TRM 1858 –CHROMOGENIC COLIFORM AGAR

INTENDED USE

For determination of coliform bacteria particularly Enterobacteriaceae on the basis of their ability to ferment lactose.

PRODUCT SUMMARY AND EXPLANATION

Coliforms including *Escherichia coli* are used as primary indicators of faecal contamination in water and food industries. Their presence and enumeration in samples is used as an index of the presence of faecal matter and is indicative of the possible presence of enteric pathogens. Chromogenic Coliform Agar (CCA) is a fast, accurate, and efficient way to detect coliforms and *E. coli* during microbiological quality testing of water and food samples. *Escherichia coli* are also the most common pathogen in urinary tract infections. This product incorporates the company's chromogenic galactoside that detects clinical levels of coliforms with high sensitivity.

COMPOSITION

Ingredients	Gms / Ltr
Agar	15.000
Sodium chloride	5.000
Disodium hydrogen phosphate	2.70
Sodium dihydrogen phosphate (2H2O)	2.20
Yeast extract	2.00
Enzymatic digest of casein	1.00
Sodium pyruvate	1.00
Sorbitol	1.00
Tryptophan	1.00
Salmon-β-D-galactoside	0.20
Sodium heptadecylsulphate (Tergitol 7)	0.15
X-glucuronide	0.10
Isopropyl 1-β-D- thiogalactopyranoside (IPTG)	0.10

PRINCIPLE

This medium contains enzymatic digest of casein, yeast extract, sorbitol and sodium pyruvate as sources of carbon, nitrogen, fermentable carbohydrate and other essential growth nutrients for the growth of microorganisms. Disodium hydrogen phosphate and sodium dihydrogen phosphate are the buffering agents. Sodium chloride maintains the osmotic equilibrium in the medium. L- Tryptophan improves the indole reaction and gives improved differentiation between *Escherichia coli* and other coliforms. Tergitol- 7 inhibits gram positive bacteria. The two chromogens used; salmon-β-D-galactoside and Xglucuronide help in differentiation of *Escherichia coli* and other coliforms on the basis of colony colour. The enzyme β-D-galactosidase cleaves salmon-β-D-galactoside, and gives a salmon to red colour to the coliform bacteria. *E. coli* have β-D galactosidase and β-D-glucuronidase enzymes to cleave both the chromogens, which give blue-violet colour to colonies. Expression of β-Dgalactosidase is strengthened in the presence of IPTG. Agar is a gelling agent.

INSTRUCTION FOR USE

1. Chromogenic Coliform Agar is a ready to use solid media in glass bottle. The medium is pre-sterilized, hence sterilization is not required.
2. Prior to use, medium in the bottle can be melted either by using a pre-heated water bath or any other method.
3. Slightly loosen the cap before melting.

4. Pour liquefied agar into each plate as desired and allow them to solidify at room temperature. Plates are now ready to inoculate or refrigerate for later use.

QUALITY CONTROL SPECIFICATIONS

Appearance	:	Light yellow color, clear to slightly opalescent gel.
Quantity of Medium	:	100 ml of the medium in glass bottle
pH (at 25°C)	:	6.8± 0.2
Sterility Check	:	Passes release criteria

INTERPRETATION

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

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Color of colony	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Luxuriant	>=70%	Dark blue to voilet	35-37°C	18-24 Hours
**Klebsiella aerogenes*	13048	50-100	Luxuriant	>=70%	Pink to red	35-37°C	18-24 Hours
Citrobacter freundii	43864	50-100	Luxuriant	>=70%	Pink to red	35-37°C	18-24 Hours
Enterococcus faecalis	19433	≥1000	Inhibited	0%	-	35-37°C	18-24 Hours
Salmonella enteridis	13076	50-100	Luxuriant	>=70%	Colourless	35-37°C	18-24 Hours

***** Formerly known as *Enterobacter aerogenes*

PACKAGING

100 ml glass bottle.

STORAGE

On receipt, store bottles in the dark at 2-8°C. Avoid freezing and overheating. The medium may be used up to the expiration date and incubated for the recommended incubation times. Bottles from unopened packages can be used up to the expiration date. Opened bottles must be used immediately. To prepare plates or tubes from the bottled medium, it must first be liquefied. Do not liquefy any leftovers for a second time

Product Deterioration: Do not use bottles if they show evidence of microbial contamination, discoloration, 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. ISO 9308-1/2014. Water quality — Enumeration of Escherichia coli and coliform bacteria —Part 1: Membrane filtration method for waters with low bacterial background flora.
2. Frampton, E.W., Restaino, L. and Blaszko, N. 1988. J. Food Prot. 51: 402-404.
3. Kilian, M. and Bulow, P. 1979. Acta. Pathol. Microbiol. Scand. (Section B) 87: 271-276.

Quantity

Lot / Batch Number


Temprature Unit


Manufacturer


Best Before

Certification of
Good Manufacturing Practices

Catalogue No.

Authorized Representative


European Conformity


QR
Code


Consults Instructions for use :

For In Vitro Diagnostic Use

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

***For Lab Use Only**

Revision: 31st March. 2022