

TM 1636- CHROMOGENIC MM AGAR

INTENDED USE

For identification and differentiation of *Salmonella* and non-*Salmonella* from water and clinical samples.

PRODUCT SUMMARY AND EXPLANATION

Chromogenic MM Agar was formulated by Miller and Mallison for specific isolation and detection of *Salmonellae*. This medium is superior to XLT4 Agar in supporting growth of *Salmonella* due to the presence of appropriate proportion of four sugars. Most differential and selective media are formulated with one or more sugars and pH indicators respectively. The utilization of sugars by organisms results in pH-changes. This is used as a means of distinguishing *Salmonella* from competing bacteria on the basis of colony colour. *Salmonella* usually are unable to ferment these sugars that support growth of competing bacteria. Thus other bacteria tend to overgrow *Salmonellae*, masking their presence.

COMPOSITION

Ingredients	Gms / Ltr
Agar	15.000
Peptic digest of animal tissue	10.000
Lactose	10.000
Chromogenic mixture	6.600
D-Cellobiose	3.000
Beef extract	2.000
D-Trehalose	1.330
D-Mannitol	1.200

PRINCIPLE

The inclusion of sugars like mannitol, cellobiose and trehalose stimulate the better initial growth of *Salmonella* cells. However, the low concentrations of these sugars do not interfere with the utilization of protein and H₂S production. Presence of lactose suppresses H₂S production by non-salmonellae like *Citrobacter freundii*. The chromogenic mixture, present in this medium helps to differentiate between lactose fermenters and non-fermenters. Lactose fermenters give bluish green coloured colonies, which would have been impossible to differentiate with an indicator based on pH change. Peptic digest of animal tissue and beef extract provide essential nitrogen compounds. Agar is the solidifying agent.

INSTRUCTION FOR USE

- Dissolve 49.13 grams in 1000 ml distilled water.
- Gently heat to boiling with swirling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.
- Cool to 45-50°C.
- Pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of powder	: Cream to yellow homogeneous free flowing powder
Appearance of prepared medium	: Light amber coloured, slightly opalescent gel
pH (at 25°C)	: 7.6±0.2

INTERPRETATION



Cultural characteristics observed after an 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
<i>Citrobacter freundii</i>	8090	50-100	Good-Luxuriant	Colourless may show bluish green colour on prolonged incubation	>=50%	35± 2°C	18 - 24 Hours
<i>Enterococcus faecalis</i>	29212	≥ 1000	Inhibited	---	0%	35± 2°C	18 - 24 Hours
<i>Escherichia coli</i>	25922	50-100	Luxuriant	Light blue	>=50%	35± 2°C	18 - 24 Hours
<i>Salmonella typhimurium</i>	14028	50-100	Luxuriant	Black centered	>=50%	35± 2°C	18 - 24 Hours
<i>Salmonella enteritidis</i>	13076	50-100	Luxuriant	Black centered	>=50%	35± 2°C	18 - 24 Hours
<i>Pseudomonas aeruginosa</i>	27853	50-100	Good-Luxuriant	Colourless	>=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

1. Miller R.G. and Mallison E.T., 2000, J. Food Protection, 63(10), 1443-46.
2. Miller R.G., Tate C.R., Mallinson E.T. and Scherrer J.A., 1991, PaultSa 70:2429-32.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP MedNet GmbH Berkstrasse 10, 48163 Muenster, Germany Authorized Representative	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

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

*For Lab Use Only

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