 242-259, (April 1).
3. United States Pharmacopoeia / National Formulary (USP21/NF16) 1985, US Pharmacopoeial Convention, Inc., Rockville, MD.
4. Wright and Welch, 1959-60, Antibiotics Ann., 61.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019

TM 350 – NUTRIENT BROTH

INTENDED USE

For general cultivation of less fastidious microorganisms, can be enriched with blood.

PRODUCT SUMMARY AND EXPLANATION

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. 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. 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.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	5.000
Beef extract	1.500
Yeast extract	1.500
Sodium chloride	5.000

PRINCIPLE

The medium consists of Peptone, Beef extract and yeast extract that 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.

INSTRUCTION FOR USE

- Dissolve 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 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light yellow coloured clear to slightly opalescent solution.
pH (at 25°C) : 7.4 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period

Escherichia coli	25922	50-100	Good-luxuriant	35-37°C	18-48 Hours
Salmonella Typhi	6539	50-100	Good-luxuriant	35-37°C	18-48 Hours
Staphylococcus aureus aubsp.aureus	25923	50-100	Good-luxuriant	35-37°C	18-48 Hours
Streptococcus pyogenes	19615	50-100	Good-luxuriant	35-37°C	18-48 Hours
Pseudomonas aeruginosa	27853	50-100	Good-luxuriant	35-37°C	18-48 Hours

PACKAGING:
In pack size of 100 gm and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., 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, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
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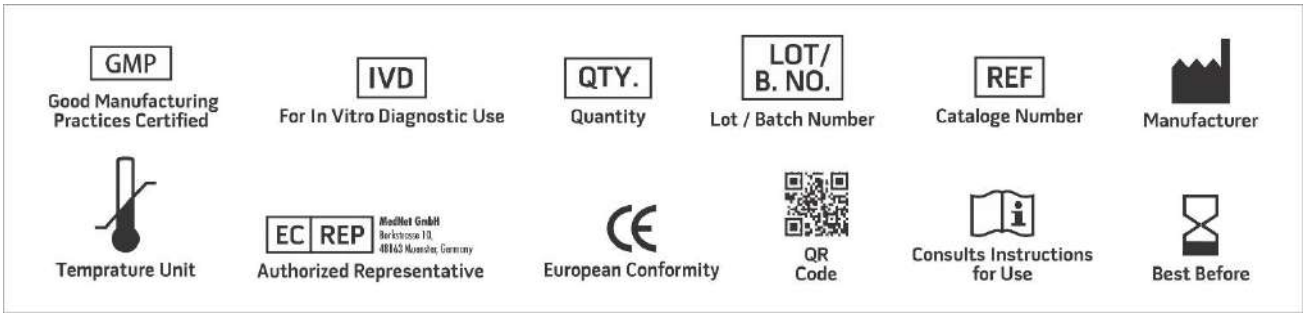

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 08 Nov., 2019

TM 358 – BAIRD PARKER AGAR BASE

INTENDED USE

For isolation and enumeration of coagulase positive Staphylococci from food and other products.

PRODUCT SUMMARY AND EXPLANATION

Baird Parker Agar was developed by Baird Parker from the Tellurite-glycine formulation of Zebovitz et al for isolation and enumeration of Staphylococci in food and other material since it allows a good differentiation of coagulase positive strains. A high correlation has been found between the coagulase test and the presence of clear zone of lipolysis in this medium, which is due to the lecithinase of Staphylococci that breakdown, the egg yolk. On the other hand, studies show that almost 100% of coagulase positive Staphylococci are capable of reducing tellurite, which produces black colonies, whereas other Staphylococci cannot always do so. The medium was found to be less inhibitory to *Staphylococcus aureus* than other media at the same time being more selective. Subsequently the use of Baird-Parker Agar was officially adopted by AOAC International and is recommended in the USP for use in the performance of Microbial Limit Tests. Recently, ISO committee has also recommended this medium for the isolation and enumeration of Staphylococci.

The identity of *Staphylococcus aureus* isolated on Baird-Parker Agar must be confirmed with a coagulase reaction. Baird Parker Agar can also be used to detect coagulase activity by adding fibrinogen plasma. Fibrinogen Plasma Trypsin Inhibitor supplement dissolved in 10 ml sterile distilled water added to 90 ml sterile molten media kept at 45-50°C. On this medium coagulase positive colonies appear white to grey-black surrounded by an opaque zone due to coagulase activity within 24-48 hours after 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. Smith and Baird-Parker found that the addition of 50 mg/l Sulphamethazine in the medium, suppresses the growth and swarming of Proteus species.

Glycine, pyruvate enhances growth of *Staphylococcus*. With the addition of egg yolk, the medium becomes yellow, opaque. The egg yolk additive, in addition to provide enrichment, aids in the identification process by demonstrating lecithinase activity (egg yolk reaction). 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. When testing the medium, inoculate the material to be examined (0.1 ml per plate of diameter 90-100 mm), incubate at 37°C and take the first reading after 24-26 hours. The colonies of *Staphylococcus aureus* are black and shiny, with a fine white rim, surrounded by a clear zone. Incubate at 37°C for another 24 hours and perform the coagulase test on the colonies with the above characteristics, which have developed during the further incubation period. Plates should be used on the same day of preparation or within 48 hours, to avoid the loss of definition in the precipitated zones. The basal medium, without the egg yolk or the tellurite, is perfectly stable. Colonies of some contaminating organisms may digest the coagulase halo reaction. Other bacteria may grow on this media but biochemical test will differentiate coagulase positive Staphylococci from the other organisms.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	10.000
Beef exract	5.000
Yeast extract	1.000
Glycine	12.000
Sodium pyruvate	10.000
Lithium chloride	5.000
Agar	20.000

PRINCIPLE

Tryptone, beef extract and yeast extract are sources of nitrogen, carbon, sulphur and vitamins. Sodium pyruvate not only protects injured cells and helps recovery but also stimulates *Staphylococcus aureus* growth without destroying selectivity. Lithium chloride and potassium tellurite inhibit most of the contaminating microflora except *Staphylococcus aureus*. The tellurite additive is toxic to egg yolk-clearing strains other than *S.aureus* and imparts a black colour to the colonies.

INSTRUCTION FOR USE

- Dissolve 63.0 grams in 950 ml purified/ distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 50°C and aseptically add 50 ml concentrated Egg Yolk Emulsion and 3 ml sterile 3.5% Potassium Tellurite solution or 50 ml Egg Yolk Tellurite Emulsion.
- For additional selectivity, if desired add rehydrated contents of 1 vial of BP Sulpha Supplement. Alternatively, 1 vial of Fibrinogen Plasma Trypsin Inhibitor Supplement may be used per 90 ml medium in place of Egg yolk Tellurite Emulsion for identification of coagulase, positive Stapylococci.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.

Appearance 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.

pH (at 25°C) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after incubation. Recovery rate is considered as 100% for bacteria growth on Soyabean Casein Digest Agar.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Lecithinase	Incubation Temperature	Incubation Period
Staphylococcus aureus subsp. aureus	6538	50 -100	Luxuriant	>=70%	Grey-black shiny	Positive, opaque zone around the colony	35-37°C	24-48 Hours
Staphylococcus aureus subsp. aureus	25923	50 -100	Luxuriant	>=70%	Grey-black shiny	Positive, opaque zone around the colony	35-37°C	24-48 Hours
Proteus mirabilis	25933	50 -100	Good-luxuriant	>50%	Brown-black	Negative	35-37°C	24-48 Hours
Micrococcus luteus	10240	50 -100	Poor-good	10-40%	Shades of brown-black (very small)	Negative	35-37°C	24-48 Hours
Staphylococcus epidermidis	12228	50 -100	Poor-good	10-40%	Black	Negative	35-37°C	24-48 Hours

Bacillus subtilis subsp. spizizenii	6633	50 -100	None-poor	0-10%	Dark brown matt	Negative	35-37°C	24-48 Hours
Escherichia coli	8739	50 -100	None-poor	0-10%	Large brown black	Negative	35-37°C	24-48 Hours
Escherichia coli	25922	50 -100	None-poor	0-10%	Large brown black	Negative	35-37°C	24-48 Hours

PACKAGING:
In pack size of 100 gm and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
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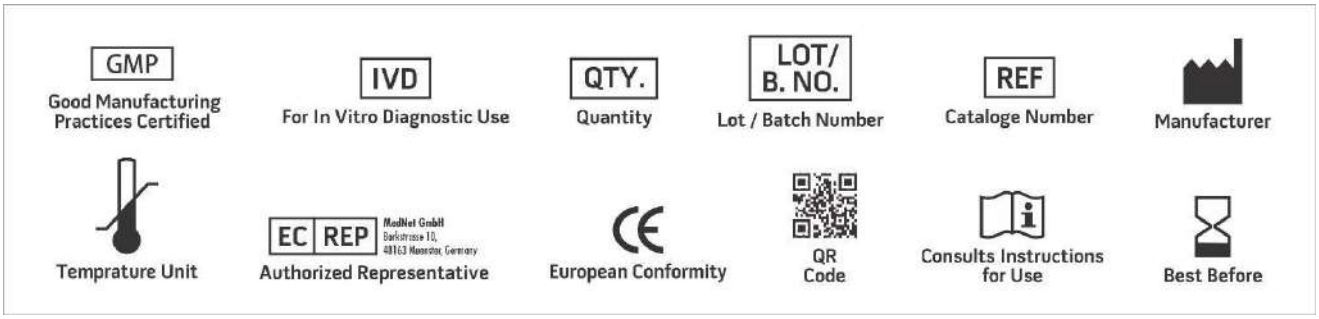

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 25 July., 2023

TM 364 – BRILLIANT GREEN AGAR BASE, MODIFIED

INTENDED USE

For selective isolation of Salmonellae other than *Salmonella Typhi* from faeces and foods etc.

PRODUCT SUMMARY AND EXPLANATION

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. and further modified by Kauffmann. Brilliant Green Agar is also recommended by APHA, FDA and described in EP, BP and IP.

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. 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.

COMPOSITION

Ingredients	Gms / Ltr
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

PRINCIPLE

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. 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.

INSTRUCTION FOR USE

- Dissolve 29.0 grams in 500 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. AVOID OVERHEATING. Cool to 45-50°C.
- For more selectivity, aseptically add rehydrated contents of 1 vial of Sulpha Supplement.
- Mix well before pouring into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to light pink homogeneous free flowing powder.
Appearance of prepared medium : Greenish brown clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 6.9±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Escherichia coli	25922	50 -100	None-poor	0-10%	Yellowish green	30-35°C	24-48 Hours
Escherichia coli	8739	50 -100	None-poor	0-10%	Yellowish green	30-35°C	24-48 Hours
Staphylococcus aureus subsp. aureus	25923	>=10^3	Inhibited	0%	-	30-35°C	24-48 Hours
Staphylococcus aureus subsp. aureus	6538	>=10^3	Inhibited	0%	-	30-35°C	24-48 Hours
Salmonella Typhi	6539	50-100	Fair-good	20-40%	Reddish-pink	30-35°C	24-48 Hours
Salmonella Typhimurium	14028	50 -100	Good-luxuriant	>=50%	Pinkish white	30-35°C	24-48 Hours
Salmonella Enteritidis	13076	50 -100	Luxuriant	>=70%	Pinkish white	30-35°C	24-48 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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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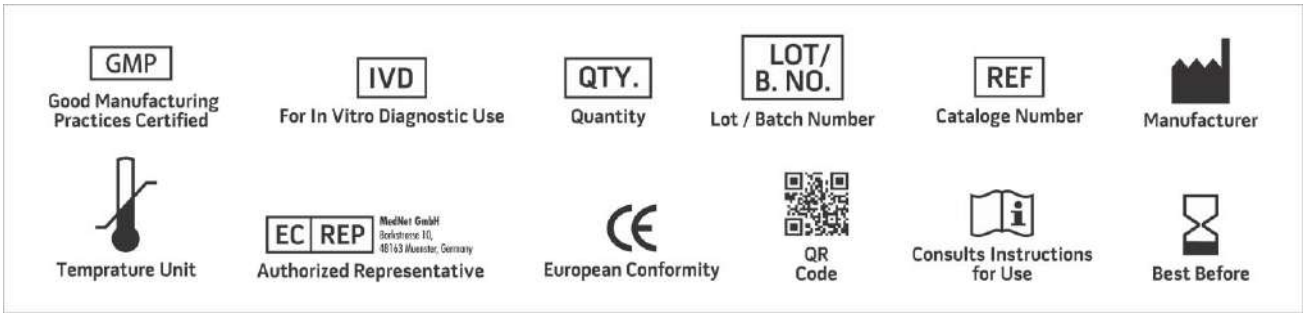
6. The British Pharmacopoeia, 2008 vol. II, London.
7. The European Pharmacopoeia, 2008, Council or Europe, Strasbourg



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 08 Nov., 2019

TM 371 – EMB AGAR, LEVINE

INTENDED USE

For isolation, enumeration and differentiation of members of *Enterobacteriaceae* from pharma, dairy & food products.

PRODUCT SUMMARY AND EXPLANATION

Levine EMB Agar was developed by Levine and is used for the differentiation of *Escherichia coli* and *Enterobacter 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. It is also recommended by BIS for detection and estimation of coliform bacteria in food stuff and Escherichia coli from food and water.

COMPOSITION

Ingredients	Gms / Ltr
Peptic digest of animal tissues	10.00
Dipotassium phosphate	2.000
Lactose	10.00
Eosin -Y	0.400
Methylene blue	0.065
Agar	15.000

PRINCIPLE

Eosin-Y and methylene blue make the medium slightly selective and inhibit certain gram-positive bacteria. These dyes differentiate between lactose fermenters and non-fermenters. Some gram-positive bacteria such as faecal Streptococci, yeasts grow on this medium and form pinpoint colonies. Weld 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.

INSTRUCTION FOR USE

- Dissolve the 37.5 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi 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.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light pink to purple coloured homogeneous free flowing powder.

Appearance of prepared medium : Reddish purple coloured slightly opalescent gel with greenish cast and finely dispersed precipitate, forms in Petri plates.

pH (at 25°C) : 7.1 ± 0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Color of the colony	Incubation Temperature	Incubation Period
Candida albicans	10231	10-100	Good-Luxuriant (Incubated in 10% carbon dioxide)	>=70%	Colourless	35-37°C	24-48 Hours
Enterobacter aerogenes	13048	50-100	Good	40-50%	Pink red	35-37°C	24-48 Hours
Enterococcus faecalis	29212	>=10^3	Inhibited	0%	-	35-37°C	24-48 Hours
Escherichia coli	25922	50-100	Luxuriant	>=70%	Blue- black with metallic sheen	35-37°C	24-48 Hours
Pseudomonas aeruginosa	27853	50-100	Luxuriant	>=70%	Colourless	35-37°C	24-48 Hours
Saccharomyces cerevisiae	9763	10-100	None-poor	0-10%	Cream	35-37°C	24-48 Hours
Salmonella Serotype Typhimurium	14028	50-100	Luxuriant	>=70%	Colourless	35-37°C	24-48 Hours
Staphylococcus aureus	25923	50-100	None-poor	0-10%	Colourless	35-37°C	24-48 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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3. Greenberg A. E., Trussell R. R. and Clesceri L. S. (Eds.), 1985, Standard Methods for the Examination of Water and Waste water, 16th ed., APHA, Washington, D.C.
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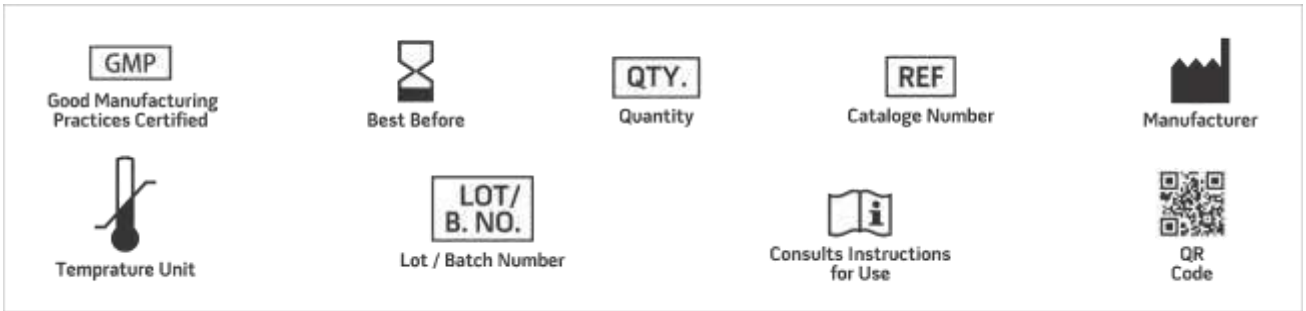

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 08 Nov., 2019

TM 384 – POTATO DEXTROSE AGAR W/ ROSE BENGAL

INTENDED USE
For propagation of ascospores.

PRODUCT SUMMARY AND EXPLANATION
Potato Dextrose media are recommended by APHA and F.D.A. for plate counts of yeasts and moulds in the examination of foods and dairy products. Potato Dextrose Agar is used for stimulating sporulation, for maintaining stock cultures of certain dermatophytes and for differentiation of typical varieties of dermatophytes on the basis of pigment production. Potato Dextrose Rose Bengal Agar enhances ascospore production.

COMPOSITION

Ingredients	Gms / Ltr
Potatoes, infusion from	200.000
Dextrose (Glucose)	20.000
Agar	15.000
Rose Bengal	0.0084

PRINCIPLE
This medium consists of Potato infusion and dextrose that promote luxuriant fungal growth. Acidifying the medium to pH 3.5 by tartaric acid inhibits bacterial growth. Heating the medium after acidification should be avoided as it may hydrolyse the agar, which can render the agar unable to solidify. Rose bengal is the eosin-related dye which inhibits the spreading of some rapidly growing fungi and has antibacterial properties as well.

INSTRUCTION FOR USE
- Dissolve 39.0 grams in 1000 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Mix well before dispensing. In specific work, when pH 3.5 is required, acidify the medium with sterile 10% tartaric acid. The amount of acid required for 100 ml. of sterile, cooled medium is approximately 1 ml. Do not heat the medium after addition of the acid.

QUALITY CONTROL SPECIFICATIONS
Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Pink coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 5.6 ± 0.2

INTERPRETATION
Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Ascospore formation	Recovery	Incubation Temperature	Incubation Period

Candida albicans	10231	10-100	Good-luxuriant	Negative	>=50%	20-25°C	2-7 Days
Saccharomyces cerevisiae	9763	10-100	Good-luxuriant	Positive	>=50%	20-25°C	2-7 Days
Aspergillus niger	16404	10-100	Good-luxuriant	Negative	>=50%	20-25°C	2-7 Days

PACKAGING:
In pack size of 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
1. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
2. FDA Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, DC.
3. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
4. MacFaddin J. F., 1985, Media for the Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.1, Williams and Wilkins, Baltimore.
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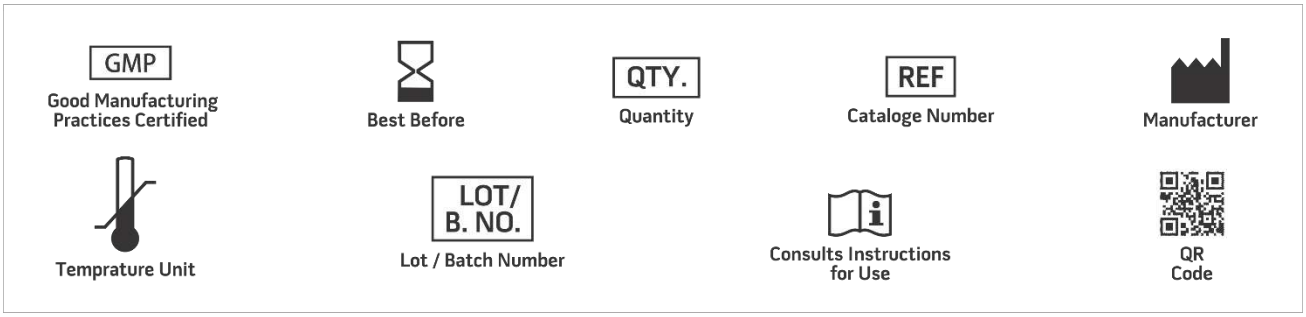

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019

TM 386 - SS AGAR (SALMONELLA SHIGELLA AGAR)

INTENDED USE

For differential and selective isolation of *Salmonella* and *Shigella* species from pathological samples.

PRODUCT SUMMARY AND EXPLANATION

SS Agar medium is recommended as differential and selective medium for the isolation of *Salmonella* and *Shigella* species from pathological specimens and suspected foodstuffs and for microbial limit test. SS Agar is a moderately selective medium in which gram-positive bacteria are inhibited by bile salts, brilliant green and sodium citrate.

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.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	5.000
Beef extract	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

PRINCIPLE

Peptone, Beef extract 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.

INSTRUCTION FOR USE

- Dissolve 63.02 grams in 1000 ml 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.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to pink homogeneous free flowing powder.

Appearance of prepared medium : Reddish orange coloured clear to slightly opalescent gel forms in Petri plates.

pH (at 25°C) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Color of the colony	Incubation Temperature	Incubation Period
Klebsiella aerogenes	13048	50-100	Fair	20-30%	Cream pink	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	Fair	20-30%	Pink with bile Precipitate	35-37°C	18-24 Hours
Salmonella Choleraesuis	12011	50-100	Good-luxuriant	>=50%	Colourless with black center	35-37°C	18-24 Hours
Salmonella Typhi	6539	50-100	Good-luxuriant	>=50%	Colourless with black center	35-37°C	18-24 Hours
Enterococcus faecalis	29212	50-100	None-poor	0-10%	Colourless	35-37°C	18-24 Hours
Proteus mirabilis	25933	50-100	Fair-good	20-40%	Colourless, may have black center	35-37°C	18-24 Hours
Shigella flexneri	12022	50-100	Good	40-50%	Colourless	35-37°C	18-24 Hours
Salmonella Typhimurium	14028	50-100	Good-luxuriant	>=50%	Colourless with black center	35-37°C	18-24 Hours
Salmonella Enteritidis	13076	50-100	Good-luxuriant	>=50%	Colourless with black center	35-37°C	18-24 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and
2. Wastewater, 23rd ed., APHA, Washington, D.C.
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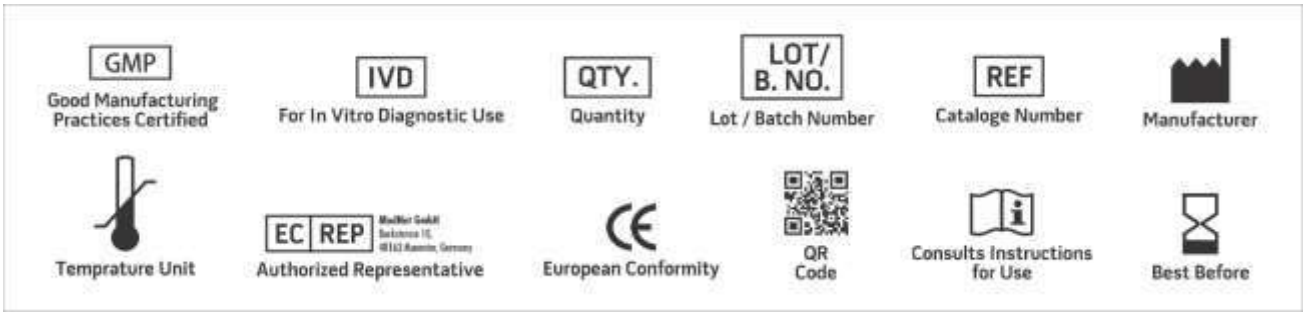

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 08 Nov., 2019

TM 388 – SABOURAUD DEXTROSE BROTH

INTENDED USE
For cultivation of yeasts, molds and aciduric microorganisms.

PRODUCT SUMMARY AND EXPLANATION
Sabouraud Dextrose Agar is Carliers modifications of the formulation described by Sabouraud for the cultivation of fungi, particularly those associated with skin infections. The medium is also recommended by APHA. Sabouraud Dextrose Broth is also a modification by Sabouraud and serves the same purpose as Sabouraud Dextrose Agar Medium 3.

COMPOSITION

Ingredients	Gms / Ltr
Dextrose	20.000
Peptone, special	10.000

PRINCIPLE
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. 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.

INSTRUCTION FOR USE
- Dissolve 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 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS
Appearance of Powder : Cream to yellow, homogeneous free flowing powder
Appearance of prepared medium : Light amber colored clear solution in tubes.
pH (at 25°C) : 5.6 ± 0.2

INTERPRETATION
Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Candida albicans	10231	10-100	Luxuriant	20-25°C	3-5 days

Candida albicans	2091	10-100	Luxuriant	20-25°C	3-5 days
Aspergillus brasiliensis	16404	10-100	Luxuriant	20-25°C	3-5 days
Saccharomyces cerevisiae	9763	10-100	Luxuriant	20-25°C	3-5 days
Escherichia coli	8739	50-100	Luxuriant (inhibited on media with low pH)	20-25°C	3-5 days

PACKAGING:
In pack size of 100 gm and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
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2. Moeller V., 1954, Acta Pathol. Microbiol. Scand., 355:25.
3. W.H. Ewing, B.R. Davis, F.R.Edward, The decarboxylase reactions of Enterobacteriaceae and their value in taxonomy, Pub. Hlth. Labs., 18, 77 (1960)
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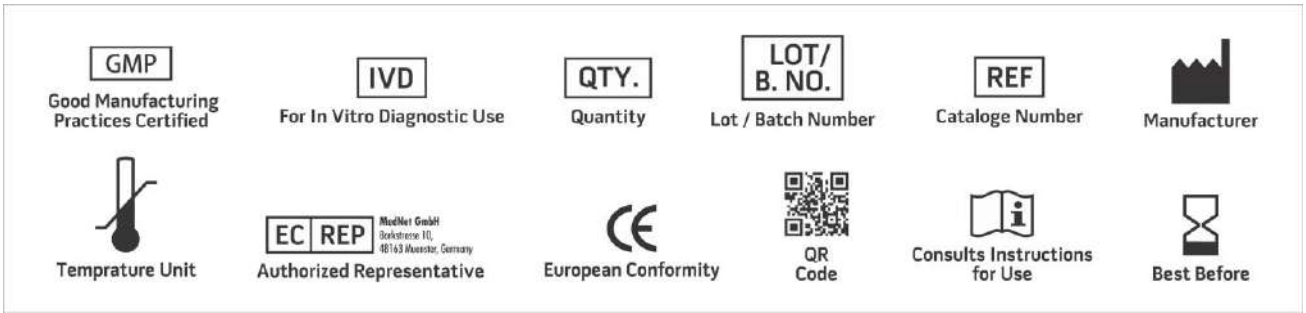

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**

Revision: 08 Nov., 2019

TM 471 – TRYPTONE SOYA YEAST EXTRACT AGAR

INTENDED USE

For isolation and cultivation of *Listeria* from Henry's light.

PRODUCT SUMMARY AND EXPLANATION

Tryptone Soya Yeast Extract Agar is formulated as per APHA for the isolation and cultivation of *L. monocytogenes* from foods. ISO Committee has recommended this medium for confirmation of *Listeria* species and can also be used for the cultivation and maintenance of a wide variety of heterotrophic microorganisms. According to FDAs enrichment procedure for isolation of *L. monocytogenes* from dairy products, the sample to be tested is inoculated in enrichment broth and incubated at 30°C for 24-48 hours. This culture is streaked on Modified McBride Listeria Agar with cycloheximide or Lithium-Phenylethanol-Moxalactam (LPM) Agar and incubated at 35°C for 48 hours. Presumptive *Listeria* colonies are selected under 45° transillumination and colonies are further purified on Tryptone Soya Yeast Extract Agar under the light illumination. *Listeria* colonies are dense white to iridescent white appearing as crushed glass. Other colonies tend to be yellowish or orange.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	17.000
Papaic digest of soyabean meal	3.000
Sodium chloride	5.000
Dipotassium hydrogen phosphate	2.500
Dextrose	2.500
Yeast extract	6.000
Agar	15.000

PRINCIPLE

Casein enzymic hydrolysate and papaic digest of soyabean meal provide amino acids and other complex nitrogenous substances. Dextrose is the energy source. Dipotassium hydrogen phosphate buffers the medium. Yeast extract is the rich source of vitamin B complex.

INSTRUCTION FOR USE

- Suspend 51 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Yellow coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.3±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU)	Growth	Recovery	Incubation Temperature	Incubation Period
Listeria monocytogenes	19111	50-100	Good-luxuriant	>=70%	30-37°C	24-48 Hours
Listeria monocytogenes	19118	50-100	Good-luxuriant	>=70%	30-37°C	24-48 Hours

PACKAGING:
In pack size of 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
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3. Atlas R. M. 2004, 3rd Ed., Handbook of Microbiological Media, Parks, L.C. (Ed.), CRC Press, Boca Raton.
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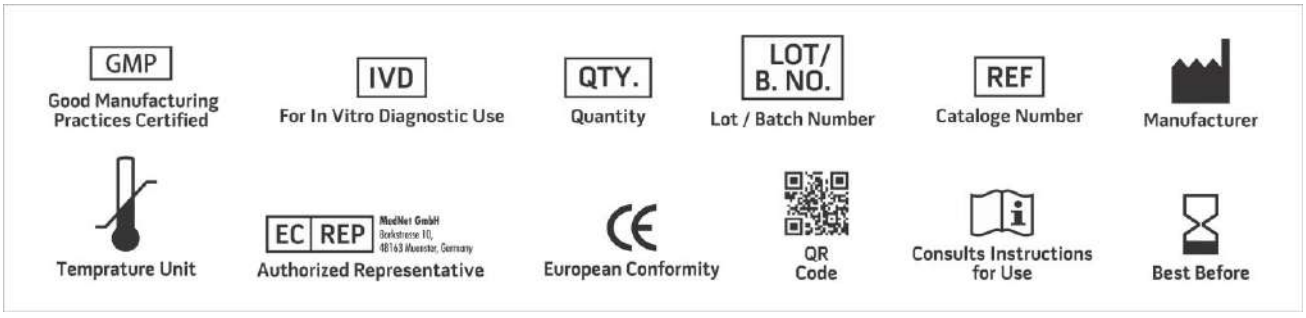

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019

TM 492 – XLD AGAR

INTENDED USE

For selective isolation and enumeration of *Salmonella* Typhi and other *Salmonella* species.

PRODUCT SUMMARY AND EXPLANATION

XLD Agar has been recommended for the identification of *Enterobacteriaceae* and for the microbiological testing. XLD Agar was formulated by Taylor for the isolation and differentiation of enteric pathogens including *Salmonella* Typhi from other *Salmonella* species of foods, water and dairy products. XLD Agar exhibits increased selectivity and sensitivity as compared to other plating media e.g. SS Agar, EMB Agar and Bismuth Sulphite Agar. The media formulation does not allow the overgrowth of other organisms over *Salmonella* and Shigella. Samples suspected of containing enteric pathogens, along with other mixed flora, are initially enriched in Modified Semisolid RV Medium Base.

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.

COMPOSITION

Ingredients	Gms / Ltr
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

PRINCIPLE

The medium consists of 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.

INSTRUCTION FOR USE

- Dissolve 56.68 grams in 1000 ml purified/distilled water.
- Heat with frequent agitation until the medium boils. DO NOT HEAT IN AN AUTOCLAVE.
- Transfer immediately to a water bath at 50°C. After cooling, pour into sterile Petri plates.
- It is advisable not to prepare large volumes, which will require prolonged heating and may produce 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.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to light pink homogeneous free flowing powder.
Appearance of prepared medium : Red coloured clear to very slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.4 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation. Recovery rate is considered as 100% for bacteria growth on Soyabean Casein Digest Agar.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Salmonella Typhimurium	14028	50-100	Luxuriant	>=70%	Red with black centers	35-37°C	18-72 Hours
Escherichia coli	8739	50-100	Fair	20 -30 %	Yellow	35-37°C	18-72 Hours
Escherichia coli	25922	50-100	Fair	20 -30 %	Yellow	35-37°C	18-72 Hours
Proteus vulgaris	13315	50-100	Good-luxuriant	>=50%	Grey with black centers	35-37°C	18-72 Hours
Salmonella Paratyphi A	9150	50-100	Good-luxuriant	>=50%	Red	35-37°C	18-72 Hours
Salmonella Paratyphi B	8759	50-100	Good-luxuriant	>=50%	Red with black centers	35-37°C	18-72 Hours

Salmonella Enteritidis	13076	50-100	Good-luxuriant	>=50%	Red with black centers	35-37°C	18-72 Hours
Salmonella Typhi	6539	50-100	Good-luxuriant	>=50%	Red with black centers	35-37°C	18-72 Hours
Shigella dysenteriae	13313	50-100	Good-luxuriant	>=50%	Red	35-37°C	18-72 Hours
Shigella flexneri	12002	50-100	Fair-good	30 -40 %	Red	35-37°C	18-72 Hours
Shigella sonnei	25931	50-100	Fair-good	30 -40 %	Red	35-37°C	18-72 Hours
Enterobacter aerogenes	13048	50-100	Fair	20 -40 %	Yellow	35-37°C	18-72 Hours
Enterobacter cloacae	13047	50-100	Fair	20 -40 %	Yellow	35-37°C	18-72 Hours
Staphylococcus aureus	25923	>=10^4	Inhibited	0%	-	35-37°C	>=72 Hours
Staphylococcus aureus subsp. aureus	6538	>=10^4	Inhibited	0%	-	35-37°C	>=72 Hours
Enterococcus faecalis	29212	>=10^4	Inhibited	0%	-	35-37°C	>=72 Hours

PACKAGING:
In pack size of 100 gm and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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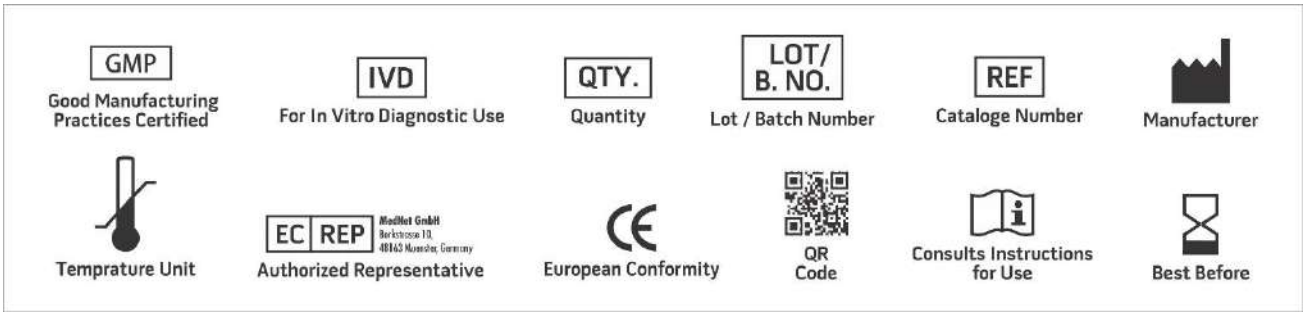

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 08 Nov., 2019

TM 544 - STANDARD METHODS AGAR (PLATE COUNT AGAR) (ISO 4833-1 & 2:2013)

INTENDED USE

For determination of plate counts of microorganisms in foods, water, waste water and also from clinical samples.

PRODUCT SUMMARY AND EXPLANATION

Plate count agar is used for determination of plate counts of microorganisms from samples. This media was formulated and described by Buchbinder et al. Plate count agar is also suitable for determining bacterial count in food and water, indicating microbial contamination. This culture medium complies with the specifications given by ISO 4833-1 & 2:2013 and APHA.

COMPOSITION

Ingredients	Gms / Ltr
Agar	15.000
Tryptone	5.000
Yeast extract	2.500
Dextrose	1.000

PRINCIPLE

The medium consists of Tryptone which provides nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is a source of vitamins, particularly the B-group. Dextrose is the fermentable sugar providing carbon and energy. Agar acts as a solidifying agent.

INSTRUCTION FOR USE

- Dissolve 23.50 grams in 1000ml distilled water.
- Gently heat to boiling with gentle swirling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi (121°C) for 15 minutes
- Cool to 45-50°C.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Dehydrated powder	:	Cream to yellow, homogeneous free flowing powder
Appearance of Prepared medium	:	Light yellow colored, clear to slightly opalescent gel
pH (at 25°C)	:	7.0± 0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Bacillus subtilis	6633	50-100	Luxuriant	>=70%	35-37°C	18-48 Hours
Escherichia coli	25922	50-100	Luxuriant	>=70%	35-37°C	18-48 Hours

Lactobacillus casei	9595	50-100	Luxuriant	>=70%	35-37°C	18-48 Hours
Staphylococcus aureus	25923	50-100	Luxuriant	>=70%	35-37°C	18-48 Hours
Streptococcus pyogenes	19615	50-100	Luxuriant	>=70%	35-37°C	18-48 Hours
Enterococcus faecalis	29212	50-100	Luxuriant	>=70%	35-37°C	18-48 Hours

PACKAGING:
In 100 & 500 gm packaging size.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use powder if they show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 14th ed., APHA Inc., Washington, D.C. (1978).
2. E.W. Frampton, et al., Comparison of ß-glucuronidase and indole-based direct plating methods for enumeration of unstressed E. coli, (1990). J. Food Protect. 53,933.
3. Buchbinder L., Baris Y., Aldd E., Reynolds E., Dilon E., Pessin V., Pincas L. and Strauss A., 1951, Publ. Hlth. Rep., 66:327.

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
Revision: 10th July 2020

TM 615 – TRYPTOSE SULPHITE CYCLOSERINE AGAR BASE

INTENDED USE

For presumptive identification and enumeration of *Clostridium perfringens* from food.

PRODUCT SUMMARY AND EXPLANATION

Tryptose Sulphite Cycloserine Agar (TSC) was originally formulated by Harmon et al 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. Perfringens Agar Base is also recommended by APHA. Perfringens Agar Base can be made selective either by addition of D-cycloserine or Kanamycin and Polymyxin B. TSC Agar Base or SFP Agar Base is comparable in performance for isolation of *C. perfringens*.

COMPOSITION

Ingredients	Gms / Ltr
Tryptose	15.000
Beef extract	5.000
Soya peptone	5.000
Yeast extract	5.000
Sodium metabisulphite	1.000
Ferric ammonium citrate	1.000
Agar	15.000

PRINCIPLE

Tryptose, Soya peptone, yeast extract, Beef extract provide nitrogenous compounds, carbon, sulphur, 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, Kanamycin and Polymyxin B help in the selective isolation of *C. perfringens* by inhibiting accompanying flora. Egg yolk emulsion serves as a source of lecithin utilized by *C. perfringens*.

INSTRUCTION FOR USE

- Suspend 23.5 grams in 475 ml purified / distilled water. Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°) for 15 minutes. Cool to 45-50°C.
- Add 25 ml of Egg Yolk Emulsion and rehydrated contents of 1 vial of S.F.P. Supplement / T.S.C. Supplement.
- Alternatively, if fluorogenic detection is desired add rehydrated contents of Clostridium perfringens supplements instead of S.F.P. Supplement/ T.S.C. Supplement.
- Mix well before pouring into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to brownish yellow homogeneous free flowing powder.
Appearance of prepared medium : Amber coloured clear to slightly opalescent gel. After Addition of Egg Yolk Emlusion : Yellow coloured opaque gel forms in Petri plates.
pH (at 25°C) : 7.6±0.2

INTERPRETATION

Cultural characteristics observed under anaerobic condition with added TSC Supplement/S.F.P Supplement/Clostridium Perfringens Supplement and Egg Yolk Emulsion, after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Sulphite Reduction	Lecithinase/ Haloes	Fluorescence	Incubation Temperature	Incubation Period
Clostridium perfringens	12924	50-100	Luxuriant	>=70%	Positive, blackening of medium	Positive reaction, opaque zone around the colony	Positive Reaction	35-37°C	18-24 Hours
Paeniclostridium sordellii	9714	>=10^4	Inhibited	0%	-	-	-	35-37°C	18-24 Hours

PACKAGING:
In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 10-25°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
1. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 2, Williams and Wilkins, Baltimore.
2. 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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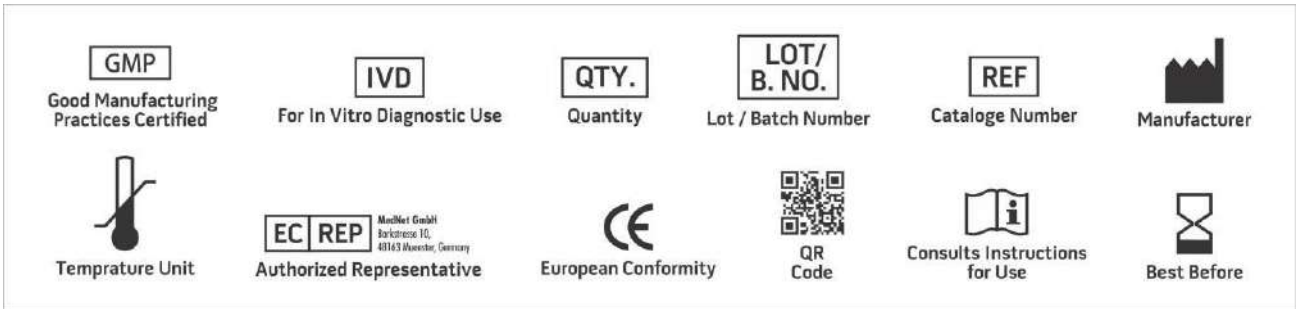

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices
***For Lab Use Only**
Revision: 20 Nov., 2025

TM 741 - HUGH LEIFSON GLUCOSE MEDIUM

INTENDED USE

For differentiation of Staphylococci from Micrococci by anaerobic fermentation of glucose.

PRODUCT SUMMARY AND EXPLANATION

Hugh Leifson Glucose Medium is formulated by Hugh and Leifson. Hugh Leifson Glucose Medium is prepared as described by FDA 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.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	2.000
Yeast extract	0.500
Sodium chloride	30.000
Dextrose (Glucose)	10.000
Bromocresol purple	0.015
Agar	3.000

PRINCIPLE

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. 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.

INSTRUCTION FOR USE

- Dissolve 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 psi pressure (121°C) for 15 minutes.
- Cool the tubed medium in an upright position.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to bluish grey homogeneous free flowing powder.
Appearance of prepared medium : Purple coloured, clear to slightly opalescent gel forms in tubes as butts.
pH (at 25°C) : 7.4±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour of Medium (Aerobic)	Colour of Medium (Anaerobic)	Incubation Temperature	Incubation Period
Micrococcus luteus	10240	50-100	Good	Yellow	Pink-purple	35 - 37°C	18-24 Hours
Staphylococcus aureus subsp. aureus	*25923*	50-100	Good	Yellow	Yellow	35 - 37°C	18-24 Hours

PACKAGING:
In pack size of 100 gm and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
1. Bacteriological Analytical Manual, 1995, 8th Ed., Food & Drug Administration, AOAC International, USA.
2. Baird Parker, 1966, International subcommittee on Staphylococci and Micrococci.
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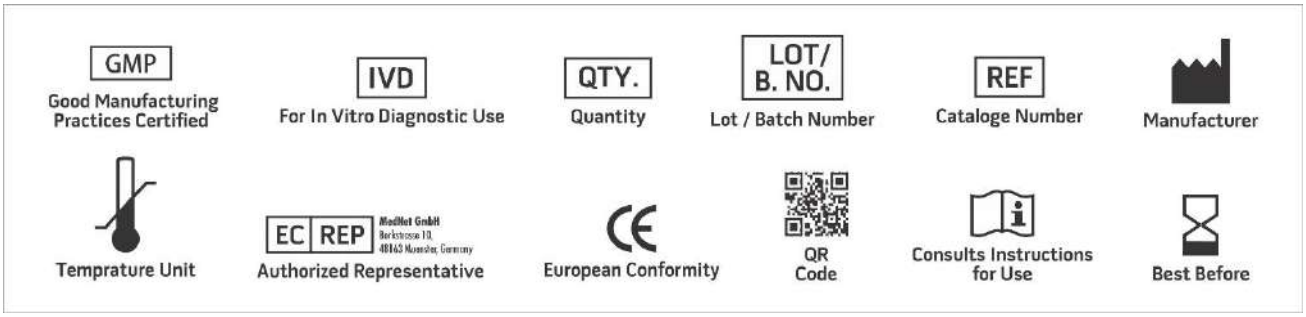

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019

TM 1505 -L-ARGININE DIHYDROLASE MEDIUM, MODIFIED (ISO 22964:2006)

INTENDED USE

For confirmation of *Enterococcus sakazakii* from milk and milk products

PRODUCT SUMMARY AND EXPLANATION

L- ARGININE DI HYDROLASE MEDIUM, MODIFIED (AS PER ISO) is used for the confirmation of Enterococcus from milk and milk products, in accordance with ISO specifications. This medium was first described by "Moeller" for detecting lysine and ornithine decarboxylase and arginine dihydrolase. Members of Enterobacteriacea family are detected in this medium on the basis of their ability to decarboxylate arginine.

COMPOSITION

Ingredients	Gms / Ltr
L-Arginine mono hydrochloride	5.000
Yeast extract	3.000
Glucose	1.000
Bromocresol purple	0.015

PRINCIPLE

The yeast extract makes this media nutritious by providing necessary nutrients for the growth of microorganisms. Glucose acts as an energy source. L-arginine stimulates the arginine dihydrolase synthesis which helps in detection of *Enterobacter* species. Bacteria producing arginine dihydrolase enzyme, decarboxylates arginine to putrescine and this amine elevates the pH of the medium. An elevation of the pH is detected by the indicator, bromocresol purple which forms purple in alkaline condition. Colour change from purple to yellow and then back to purple is considered a positive reaction.

INSTRUCTION FOR USE

- Dissolve 9.01 grams in 1000ml distilled water.
- Gently heat to boiling with swirling to dissolve the medium completely.
- Dispense in tubes.
- Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.
- Cool 45-50°C prior use.

QUALITY CONTROL SPECIFICATIONS

Appearance of Dehydrated powder : Light yellow to grey, homogeneous free flowing powder
Appearance of Prepared medium : Purple colour, clear solution
pH (at 25°C) : 6.8± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Arginine Dihydrolase	Recovery	Incubation Temperature	Incubation Period
Enterobacter sakazakii	12868	50-100	Good-Luxuriant	+	>=70%	35-37°C	18 – 24 Hours
Enterobacter aerogenes	13048	50-100	Good-Luxuriant	-	>=70%	35-37°C	18 – 24 Hours

Klebsiella pneumoniae	13883	50-100	Good-Luxuriant	-	>=70%	35-37°C	18 – 24 Hours
Proteus vulgaris	13315	50-100	Good-Luxuriant	-	>=70%	35-37°C	18 – 24 Hours
Salmonella typhi	6539	50-100	Good-Luxuriant	+	>=70%	35-37°C	18 – 24 Hours
Salmonella Typhimurium	14028	50-100	Good-Luxuriant	+	>=70%	35-37°C	18 – 24 Hours

+=Positive Reaction, Purple Colour
-=Negative Reaction, Yellow Colour

PACKAGING:
In 500 gm packaging size.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use, if powder show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
1. Collee J. G., Duguid J. P., Fraser A. G., Marmion B. P., (Eds.), Mackie and McCartney, Practical Medical Microbiology, 1989, 13th Edition, Churchill Livingstone
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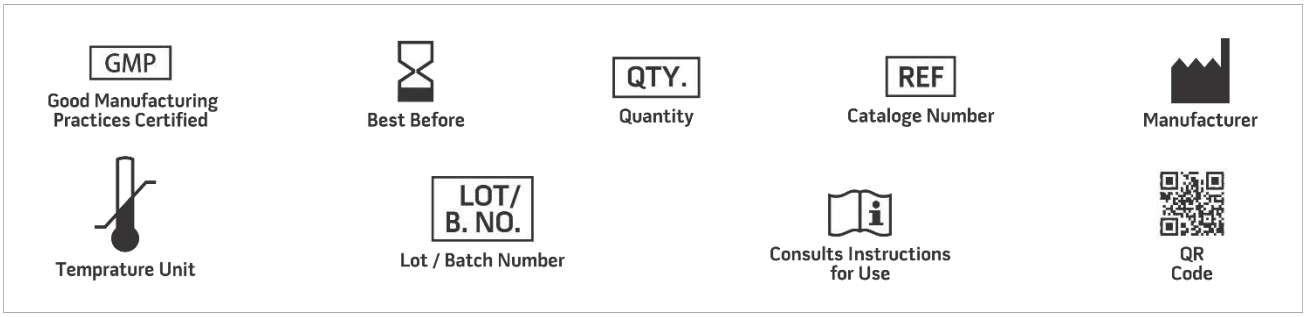

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
Revision: 8th July 2020

TM 1640- CHROMOGENIC VIBRIO AGAR

INTENDED USE

For selective isolation and differentiation of *Vibrio* species.

PRODUCT SUMMARY AND EXPLANATION

Vibrios 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 *Vibrios* 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. *Vibrio* species are mainly responsible for causing cholera and food poisoning in humans. *Vibrio cholerae* causes cholera due to the intake of contaminated food such as raw oysters. *Vibrio parahaemolyticus* is a major cause of food borne infections, causing food poisoning. 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. The widely used media for *Vibrio* isolation are TCBS Agar and Alkaline Peptone Water. However accompanying sucrose-fermenting bacteria pose a problem in the identification of *Vibrio* species on TCBS Agar. On Chromogenic 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

COMPOSITION

Ingredients	Gms / Ltr
Sodium chloride	25.000
Agar	15.000
Peptone	10.000
Sodium citrate	6.000
Chromogenic mixture	5.500
Sodium thiosulphate	5.000
Sodium cholate	1.000

PRINCIPLE

Peptone provides carbonaceous, nitrogenous 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.

INSTRUCTION FOR USE

- Dissolve 67.5 grams in 1000 ml distilled water.
- Gently heat to boiling with swirling to dissolve the medium completely. Do not autoclave the medium.
- Cool to 45-50°C.
- Mix well before pouring into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of powder : Light yellow to light tan homogeneous free flowing powder

Appearance of prepared medium : Light yellow coloured, clear to slightly opalescent gel
pH (at 25°C) : 8.5±0.2

INTERPRETATION

Culture characteristics observed after incubation. Recovery rate is considered 100% for bacteria growth on Soya Agar.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour of colony	Recovery	Incubation Temp.	Incubation Period
Vibrio cholerae	15748	50-100	Good-luxuriant	Salmon to Purple	>=50%	35 ± 2°C	18 – 24 Hours
Vibrio parahaemolyticus	17802	50-100	Good-luxuriant	Bluish green	>=50%	35 ± 2°C	18 – 24 Hours
Staphylococcus aureus	25923	≥ 1000	Inhibited	-	0%	35 ± 2°C	18 – 24 Hours
Escherichia coli	25922	≥ 1000	Inhibited	-	0%	35 ± 2°C	18 – 24 Hours
Enterococcus faecalis	29212	≥ 1000	Inhibited	-	0%	35 ± 2°C	18 – 24 Hours
Vibrio harveyi	14126	50-100	Good-luxuriant	Creamy milky white- light pink colonies	>=50%	35 ± 2°C	18 – 24 Hours
Vibrio alginolyticus	17749	50-100	Good-luxuriant	gelatinous yellow-cream	>=50%	35 ± 2°C	18 – 24 Hours

PACKAGING:

In pack size of 100gm & 500gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 2-8°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if powder show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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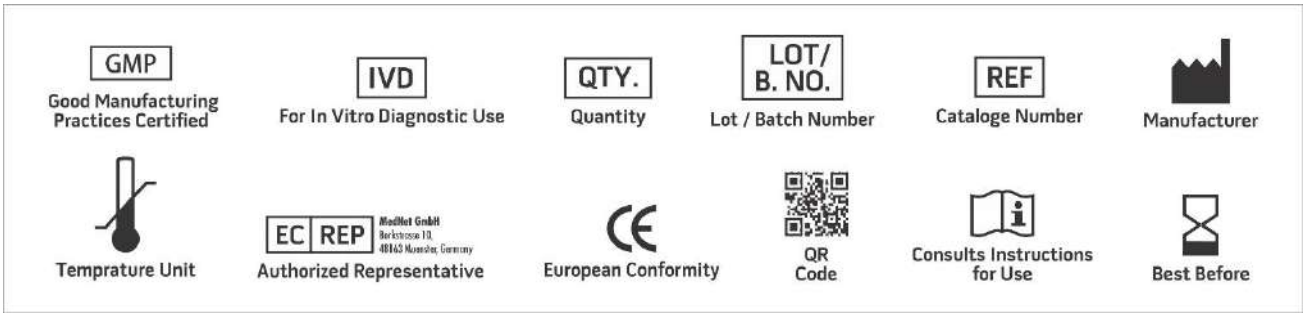
2. Alcamo. E.I, 2001. Fundamentals of Microbiology, 6th ed, Jones and Bartlett Publishers, Inc. pg 254, 244.
3. Clesceri, Greenberg and Eaton (ed.). 1998. Standard Method for the examination of Water and Waste water, 20th ed.American Public Health Association, Washington, D.C.
4. Kudo. H. Y et al, 2001. Improved Method for Detection of! *Vibrio parahaemolyticus* @ in Seafood. ASM. Vol 67,12, pg 5819-5823



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 18 January, 2023

TM 1860 -VIOLET RED BILE LACTOSE AGAR (ISO 4832:2006)

INTENDED USE

For detection and enumeration of coliform bacteria in food, water and dairy products.

PRODUCT SUMMARY AND EXPLANATION

Violet Red Lactose Bile Agar, a modification of MacConkeys original formulation 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 pinkish red colonies surrounded by purple halos. Non-fermenters produce colourless to orangish yellow. Whereas, late lactose-fermenters produce pink to pale pink colonies. It is recommended by the ISO committee and the composition & performance criteria of this medium are as per the specifications laid down in ISO 4832:2006.

COMPOSITION

Ingredients	Gms / Ltr
Agar	12.000
Lactose	10.000
Peptone	7.000
Sodium chloride	5.000
Yeast extract	3.000
Bile salt mixture	1.500
Neutral red	0.030
Crystal violet	0.002

PRINCIPLE

The medium contains Peptic digest of animal tissue 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.

INSTRUCTION FOR USE

- Dissolve 38.53 grams in 1000ml distilled water.
- Gently heat to boiling with swirling to dissolve the medium completely. Do Not Autoclave.
- Mix well pour into sterile Petri plates.

Note: Continue to boil for up to 2 minutes with swirling or for the minimum time necessary to dissolve completely.

QUALITY CONTROL SPECIFICATIONS

Appearance of Dehydrated powder	:	Light yellow to pink, homogeneous free flowing powder
Appearance of Prepared medium	:	Reddish purple colored, clear to slightly opalescent gel
pH (at 25°C)	:	7.4± 0.2

INTERPRETATION

Cultural characteristics observed after incubation. Recovery rate is considered 100% for bacteria growth on Soya Agar.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Enterobacter aerogenes	13048	50-100	Luxuriant	>=50%	Pink to pinkish red	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	Luxuriant	>=50%	Pinkish red with bile ppt. and purple halo	35-37°C	18-24 Hours
Salmonella enteritidis	13076	50-100	Luxuriant	>=50%	Colourless to orangish yellow	35-37°C	18-24 Hours
Staphylococcus aureus	25923	≥1000	Inhibited	0%	-	35-37°C	18-24 Hours

PACKAGING

In 100 & 500 gm packaging size.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use, if powder show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Eaton A. D., Clesceri L. S. and Greenberg A. E., (Ed.), 1998, Standard Methods for the Examination of Water and Wastewater, 20th Ed., American Public Health Association, Washington, D.C.
2. Downes F. P. and Ito K., (Ed.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., American Public Health Association, Washington, D.C.
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5. Marshall R. T., (Ed.), 1992, Standard Methods for the Examination of Dairy Products, 16th Ed., APHA, Washington, D. C.
6. International Organization for Standardization (ISO), 1991, Draft ISO/DIS 4382
7. Mossel D. A. A. and Vega C. L., 1973, Hlth. Lab. Sci., 11:303
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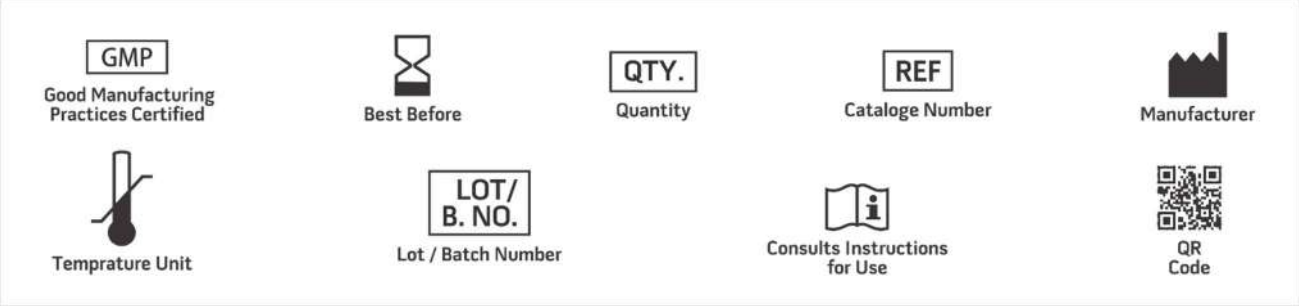


NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

*For Lab Use Only
Revision: 9th July 2020

TM 1928 - SOYA CASEIN DIGEST AGAR W/LTHTh, Modified

INTENDED USE

For determining the efficiency of sanitization of containers, equipment surfaces etc. and for enumeration of organisms from water insoluble & fatty products containing antimicrobials or preservatives.

PRODUCT SUMMARY AND EXPLANATION

Soyabean Casein Digest Agar w/ LTHTh is used for the detection and enumeration of microorganisms for products of sanitary importance, water miscible cosmetics, Products containing antimicrobials or preservatives.
Collection of samples from areas before and after the treatment with disinfectant evaluates cleaning procedures in environmental sanitation. The presence and number of microorganisms is determined by the appearance of colonies on the agar surface.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	15.000
Soya peptone	5.000
Sodium chloride	5.000
Lecithin	3.000
Polysorbate 80 (Tween 80)	30.000
Histidine	1.000
Sodium thiosulphate	5.000
Agar	18.000

PRINCIPLE

Tryptone and soya peptone provide nitrogenous compounds and other nutrients essential for microbial replication. Lecithin, polysorbate 80 (Tween 80) and thiosulphate act as neutralizing agents reported to neutralize the activity of antimicrobial agents. Lecithin and polysorbate 80 neutralizes quaternary ammonium compounds and parahydroxy benzoates. Sodium thiosulphate neutralizes mercurial, halogens, aldehydes etc. Histidine acts as a reducing agent.

INSTRUCTION FOR USE

- Dissolve 82.0 grams in 1000 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C.Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.

Appearance of prepared medium : Light to medium amber coloured, clear to slightly opalescent gel forms in Petri plates.

pH (at 25°C) : 7.3±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

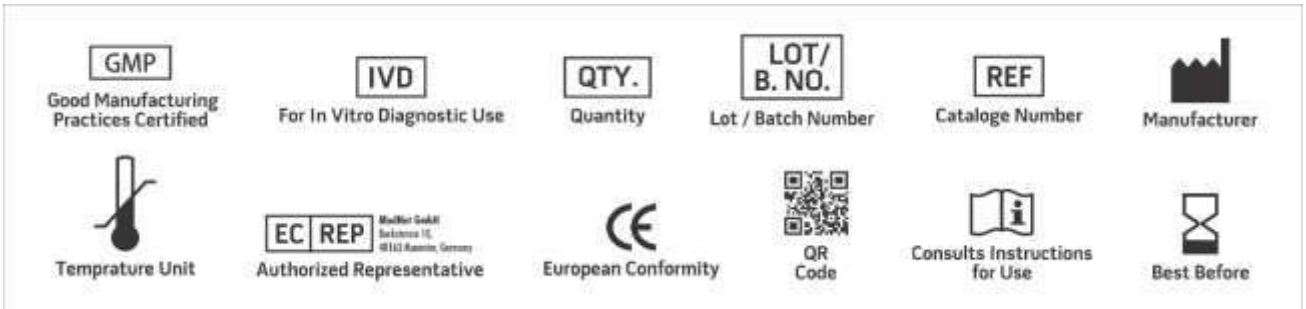
Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Growth w/ disinfectant	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Luxuriant	>=70%	Fair-good, (depends on concentration of quaternary ammonium compounds)	35-37°C	18-24 Hours
Pseudomonas aeruginosa	*27853*	50-100	Luxuriant	>=70%	Fair-good, (depends on concentration of quaternary ammonium compounds)	35-37°C	18-24 Hours
Staphylococcus aureus subsp. aureus	25923	50-100	Luxuriant	>=70%	Fair-good, (depends on concentration of quaternary ammonium compounds)	35-37°C	18-24 Hours

PACKAGING:
In pack size of 100 gm and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
1. Hall and Hartnett, 1964, Public Hlth. Rep., 79:1021.
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. Murray PR, Baron, Pfaller, and Yolken (Eds.), 2003, In Manual of Clinical Microbiology, 8th ed., ASM, Washington, D.C.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
Revision: 08 Nov., 2019

TR 008- KOVAC'S INDOLE REAGENT

REF NO: TBL/QA/SS/LC/TR 008	STANDARD SPECIFICATION FOR KOVAC'S INDOLE REAGENT	**Rev. No:** 03
Issue No: 04		**Review Date:** 26/10/2024
Issue Date: 27/10/2021		**Product code:** TR 008

PRODUCT PROPERTIES

C.A.S Number	NA
Chemical Formula	NA
Formula weight	NA
Functional Uses	Kovac's Indole Reagent is used for determination of indole production.
Standard Packaging	100 ml
Interpretation of results	Enterobacter aerogenes (ATCC 13048) : Negative reaction, no red ring Escherichia coli (ATCC 25922) : Positive reaction, red ring at the interface of the medium

PHYSICAL PARAMETERS

PRODUCT PARAMETER	SPECIFICATION
Appearance	Light yellow to light brown in colour with 4-dimethylaminobenzaldehyde in amyl alcohol & HCl.

CHEMICAL PARAMETERS

PRODUCT PARAMETER	SPECIFICATION
Refractive Index at 20ºC	1.401 – 1.420

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

TS 001 – EGG YOLK TELLURITE EMULSION (100 ml/vl)

INTENDED USE

For identification of Staphylococci.

COMPOSITION

Ingredients	Concentration
Egg yolk	30ml
Sterile saline	64ml
Sterile 3.5%potassium tellurite solution	6ml

(per vial sufficient for 100 ml medium)

Applied in Medium

TM 1579 BAIRD PARKER AGAR BASE (RPF) (ISO 6888-1 & 2:1999)

TM 635 BAIRD PARKER AGAR BASE (IS : 5887 (Part II) 1976, reaffirmed 2005.)

TM 636 BAIRD PARKER AGAR BASE (AGAR MEDIUM O) (as per USP/EP)

TM 943 BAIRD PARKER AGAR BASE W/ SULPHA

TM 358 BAIRD PARKER AGAR BASE

TMV 358 BAIRD PARKER AGAR BASE(VEG.)

TM 1337 CHROMOGENIC STAPHYLOCOCCUS AUREUS AGAR BASE *

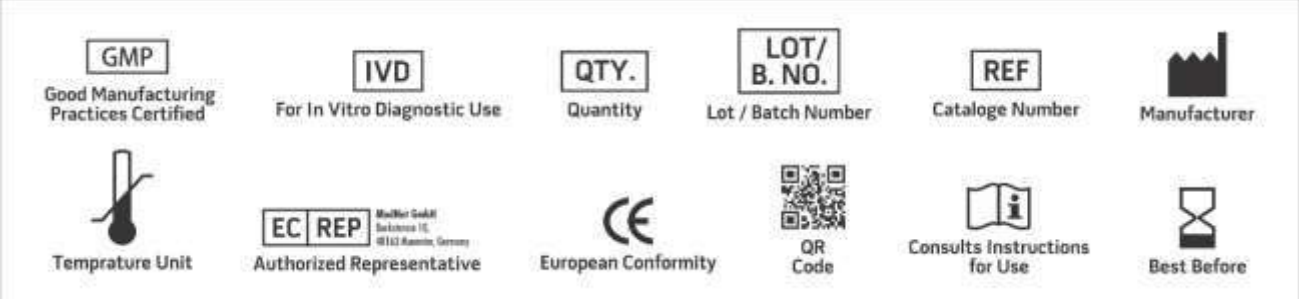
TMH 119 BAIRD PARKER AGAR BASE (as per EP/IP/BP)

INSTRUCTION FOR USE

Warm up the refrigerated Egg Yolk Tellurite 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) TM 1579 - Baird parker agar base (RPF) (ISO 6888-1 & 2:1999) / TM 635 - Baird parker agar base (IS : 5887 (Part II) 1976, reaffirmed 2005.) / TM 636 - Baird parker agar base (agar medium o) (as per USP/EP) / TM 943 - Baird parker agar base w/ sulpha / TM 358 - Baird parker agar base / TMV 358 - Baird parker agar base(veg.) / TM 1337 - Chromogenic staphylococcus aureus agar base / TMH 119 - Baird parker agar base (as per EP/IP/BP). Mix well and pour into sterile petri plates.

STORAGE

Vials should be stored in sealed container at 2-8°C.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 28 Feb., 2022

TS 003 – POTASSIUM TELLURITE 3.5% (1 ml/vl)

INTENDED USE

For selective isolation of Staphylococci and *Corynebacteria.*

COMPOSITION

Ingredients	Concentration
Potassium tellurite	0.350g
Distilled water	1ml

(per vial sufficient for 200 ml medium)

Applied in Medium

TM 358 - BAIRD PARKER AGAR BASE

TMV 358 - BAIRD PARKER AGAR BASE(VEG.)

TM 635 - BAIRD PARKER AGAR BASE (IS: 5887 (Part II) 1976, reaffirmed 2005.)

TM 943 - BAIRD PARKER AGAR BASE W/ SULPHA

TM 118 - GIOLITTI-CANTONI BROTH BASE

TM 118A - GIOLITTI-CANTONI BROTH BASE (ISO 6888-3:2003)

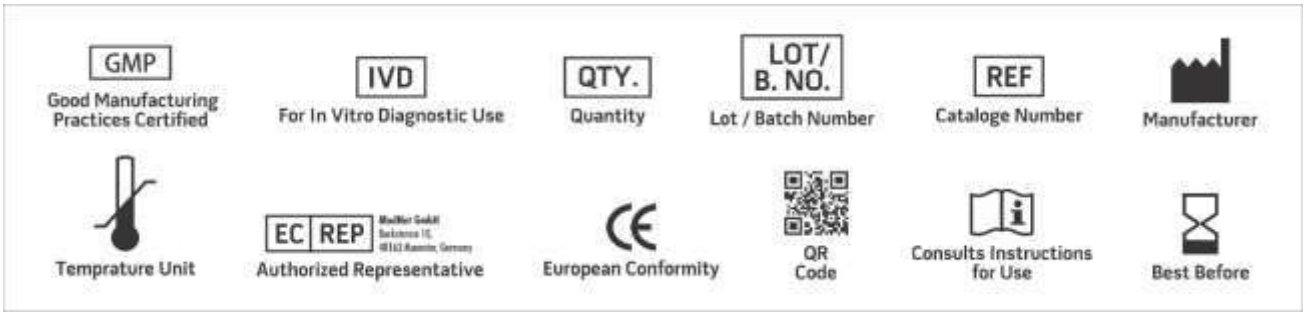
TM 522 - HOYLE MEDIUM BASE

INSTRUCTION FOR USE

Warm up the refrigerated contents of one vial to 45-50°C. Add aseptically 9 ml sterile distilled water, mix well and add 3 ml in 950 ml sterile, molten, cooled (45-50°C) TM 358 - BAIRD PARKER AGAR BASE / TMV 358 - BAIRD PARKER AGAR BASE(VEG.) / TM 635 - BAIRD PARKER AGAR BASE (IS: 5887 (Part II) 1976, reaffirmed 2005.) / TM 943 - BAIRD PARKER AGAR BASE W/ SULPHA along with 50 ml Concentrated Egg Yolk Emulsion or 10 ml in 1000 ml TM 118 - GIOLITTI-CANTONI BROTH BASE / TM 118A - GIOLITTI-CANTONI BROTH BASE (ISO 6888-3:2003) / TM 522 - HOYLE MEDIUM BASE alongwith 50 ml of laked blood. Mix well and pour into sterile petri plates.

STORAGE

Vials should be stored in sealed container at 2-8°C.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 11 March., 2022

TS 005 – POTASSIUM TELLURITE 1% (1 ml /vl)

INTENDED USE

For the selective isolation of Staphylococci and *Corynebacteria.*

COMPOSITION

Ingredients	Concentration
Potassium tellurite Concentrate	1.100ml

(To achieve 1% solution dilute the contents in 8.9 ml sterile distilled water)

Applied in Medium

TM 636 - AGAR MEDIUM O (BAIRD PARKER AGAR BASE) (as per USP/EP/BP)

TM 670 - BAIRD STAPHYLOCOCCUS ENRICHMENT BROTH BASE

TM 411 - CHOLERA MEDIUM BASE

TM 707 - CYSTINE TELLURITE AGAR BASE

TM 1165 - DEXTROSE PROTEOSE PEPTONE AGAR BASE

TM 984 - DIPHTHERIA VIRULENCE AGAR BASE

TM 221 - MITIS SALIVARIUS AGAR BASE

TMV 221 - MITIS SALIVARIUS AGAR BASE (VEG.)

TM 1048 - MONSUR MEDIUM BASE

TM 235 - MYCOPLASMA BROTH BASE W/ CV (PPLO BROTH BASE W/ CV)

TM 438 - TPEY AGAR BASE

TM 879 - TELLURITE BLOOD AGAR BASE

TM 439 - TELLURITE GLYCINE AGAR BASE

TM 1109 - TRYPTONE TELLURITE AGAR BASE

TM 395 - VOGEL-JOHNSON AGAR BASE W/O TELLURITE (V. J. AGAR BASE)

TMV 395 - VOGEL JOHNSON AGAR BASE W/O TELLURITE (V. J. AGAR BASE) (VEG.)

TM 1722 - VOGEL JOHNSON AGAR MEDIUM (as per USP)

TM 1820 - VOGEL JOHNSON AGAR MEDIUM (as per IP)

TM 2121 - CHROMOGENIC EC O157:H7 AGAR, MODIFIED

TM 2420 - VOGEL JOHNSON AGAR BASE W/ 1.5% AGAR

TMH 119 - BAIRD PARKER AGAR BASE (as per EP/IP/BP)

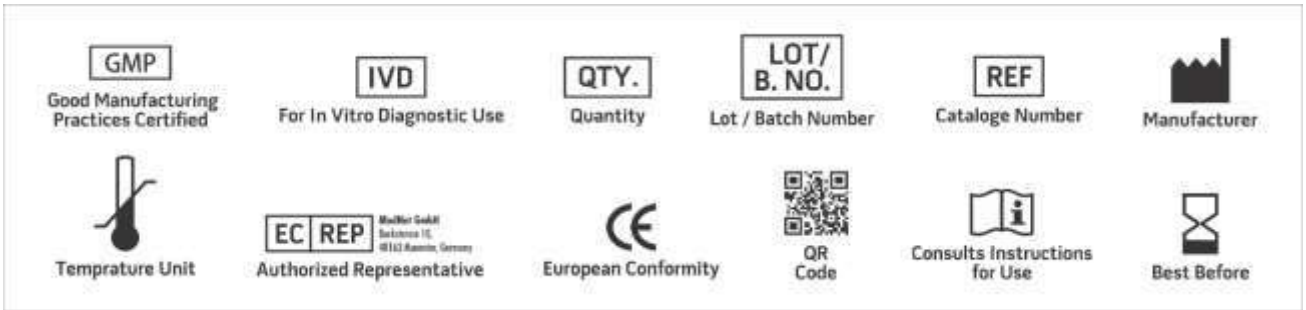
INSTRUCTION FOR USE

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) TM 636 - AGAR MEDIUM O (BAIRD PARKER AGAR BASE) (as per USP/EP/BP) / TMH 119 - BAIRD PARKER AGAR BASE (as per EP/IP/BP) / TM 670 - BAIRD STAPHYLOCOCCUS ENRICHMENT BROTH BASE / TM 395 - VOGEL-JOHNSON AGAR BASE W/O TELLURITE (V. J. AGAR BASE) / TMV 395 - VOGEL JOHNSON AGAR BASE W/O TELLURITE (V. J. AGAR BASE) (VEG.) / TM 1722 - VOGEL JOHNSON AGAR MEDIUM (as per USP) / TM 1820 - VOGEL JOHNSON AGAR MEDIUM (as per IP) / TM 235 - MYCOPLASMA BROTH BASE W/ CV (PPLO BROTH BASE W/ CV) / TM 438 - TPEY AGAR BASE / TM 439 - TELLURITE GLYCINE AGAR BASE / TM 411 - CHOLERA MEDIUM BASE / TM 707

- CYSTINE TELLURITE AGAR BASE / TM 1165 - DEXTROSE PROTEOSE PEPTONE AGAR BASE / TM 984 - DIPHTHERIA VIRULENCE AGAR BASE / TM 1109 - TRYPTONE TELLURITE AGAR BASE / TM 879 - TELLURITE BLOOD AGAR BASE / TM 221 - MITIS SALIVARIUS AGAR BASE / TMV 221 - MITIS SALIVARIUS AGAR BASE (VEG.) / TM 1048 - MONSUR MEDIUM BASE / TM 2121 - CHROMOGENIC EC O157:H7 AGAR, MODIFIED / TM 2420 - VOGEL JOHNSON AGAR BASE W/ 1.5% AGAR. Mix well and dispense in sterile Petri plates or tubes.

STORAGE

Vials should be stored in sealed container at 2-8°C.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 4 March., 2022

TS 076 – PERFRINGEN'S T.S.C. SUPPLEMENT (TSC SUPPLEMENT)

INTENDED USE

For the selective isolation of *Clostridium perfringens*.

COMPOSITION

Ingredients	Concentration
D-Cycloserine	200mg

(per vial sufficient for 500 ml medium)

Applied in Medium

TM 615 - PERFRINGENS AGAR BASE (T.S.C./S.F.P. AGAR BASE)

TMV 615 - PERFRINGENS AGAR BASE (T.S.C./S.F.P. AGAR BASE) (VEG.)

TM 1826 - PERFRINGENS AGAR BASE (TRYPTOSE SULPHITE CYCLOSERINE AGAR BASE) (ISO 7937: 2004, ISO 14189:2013)

TM 809 - TRYPTOSE CYCLOSERINE AZIDE AGAR BASE

TM 902 - TRYPTOSE CYCLOSERINE DEXTROSE AGAR BASE

TM 2311 - S.F.P. AGAR BASE

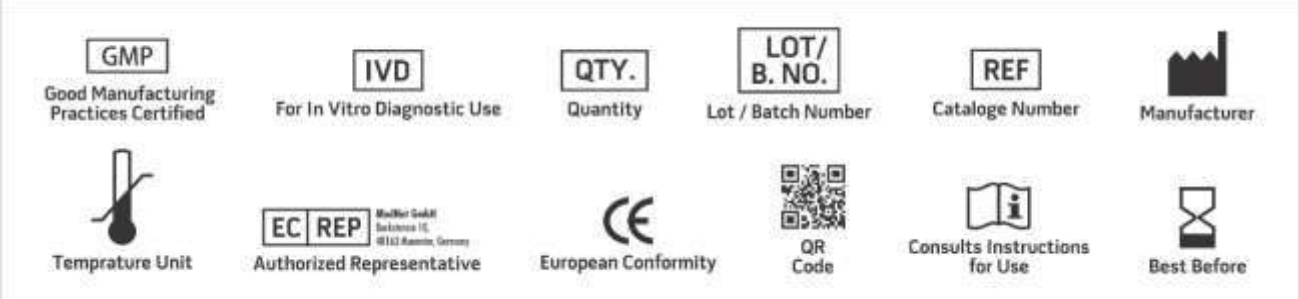
TM 2400 - TRYPTONE YEAST SODIUM SULPHITE AGAR BASE (ISO 14189:2013)

INSTRUCTION FOR USE

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 (45-50°C) TM 615 - PERFRINGENS AGAR BASE (T.S.C./S.F.P. AGAR BASE) / TMV 615 - PERFRINGENS AGAR BASE (T.S.C./S.F.P. AGAR BASE) (VEG.) / TM 2311 - S.F.P. AGAR BASE along with 25 ml of Egg Yolk Emulsion or 500 ml of sterile, molten, cooled (45-50°C) TM 1826 - PERFRINGENS AGAR BASE (TRYPTOSE SULPHITE CYCLOSERINE AGAR BASE) (ISO 7937: 2004, ISO 14189:2013) / TM 809 - TRYPTOSE CYCLOSERINE AZIDE AGAR BASE / TM 902 - TRYPTOSE CYCLOSERINE DEXTROSE AGAR BASE / TM 2400 - TRYPTONE YEAST SODIUM SULPHITE AGAR BASE (ISO 14189:2013). Mix well and pour into sterile petri plates.

STORAGE

Vials should be stored in sealed container at 2-8°C.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 4 March., 2022