

TM 1638-CHROMOGENIC M-LAURYL SULPHATE AGAR

INTENDED USE

For enumeration and differentiation of *E. coli* and other coliforms by membrane filter technique.

PRODUCT SUMMARY AND EXPLANATION

Chromogenic M-Lauryl Sulphate Agar is used for the differentiation and enumeration of *Escherichia coli* and other coliforms through the membrane filtration technique. The presence of chromogenic mixture and the dye phenol red helps in differentiation of *E.coli* and other coliforms on the basis of color. It can also be used to isolate *E.coli* from clinical samples.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	40.000
Lactose	30.000
Agar	10.000
Yeast extract	6.000
Sodium lauryl sulphate	1.000
Sodium pyruvate	0.500
Phenol red	0.200
X-Glucuronide (BCIG)	0.200

PRINCIPLE

Medium contains Peptone and Yeast extract which provide amino acids, vitamins and other complex substances. Phenol red is used as a pH indicator, detecting lactose fermentation and producing yellow colonies when acid is produced. Lactose acts as a source of fermentable sugar while sodium lauryl sulphate inhibits organisms other than coliforms. Sodium pyruvate protects injured cells, helps recovery of coliforms and enhances growth. The enzyme β -glucuronidase released by *E.coli*, cleaves X-Glucuronide, imparting blue color to the colony which turns green due to lactose-fermentation. Agar is the solidifying agent.

INSTRUCTION FOR USE

- Suspend 87.90 grams in 1000 ml distilled water.
- Gently heat with swirling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool at 40 - 50°C
- Mix well and dispense into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	:	Light yellow to pink homogeneous free flowing powder
Appearance of prepared medium	:	Red colour, clear to slightly opalescent gel
pH (at 25°C)	:	7.4 $\pm$ 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 Temp.	Incubation Period
<i>Escherichia coli</i>	25922	50-100	Luxuriant	>=50%	Green	35-37°C	18-24 Hours
<i>Salmonella Enteritidis</i>	27853	50-100	Good	40-50%	Pink	35-37°C	18-24 Hours
<i>Klebsiella pneumoniae</i>	13883	50-100	Good	40-50%	Yellow, mucoid	35-37°C	18-24 Hours
<i>Staphylococcus aureus</i>	25923	≥1000	Inhibited	0%	-	35-37°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. Mara, D. D. A single medium for the rapid detection of *Escherichia coli* at 44°C. J. Hyg. 71:783-785. (1973).
2. Pugsley, A. P., L. J. Evison, and A. James. A simple technique for the differentiation of *Escherichia coli* in water examination. Water RES. 7:1431-1437. (1973).
3. The Environment Agency, Methods for Examination of Waters and Associated Material. The Microbiology of Drinking Water. (2002).

IVD
For In Vitro Diagnostic Use

QTY.
Quantity

**LOT/
B. NO.**
Lot / Batch Number


Temperature Unit


Best Before


European Conformity


QR Code

REF
Catalogue No.


Consults Instructions for use :


Manufacturer

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

***For Lab Use Only**
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2022

