

CM 20436 - CHROMOGENIC COLIFORM AGAR W/SLS

INTENDED USE

For simultaneous detection of total coliforms and Escherichia coli in water and foods.

PRODUCT SUMMARY AND EXPLANATION

CHROMOGENIC COLIFORM AGAR W/SLS is used for rapid detection of coliforms and Escherichia coli during microbiological quality testing of water and food samples. The medium utilizes specific enzymes associated with coliforms and E. coli for differentiating the microorganisms.

COMPOSITION

Ingredients	Gms / Ltr
Agar	12.000
Sodium chloride	5.000
Dipotassium hydrogen phosphate	3.000
Peptone, special	3.000
Potassium dihydrogen phosphate	1.700
Sodium pyruvate	1.000
L-Tryptophan	1.000
Chromogenic mixture	0.200
Sodium lauryl sulphate	0.100

PRINCIPLE

Medium contains Peptone special which provides essential nutrients for growth like nitrogen, vitamins, minerals and amino acids. The combined action of Peptone and Sodium pyruvate allow rapid colony growth in this phosphate buffered medium, which also allows easy recovery of sub lethally, thermally injured, Coliforms. Sodium chloride provides the osmotic environment necessary for growth. Agar acts as the solidifying agent and Sodium lauryl sulphate makes the medium selective by inhibiting gram-positive organisms. The differentiation between Coliforms and E. coli is achieved with the presence of Chromogenic mixture Salmon-GAL, a chromogenic substrate for the detection of β -galactosidase and XGLUC, a chromogenic substrate for the detection of β -glucuronidase. Salmon-GAL is hydrolysed by coliforms releasing a salmon colour pigment; this reaction is strengthened in the medium by the presence of IPTG (isopropyl- β -D-thiogalactopyranoside). X-GLUC is hydrolysed, among Enterobacteria, by E. coli, and by a few other strains of Salmonella and Shigella releasing blue pigment. However, in the presence of the two substrates, and cleavage of these by E. coli results in the formation of dark blue to violet colonies. The presence of Tryptophan in the medium allows testing the indole directly onto the colonies by adding Kovac's Reagent, for the confirmation of E. coli.

INSTRUCTION FOR USE

- Suspend 27.00 grams in 1000 ml distilled water.
- Gently heat to boiling with swirling to dissolve the agar completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool at 40 - 50°C.
- Mix well and pour into sterile Petri plates.

Note: When a high number of gram-positive bacteria are expected add 5mg/liter of Novobiocin antibiotics before autoclaving the medium

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
pH (at 25°C)	:	6.8± 0.2

INTERPRETATION

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

<i>Microorganism</i>	<i>ATCC</i>	<i>Inoculum (CFU/ml)</i>	<i>Growth</i>	<i>Recovery</i>	<i>Colour of colony</i>	<i>Indole production</i>	<i>Incubation Temp.</i>	<i>Incubation Period*</i>
<i>Escherichia coli</i>	25922	50-100	Good-luxuriant	≥50%	Dark blue to violet	Positive reaction	35-37°C	18-24 Hours
<i>Escherichia coli</i>	8739	50-100	Good-luxuriant	≥50%	Blue-Violet with purple surrounding	Positive reaction	35-37°C	18-24 Hours
<i>Citrobacter freundii</i>	8090	50-100	Good-luxuriant	≥50%	salmon to red	Negative reaction	35-37°C	18-24 Hours
<i>Enterobacter aerogenes</i>	13048	50-100	Good-luxuriant	≥50%	salmon to red	Negative reaction	35-37°C	18-24 Hours
<i>Salmonella enteritidis</i>	13076	50-100	Good	40-50%	Colourless	Negative reaction	35-37°C	18-24 Hours
<i>Klebsiella pneumoniae</i>	13883	50-100	Good-luxuriant	≥50%	Light pink	Negative reaction	35-37°C	18-24 Hours
<i>Enterococcus faecalis</i>	29212	≥1000	Inhibited	0%	-	-	35-37°C	18-24 Hours

Positivereaction= confirmation of red colour around the colony by addition of Kovacs reagent.

*Incubation period 48 hours, if necessary.

PACKAGING

Inpacksizeof100gm & 500gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 10-25°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. Frampton E.W., Restaino L. and Blascko N., J. Food Prot., 51:402. (1988).
2. LeMinor L. and Hamida F., Ann. Inst. Pasteur (Paris), 102:267. (1962).
3. Manafi M. and Kneifel W., Zentralbl. Hyg., 189:225. (1989).



 GMP Good Manufacturing Practices Certified	 Best Before	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. Lot / Batch Number	 Consults Instructions for Use	 QR Code	

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

*For Lab Use Only

