

## TM 2123 – 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 and Ratnam reported the inability of *Escherichia coli* O157:H7 to ferment sorbitol while developing Sorbitol MacConkey medium. Subsequently Thomson et al observed the absence of  $\beta$ -glucuronidase 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

The medium contains 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  $\beta$ -D-galactosidase and  $\beta$ -glucuronidase 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  $\beta$ -glucuronidase 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	: Light yellow coloured, clear solution without any precipitate
pH (at 25°C)	: 7.1 $\pm$ 0.2

### INTERPRETATION

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



Microorganisms	ATCC	Inoculum (CFU/ml)	Growth	Color of the medium	Growth after addition of supplement	Color of medium after addition of the supplement	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	25922	50-100	Good-luxuriant	blue may show slight precipitation of growth	Inhibited	-	35-37°C	18- 24 Hours
<i>Klebsiella pneumoniae</i>	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
<i>Salmonella Enteritidis</i>	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
<i>Enterococcus faecalis</i>	29212	$\geq 10^3$	Inhibited		Inhibited	-	35-37°C	18- 24 Hours
* <i>Cronobacter sakazakii</i>	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
<i>Salmonella flexneri</i>	12022	50-100	Good	Colorless	Inhibited	-	35-37°C	18- 24 Hours

\* *Enterobacter sakazakii*

#### PACKAGING:

In pack size of 100 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



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

**REFERENCES**

1. March S. 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.

 GMP Good Manufacturing Practices Certified	 Best Before	 Quantity	 Cataloge Number	 Manufacturer
 Temprature Unit	 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**  
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