CM 22,177 – CHROMOGENIC COLIFORM AGAR MODIFIED

INTENDED USE

Recommendedfor thesimultaneousdetectionof Escherichia coli and thermotolerent coliforms in water, milk, dairy productsandother foodsamples .

PRODUCT SUMMARY AND EXPLANATION

ChromogenicColiformAgar Modified is aselective medium recommended for the simultaneous detection of E.coli and thermotolerant coliforms in water and food samples.

COMPOSITION

Ingredients	Gms / Ltr
Peptone special	8.000
Sodium chloride	1.000
Yeast extract	3.000
Potassium dihydrogen phosphate	0.200
Dipotassium phosphate	0.600
Chromogenic mixture	0.200
Agar	10.000
Bile salts	0.800
Magnesium sulphate	0.200

PRINCIPLE

Peptone special and yeast extract provide essential growth nutrients to the organisms. The phosphates buffer the medium well. Magnesium sulphate helps colour development. Bile salts inhibits gram-positive organisms. Sodium chloride maintains osmotic balance. The chromogenic mixture contains two chromogenic substrates, which enables the detection of two specific enzymes, ß-galactosidase and ß-glucoronidase. ß-galactosidase produced by coliforms cleaves one chromogen, resulting in the pink coloration of coliform colonies. The enzyme ß-glucuronidase produced by E. coli, cleaves X-glucuronide. E.coli forms dark blue to violet coloured colonies due to cleavage of both the chromogens. E.coli strains that are ß-glucoronidase negative (serotype O157:H7) produce pink coloured colonies. Other gram negative bacteria able to grow at (44±0.5)ºC produce white or Colourless colonies.

Transfer 1 ml of product to analyses and its tenfold dilutions to sterile Petri plates. Pour 12 ml of medium, mix well and allow to solidify. Overlay with 4 ml of medium, allow to solidify and incubate at 43-45°C for 18-24 hours.

INSTRUCTION FORUSE

Dissolve 24 grams in 1000 ml distilled water.
Heat to boiling to dissolve the medium completely.
Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

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

INTERPRETATION

Culturalcharacteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Color of the colony	Incubation Temperature	Incubation Period
Escherichia coli	10536	50-100	luxuriant	>=50%	dark blue/ violet	43-45°C	24 hours (48 Hours if necessary)
Escherichia coli	25922	50-100	luxuriant	>=50%	dark blue/ violet	43-45°C	24 hours (48 Hours if necessary)
Enterobacter cloacae	23355	50-100	luxuriant	>=50%	Pink	43-45°C	24 hours (48 Hours if necessary)
Klebsiella pneumoniae	13883	50-100	luxuriant	>=50%	Light Pink	43-45°C	24 hours (48 Hours if necessary)
Enterococcus faecalis	29212	>=10^3	Inhibited	0%		43-45°C	24 hours (48 Hours if necessary)
Staphylococcus aureus	25923	>=10^3	Inhibited	0%		43-45°C	24 hours (48 Hours if necessary)

PACKAGING:

Inpacksizeof100 gm and 500 gm 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 they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

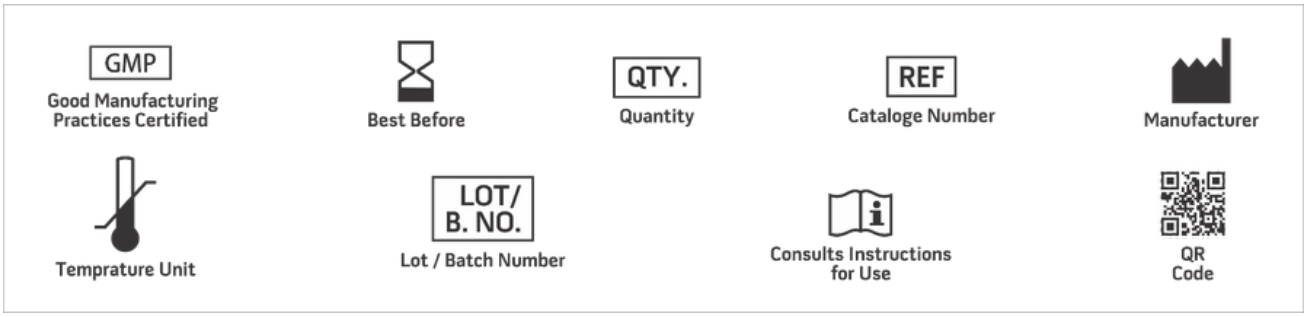
DISPOSAL

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

REFERENCES

1.FramptonE.W.,Restaino L. and Blaszko N., 1988, J. Food Prot., 51:402.

2. Kilian M. and Bülow P., 1976, Acta. Pathol. Microbiol. Scand., Sect. B, 84:245.
3. LeMinor L. and Hamida F., 1962, Ann. Inst. Pasteur (Paris), 102:267.
4. Manafi M. and Kneifel W., 1989, Zentralbl. Hyg., 189:225.



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

*For Lab Use Only