ThermoFisher SCIENTIFIC

Atmosphere Generation Systems

Providing conditions for optimal growth of microorganisms has never been easier

Thermo Scientific™ Oxoid™ AGS Atmosphere Generation System

Digitally signed by Lazari Cristina
Date: 2024.04.17 14:18:00 EEST
Reason: MoldSign Signature
Location: Moldova

Create atmospheric environments to suit a variety of fastidious organisms

Available in standard formats (boxes and jars) or a compact plastic pouch format, our easy-to-use atmophere generation system can be tailored to your needs and can accommodate small or large numbers of plates. It is suitable for the transportation, culture, selective isolation, and susceptibility testing of non-aerobic organisms.

Quick and simple

There is nothing to add.

No catalyst

No water

Thermo Scientific™ Oxoid™ AGS systems are activated on contact with air

Safe

Non-hazardous chemicals

No evolution of hydrogen

No dangerous build up of pressure

Rapid

Quickly creates the required gaseous conditions

Allows maximum recovery and larger colony size

Enhances prompt identification

Versatile

Available in standard format (for use with jars) or a compact plastic pouch format

Ideal for large or small numbers of plates

Suitable for the transportation, culture, selective isolation and susceptibility testing of non-aerobic organisms

Cost effective

No hazardous material transportation costs

No capital equipment required

Thermo Scientific™ Oxoid™ AnaeroJar™

- Specially designed for use with the standard Thermo Scientific™ Oxoid™ AGS products.
- 2.5 litre capacity.
- Plate carrier holds up to 12 culture plates.
- Easy to carry, lightweight with integral handle for safe transportation.
- Innovative pressure-release clips.

Thermo Scientific™ Oxoid™ AnaeroBox™

- 2.5 litre and 3.5 litre capacity.
- Holds 12 or 18 plates, respectively.
- Lightweight and stackable to save incubator space.

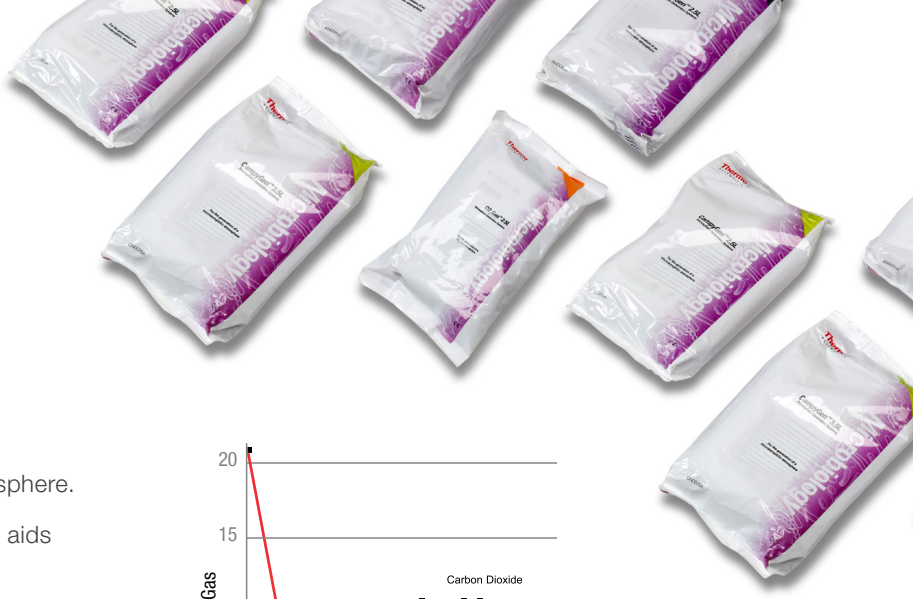
Compact pouches

Designed for the incubation of a small number of plates. For Thermo Scientific™ Oxoid™ AnaeroGen™ Compact, 1-4 standard culture plates can be used. For Thermo Scientific™ Oxoid™ CampyGen™ Compact, and CO_2Gen™ Compact, 1 or 2 culture plates can be incubated (however, if only one plate is to be incubated, a second dummy plate should also be inserted into the pouch to ensure the correct gaseous conditions).

The transparent pouch allows growth to be observed at any time without disturbing the atmosphere within the pouch – ideal for slower growing micro-organisms.

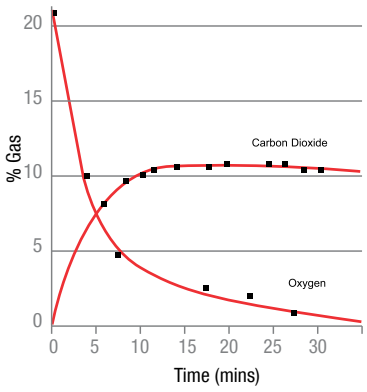
Ten pouches are supplied with the AnaeroGen Compact. Additional pouches can also be ordered (in packs of 20) for use with AnaeroGen, CampyGen and CO_2Gen Compacts.

W-Zip pouches have an integral seal. Closure is easy; simply pinch the seal together at one end and squeeze all the way across, ensuring that there are no gaps. The gas-tight seal prevents gas leakage.



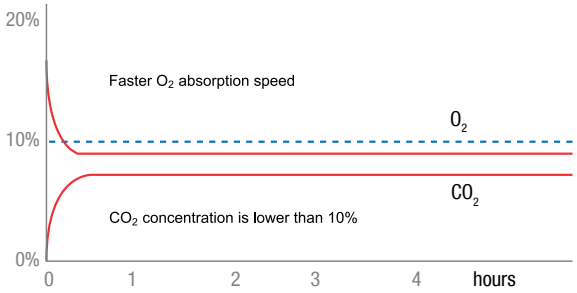
Thermo Scientific™ Oxoid™ AnaeroGen™/ AnaeroGen™ Compact

- Reacts quickly to produce a rapid anaerobic atmosphere.
- Provides improved recovery; increased colony size aids presumptive identification.
- Beneficial for the growth of fastidious anaerobes.
- Enhances the survival of obligate anaerobes.
- Within 30 minutes an atmosphere of <1% oxygen supplemented with carbon dioxide is generated – ideal for the growth of anaerobes.



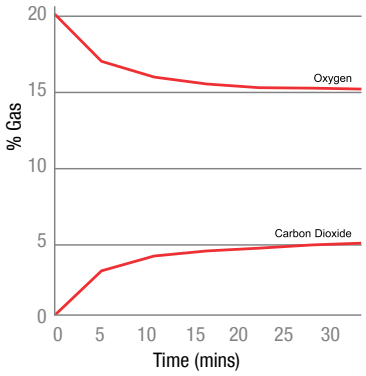
Thermo Scientific™ Oxoid™ CampyGen™/ CampyGen™ Compact

- Rapidly provides atmospheric conditions for the growth of *Campylobacter* spp. and other microaerophilic organisms.
- Removes oxygen and produces carbon dioxide quickly and safely.
- Provides conditions for optimal growth.
- Ensures maximum recovery and prompt identification.
- Within 1 hour an ideal microaerobic atmosphere of 8-9% oxygen and 7-8% carbon dioxide is generated.



Thermo Scientific™ Oxoid™ CO_2Gen™/ CO_2Gen™ Compact

- Rapidly achieves a CO_2-enriched aerobic atmosphere.
- Ideal for the growth of CO_2-dependent organisms (that require a reduced oxygen, enhanced carbon dioxide environment).
- Allows maximum recovery and prompt identification.
- Improves the growth of fastidious organisms
- CO_2Gen provides an atmosphere reduced in oxygen and supplemented with carbon dioxide to a level of ~5% (v/v).



Easy to use

Remove the atmosphere-generating sachet from its packet and place it into the jar, box or pouch with the plates immediately before sealing. **Nothing else is required.**

Ordering information

Description		Quantity	Cat. No
AnaeroJar and AnaeroBoxes			
AnaeroJar Jar	2.5 L	1 jar	AG0025A
Rectangular AnaeroBox	2.5 L	1 box	AB0025A
	3.5 L	1 box	AB0035A
AnaeroJar and AnaeroBox Sachets			
AnaeroGen System Sachets	2.5 L	10 sachets	AN0025A
	3.5 L	10 sachets	AN0035A
CampyGen Sachets	2.5 L	10 sachets	CN0025A
	3.5 L	10 sachets	CN0035A
CO_2Gen Sachets	2.5 L	10 sachets	CD0025A
AnaeroJar ancillaries			
AnaeroJar Base		1 base	AG0026A
AnaeroJar Lid		1 lid	AG0027A
AnaeroJar Handle		1 handle	AG0028A
AnaeroJar Plate Carrier		1 carrier	AG0029A
AnaeroJar ´O´Ring		5 rings	AG0030A
AnaeroJar Clips		2 clips	AG0031A
Legacy 3.5L jar ancillaries			
Schrader Value Chuck and Clips		2	HP0020A
Plate Carrier – Stainless Steel		1	HP0026A
Pressure Release Valve		1 value	HP0016A
Compact System			
W-Zip Seal Pouches (integral seal)		20 pouches	AG0060C
Plastic Pouches[2]		20 pouches	AG0020C
Sealing Clips for Plastic Pouches		5 clips	AN0005C
Compact Sachets			
AnaeroGen[1] Compact		10 sachets & 10 pouches	AN0010C
AnaeroGen[1] W-Zip Compact		10 sachets & 10 W-Zip pouches	AN0010W
AnaeroGen[1] Compact Sachets for use in Plastic Pouches or W-Zip Pouches		10 sachets	AN0020D
CampyGen Compact Sachets for use in Plastic Pouches or W-Zip Pouches		20 sachets	CN0020C
CO_2Gen Compact Sachets for use in Plastic Pouches or W-Zip Pouches		20 Sachets	CD0020C
Indicators and catalysts			
Anaerobic Indicator		100 sachets	BR0055B
Anaerobic Low Temperature Catalyst		5 catalysts	BR0042B

1. Oxoid AnaeroGen System and Oxoid AnaeroGen Compact System require the Anaerobic Indicator (BR0055B).

2. Plastic Pouches are not self-sealing and thus the clips (AN0005C) and these pouches (AG0020C) need to be ordered together.

For more information, contact your local Thermo Fisher Scientific Microbiology representative or visit **thermofisher.com/AGS**

OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION

NUTRIENT AGAR CM0003

NUTRIENT AGAR CM0003

Typical Formula*

'Lab-Lemco' powder	grams per litre	1.0
Yeast extract		2.0
Peptone		5.0
Sodium chloride		5.0
Agar		15.0

* adjusted as required to meet performance standards

Directions

Suspend 28g in 1 litre of distilled water. Bring to the boil to dissolve completely. Sterilize by autoclaving at 121°C for 15 minutes. Cool to 50°C. Mix well and pour into sterile Petri dishes.

Physical Characteristics

Straw, free-flowing powder
Colour on reconstitution - straw 1-2
Moisture level - less than 7%
pH 7.4 ± 0.2 at 25°C
Clarity - clear
Gel strength - firm, comparable to 15.0g/litre of agar

The medium is tested for compatibility using 7% v/v oxalated horse blood, defibrinated horse blood or defibrinated sheep blood. There shall be no evidence of lysis or darkening, after incubation at 37°C, 25°C and 4°C for 72 hours.

Thermophiles shall be absent after incubation at 55°C for 3 days.

Microbiological Tests Using Optimum Inoculum Dilution

Control Medium: Nutrient Agar

Medium is challenged with 10-100 colony-forming units

Reactions after incubation at 37 ± 2°C for 24 ± 2 hours

Plain plates

Staphylococcus aureus	ATCC® 25923	1-2mm white/straw colonies
Pseudomonas aeruginosa	ATCC® 27853	1-3mm straw colonies

A satisfactory result is represented by recovery of positive strains equal to or greater than 70% of the control medium.

OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION

NUTRIENT AGAR CM0003

Enriched with 7% v/v horse blood

Streptococcus pyogenes	ATCC® 19615	0.25-1mm colourless colonies, β haemolysis
Streptococcus pneumoniae	ATCC® 6303	1-2mm grey/green colonies, α haemolysis
Streptococcus pneumoniae	ATCC® 6305	0.5-1mm grey/green colonies, α haemolysis

A satisfactory result is represented by recovery of positive strains equal to or greater than 70% of the control medium.

Reactions after incubation in 5% CO_2 at 37 ± 2°C for 24 ± 2 hours
(for details, refer to Oxoid Manual - Atmosphere Generation Systems)

Enriched with 7% v/v horse blood

Haemophilus influenzae	ATCC® 19418	Pinpoint-0.25mm colourless colonies

A satisfactory result is represented by recovery of positive strains equal to or greater than 70% of the control medium.

Testing performed in accordance with ISO11133:2014

Medium is challenged with 50-120 colony-forming units

Reactions after incubation at 30 ± 2°C for 24 ± 2 hours

Yersinia enterocolitica	ATCC® 23715	WDCM00160	1-3mm straw colonies
Yersinia enterocolitica	ATCC® 9610	WDCM00038	1-3mm straw colonies

A satisfactory result is represented by recovery of positive strains equal to or greater than 70% of the control medium.

Reactions after incubation at 37 ± 2°C for 24 ± 2 hours

Escherichia coli	ATCC® 25922	WDCM00013	1-3mm straw colonies
Escherichia coli	ATCC® 8739	WDCM00012	1-3mm straw colonies
Salmonella typhimurium	ATCC® 14028	WDCM00031	1-3mm straw colonies
Salmonella enteritidis	ATCC® 13076	WDCM00030	1-3mm straw colonies

A satisfactory result is represented by recovery of positive strains equal to or greater than 70% of the control medium.

OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION

NUTRIENT AGAR CM0003

Revision History

Section / Step	Description of Change	Reason for Change	Reference
Creation of ISO11133 section	Update to include testing of ISO11133:2014	Change control	BT-CC-1196

Distribution: Central File

Date: 27/08/14
Supersedes: 05/10/12

OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION

UREA AGAR BASE — CM0053

Typical Formula*

Peptone	grams per litre	1.0
Glucose		1.0
Sodium chloride		5.0
Di-sodium phosphate		1.2
Potassium dihydrogen phosphate		0.8
Phenol red		0.012
Agar		15.0

* adjusted as required to meet performance standards

Directions

Suspend 2.4g in 95ml of distilled water. Bring to the boil to dissolve completely. Sterilize by autoclaving at 115°C for 20 minutes. Cool to 50°C and aseptically add the contents of 1 vial of Urea 40% Solution (SR0020K). Mix well, aseptically dispense 10ml amounts into sterile containers and allow to set in the slope position.

Physical Characteristics

Orange/pink, free-flowing powder
Colour on reconstitution - orange
Moisture level - less than 7%
pH 6.8 ± 0.2 at 25°C
Clarity - clear
Gel strength - firm, comparable to 15.0g/litre of agar

Microbiological Tests Using Optimum Inoculum Dilution

Inoculate slopes of the medium with the test organisms.

Medium is challenged with 1E+04 to 1E+06 colony-forming units

Reactions after incubation at 30°C for 6 hours

Morganella morganii	ATCC® 25830	Weak urease +ve, pale pink slope, or negative
Proteus mirabilis	ATCC® 29906	Urease +ve, pink slope

Reactions after incubation at 30°C for 24 hours

Morganella morganii	ATCC® 25830	Urease +ve, pink slope
Klebsiella pneumoniae	ATCC® 13883	Weak urease +ve, pale pink slope
Shigella sonnei	ATCC® 25931	Urease -ve, no colour change
Enterobacter aerogenes	ATCC® 13048	Urease -ve, no colour change
Escherichia coli	ATCC® 25922	Urease -ve, no colour change
Escherichia coli	ATCC® 11775	Urease -ve, no colour change

Salmonella nottingham	NCTC 7832	Urease -ve, no colour change

Reactions after incubation at 30°C for up to 72 hours

Candida albicans	ATCC® 10231	Urease -ve, no colour change
Cryptococcus albidus	ATCC® 34140	Weak urease +ve, pink slope

A satisfactory result is represented by reactions in accordance with the specification.

Distribution: Central File

Date: 07/06/17
Supersedes: 16/02/17

OXOID QUALITY ASSURANCE
PRODUCT SPECIFICATION

VIOLET RED BILE GLUCOSE AGAR CM0485

Typical Formula*

Yeast extract	grams per litre	3.0
Peptone		7.0
Sodium chloride		5.0
Bile salts No.3		1.5
Glucose		10.0
Neutral red		0.03
Crystal violet		0.002
Agar		12.0

* adjusted as required to meet performance standards

Directions

Suspend 38.5g in 1 litre of distilled water. With frequent agitation, bring to the boil to dissolve completely. Cool to 50°C. Mix well and pour into sterile Petri dishes or hold at 45°C when using the pour plate technique. DO NOT AUTOCLAVE.

Physical Characteristics

Straw/pink, free-flowing powder
Colour on reconstitution - purple
Moisture level - less than 7%
pH 7.4 ± 0.2 at 25°C
Clarity - clear
Gel strength - firm, comparable to 12.0g/litre of agar

Microbiological Tests Using Optimum Inoculum Dilution

Control Medium: Tryptone Soya Agar

Reactions after incubation at 37°C for 24 hours

Inoculation using pour plate technique

Medium is challenged with 50-150 colony-forming units

Klebsiella pneumoniae	ATCC® 29665	1-2mm purple/pink colonies and halo
Proteus mirabilis	ATCC® 12453	Pinpoint-1mm purple/pink colonies with/without halo

A satisfactory result for pour plate technique is represented by recovery of positive strains equal to or greater than 50% of the control medium.

There shall be no gassing in the medium.

Inoculation using surface plate technique

Medium is challenged with 10-100 colony-forming units

Shigella sonnei	ATCC® 25931	1-3mm irregular purple/pink colonies and halo
Enterobacter aerogenes	ATCC® 13048	1-4mm purple/pink mucoid colonies and halo
Pseudomonas aeruginosa	ATCC® 9027	1-3mm straw colonies, no halo

A satisfactory result for surface plate technique is represented by recovery of positive strains equal to or greater than 50% of the control medium.

Medium is challenged with 1E+04 to 1E+06 colony-forming units

Staphylococcus aureus	ATCC® 6538	No growth

Negative strains are inhibited.

Medium is challenged with 1E+04 to 1E+06 colony-forming units

Proteus mirabilis	ATCC® 12453	0.5-2mm purple/pink colonies, no swarming

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Testing performed in accordance with ISO11133:2014

Reactions after incubation at 37 ± 2°C for 24 ± 2 hours

Inoculation using pour plate technique

Medium is challenged with 50-100 colony-forming units

Escherichia coli	ATCC® 8739	WDCM00012	1-2mm purple/pink colonies and halo

Medium is challenged with 50-120 colony-forming units

Escherichia coli	ATCC® 25922	WDCM00013	1-2mm purple/pink colonies and halo
Salmonella typhimurium	ATCC® 14028	WDCM00031	0.5-2mm purple/pink colonies with/without halo
Salmonella enteritidis	ATCC® 13076	WDCM00030	0.5-2mm purple/pink colonies with/without halo

A satisfactory result for pour plate technique is represented by recovery of positive strains equal to or greater than 50% of the control medium.
There shall be no gassing in the medium.

Inoculation using surface plate technique

Medium is challenged with 1E+04 to 1E+06 colony-forming units

Enterococcus faecalis	ATCC® 29212	WDCM00087	No growth
Enterococcus faecalis	ATCC® 19433	WDCM00009	No growth

Negative strains are inhibited.

OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION

TRYPTONE BILE X-GLUCURONIDE MEDIUM (TBX) CM0945

TRYPTONE BILE X-GLUCURONIDE MEDIUM (TBX) **CM0945**

Typical Formula*

Tryptone	grams per litre	20.0
Bile salts No.3		1.5
X-glucuronide		0.075
Agar		15.0

* adjusted as required to meet performance standards

Directions

Suspend 36.6g in 1 litre of distilled water. Bring gently to the boil to dissolve completely. Sterilize by autoclaving at 121°C for 15 minutes. Cool to 50°C and pour 15ml of the medium into sterile Petri dishes or hold at 45°C when using the pour plate technique.

Physical Characteristics

Straw, free-flowing powder
Colour on reconstitution - straw 2-3
Moisture level - less than 7%
pH 7.2 ± 0.2 at 25°C
Clarity - clear
Gel strength - firm, comparable to 15.0g/litre of agar

OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION

TRYPTONE BILE X-GLUCURONIDE MEDIUM (TBX) CM0945

Microbiological Tests Using Optimum Inoculum Dilution

Control Medium: Tryptone Soya Agar

Reactions after incubation at 44 ± 2°C for 21 ± 3 hours

Stack all plates not more than 3 high in plastic bags containing damp cotton wool, seal bags with tape.

Inoculation using pour plate technique

Medium is challenged with 30-100 colony-forming units

Escherichia coli	ATCC®11775	1-2mm blue/green colonies
Klebsiella pneumoniae	ATCC®29665	1-2mm straw colonies

A satisfactory result for *Escherichia coli* strains is represented by recovery equal to or greater than 70% of the control medium.

For *Klebsiella pneumoniae* ATCC®29665, a satisfactory result is represented by recovery of positive strains equal to or greater than 50% of the control medium.

Medium is challenged with 1E+04 to 1E+06 colony-forming units

Klebsiella aerogenes	NCTC9528	No growth

Negative strains are inhibited.

Testing performed in accordance with ISO11133: 2014

Reactions after incubation at 44 ± 2°C for 21 ± 3 hours

Inoculation using pour plate technique

Medium is challenged with 50-120 colony-forming units

Escherichia coli	ATCC®25922	WDCM00013	1-2mm blue/green colonies
Escherichia coli	ATCC®8739	WDCM00012	1-2mm blue/green colonies
Escherichia coli	NCTC13216	WDCM00202	1-2mm blue/green colonies

A satisfactory result for *Escherichia coli* strains is represented by recovery equal to or greater than 70% of the control medium.

OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION

TRYPTONE BILE X-GLUCURONIDE MEDIUM (TBX) CM0945

Inoculation using surface plate technique

Medium is challenged with 50-120 colony-forming units

Escherichia coli	ATCC®25922	WDCM00013	1-2mm blue/green colonies
Escherichia coli	ATCC®8739	WDCM00012	1-2mm blue/green colonies
Escherichia coli	NCTC13216	WDCM00202	1-2mm blue/green colonies

A satisfactory result for *Escherichia coli* strains is represented by recovery equal to or greater than 70% of the control medium.

Medium is challenged with 1E+04 to 1E+06 colony-forming units

Enterococcus faecalis	ATCC®19433	WDCM00009	No growth

Negative strains are inhibited.

Medium is challenged with 1E+04 to 1E+05 colony-forming units

Enterococcus faecalis	ATCC®29212	WDCM00087	No growth

Negative strains are inhibited.

Medium is challenged with 1E+03 to 1E+04 colony-forming units

Citrobacter freundii	ATCC®43864	WDCM00006	No growth or 1-2mm white to green/beige colonies
Pseudomonas aeruginosa	ATCC®27853	WDCM00025	No growth or 1-2mm white to green/beige colonies

Inoculation using membrane filtration technique

Medium is challenged with 50-120 colony-forming units

Escherichia coli	ATCC®25922	WDCM00013	1-2mm blue/green colonies
Escherichia coli	ATCC®8739	WDCM00012	1-2mm blue/green colonies
Escherichia coli	NCTC13216	WDCM00202	1-2mm blue/green colonies

OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION

TRYPTONE BILE X-GLUCURONIDE MEDIUM (TBX) CM0945

A satisfactory result for *Escherichia coli* strains is represented by recovery equal to or greater than 70% of the control medium.

Revision History

Section / Step	Description of Change	Reason for Change	Reference
Entire Document	Reformatting to new template Update to test specification	Change control	BT-CC-1561
Entire document	Change title typographical error. Addition of *Klebsiella aerogenes* NCTC9528	Change control	BT-CC-2204

OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION

M.R.S. (ISO) AGAR CM1153

M.R.S. (ISO) AGAR **CM1153**

Typical Formula*

Enzymatic digest of casein	grams per litre	10.0
Meat extract		10.0
Yeast extract		4.0
Tri-ammonium citrate		2.0
Sodium acetate		5.0
Magnesium sulphate heptahydrate		0.2
Manganese sulphate tetrahydrate		0.05
Di-potassium hydrogen phosphate		2.0
Sorbitan mono-oleate		1.08
Glucose		20.0
Agar		12.37

*adjusted to meet performance standards

Directions

Suspend 66.7g in 1 litre of distilled water. Bring to the boil to dissolve completely. Sterilize by autoclaving at 121°C for 15 minutes. Mix well and pour into sterile Petri dishes.

Physical Characteristics

Dark straw, free-flowing powder
Colour on reconstitution – brown/orange
Moisture level- less than or equal to 7%
pH 5.7 ± 0.1 at 25°C
Clarity - clear
Gel strength - firm comparable to 12.37g/litre of agar

Microbiological Tests Using Optimum Inoculum Dilution

Control Medium: M.R.S. Agar or Tryptone Soya Agar

Reactions after incubation at 30 ± 2°C for 72 ± 3 hours under microaerophilic conditions

Medium is challenged with 10-100 colony-forming units

Lactobacillus gasseri	ATCC®19992	0.5-2mm pale straw colonies

OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION

M.R.S. (ISO) AGAR CM1153

A satisfactory result is represented by recovery of positive strains equal to or greater than 70% of the control medium.

Testing performed in accordance with ISO11133:2014

Reactions after incubation at 30 ± 2°C for 72 ± 3 hours under microaerophilic conditions

Medium is challenged with 50-120 colony-forming units

Lactobacillus sakei	ATCC®15521	WDCM00015	0.5-2mm pale straw colonies
Lactococcus lactis	ATCC®19435	WDCM00016	0.5-2mm cream colonies
Pediococcus pentosaceus	ATCC®33316	WDCM00158	ppt-3mm cream colonies

A satisfactory result is represented by recovery of positive strains equal to or greater than 70% of the control medium.

Medium is challenged with 1E+04 to 1E+06 colony-forming units

Escherichia coli	ATCC®25922	WDCM00013	No growth
Escherichia coli	ATCC®8739	WDCM00012	No growth
Bacillus cereus	ATCC®11778	WDCM00001	No growth

Negative strains are inhibited.

OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION

M.R.S. (ISO) AGAR CM1153

Revision History

Section / Step	Description of Change	Reason for Change	Reference
Entire document	Creation of new document	Change control	BT-CC-1368
Typical formula/ Physical characteristics	Correction of typographical errors. pH range changed to the correct limits.	Change control	BT-CC-2783