CM 20449 - CHROMOGENIC ENRICHMENT BROTH BASE FOR EC O 157:H7

INTENDED USE

For isolation and selective differentiation of Escherichia coli O157:H7 from food, environmental and clinical samples by chromogenic method.

PRODUCT SUMMARY AND EXPLANATION

March andRatnamreported theinability ofEscherichia coli O157:H7 to ferment sorbitol while developing Sorbitol MacConkey medium. Subsequently Thomson et al observed the absence of ß-glucoronidase activity in E.coli O157:H7 from a variety of samples by direct culture.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	10.000
Sorbitol	10.000
Bile salts mixtures	1.500
Chromogenic mixture	1.300

PRINCIPLE

Themediumcontains casein enzymic hydrolysate that provides nitrogenous, carbonaceous compounds and other essential growth nutrients. Sorbitol is the fermentable carbohydrate; bile salt mixture inhibits most of the gram-positive organisms. Addition of tellurite makes the medium more specific and selective. The bluish colour development by colonies of E.coli and Klebsiella in the medium is due to the enzymes ß-D-galactosidase and ß-glucoronidase that cleaves the chromogenic substrates present in chromogenic mixture. However E.coli O157:H7 gives a purple colour to the medium due to the absence of ß-glucoronidase and its inability to ferment sorbitol.

*: Formerly known as Enterobacter sakazakii

INSTRUCTION FOR USE

Dissolve 11.4 grams in 500 ml distilled water.
Heat if necessary to dissolve the medium completely.
Sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes.
For selective isolation of E.coli O157:H7, aseptically add the rehydrated contents of 1 vial of Chromogenic EC O157:H7 Selective Supplement I.
Mix well and dispense into sterile test tubes.

QUALITY CONTROL SPECIFICATIONS

Appearance of powder	:	Cream to yellow homogeneous free flowing powder
Appearance of prepared medium	:	Lightyellowcoloured,clearsolutionwithoutanyprecipitate
pH (at 25°C)	:	7.1 ± 0.2

INTERPRETATION

Culturalcharacteristics observed with added Chromogenic EC O157:H7 Selective Supplement I, after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Color of the medium	Growth after addition of supplement	Color of medium after addition of the supplement	Incubation Temp.	Incubation Period
Escherichia coli	25922	50-100	Good-luxuriant	blue may show slight precipitation of growth	Inhibited	-	35-37°C	18- 24 Hours
Escherichia coli O157:H7	12900	50-100	Good-luxuriant	purple may show slight precipitation of growth	Good-luxuriant	purple may show slight precipitation of growth	35-37°C	18- 24 Hours
Klebsiella pneumoniae	13883	50-100	Good-luxuriant	Bluish green may show slight precipitation of growth	Good	Bluish green may show slight precipitation of growth	35-37°C	18- 24 Hours
Salmonella Enteritidi	13076	50-100	luxuriant	Colourless may show slight precipitation of growth	Good	Colourless may show slight precipitation of growth	35-37°C	18- 24 Hours
Enterococcus faecalis	29212	>=10^3	Inhibited	-	Inhibited	-	35-37°C	18- 24 Hours
**Cronobacter sakazakii*	12868	50-100	Good-luxuriant	white may show slight precipitation of growth	none-poor	colourless may show slight precipitation of growth	35-37°C	18- 24 Hours
Salmonella flexneri	12022	50-100	Good	Colorless	Inhibited	-	35-37°C	18- 24 Hours

*Enterobacter sakazakii

PACKAGING:

Inpacksizeof100gm & 500gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 2-8°C and protect fromdirect sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for thefirst time, note the time and date on the label space provided on the container. After the desired amount of medium hasbeen taken out replace the cap tightly to protect from hydration.

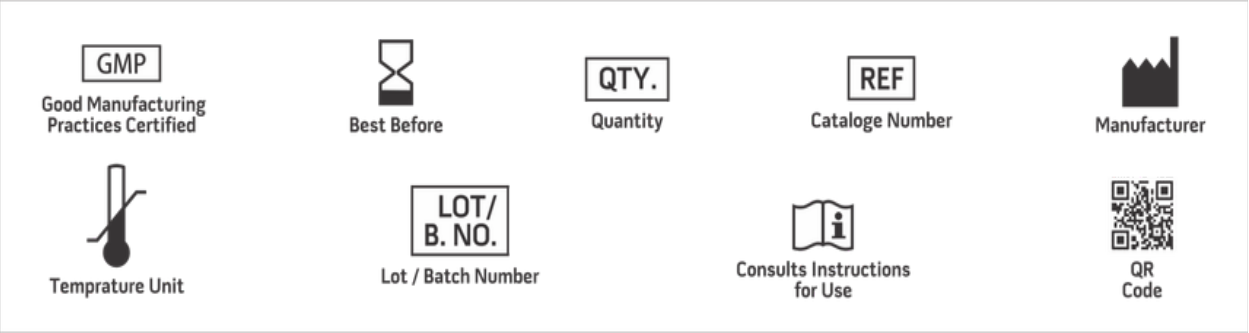
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signsof deterioration.

DISPOSAL

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

REFERENCES

1.MarchS.B and Ratnam S., 1986, J. Clin. Microbiol., 23:869-872.
2.Thompson J. S., Hodge D. S., Borczyk A. A., 1990, J. Clin. Microbiol.28, 2165-2168.



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

*ForLab UseOnly