



Modified EC Broth Base

M1285

The Modified EC Broth Base is used for the isolation of *Escherichia coli* O157:H7 .

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	20.000
Sodium chloride	5.000
Lactose	5.000
Bile salts mixture	1.120
Dipotassium hydrogen phosphate	4.000
Potassium dihydrogen phosphate	1.500
Final pH (at 25°C)	6.9±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 18.31 grams in 500 ml. distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45 – 50°C and aseptically add rehydrated contents of 2 vials of Novobiocin Supplement(FD096) . Mix well and dispense as desired.

Principle And Interpretation

EC Medium was originally developed by Hajna and Perry (1) for improved detection of coliforms. The current formulation is a combination of lactose broth, bile salts mixture and buffering agents.

Peptic digest of animal tissue serves as a rich source of nitrogen, vitamins and amino acids. Lactose provides the carbon source for lactose fermenting microorganisms. The addition of bile salts mixture inhibits the growth of gram positive bacteria particularly bacilli and faecal streptococci. Sodium chloride maintains the osmotic balance of the medium. Potassium salts buffers the medium. The addition of novobiocin inhibits gram positive bacteria.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of Prepared Medium

Light amber clear

Reaction

Reaction of 1.83% w/v aqueous solution at 25°C. pH : 6.9±0.2

pH

6.70-7.10

Cultural Response

Cultural characteristics observed with added Novobiocin Supplement (FD096) after an incubation at 35-37°C for 18-24 hours.

Cultural Response

Organism	Inoculum(CFU)	Growth
Cultural Response		
<i>Escherichia coli</i> O157:H7	50-100	luxuriant
<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant
<i>Enterococcus faecalis</i> ATCC 29212	≥10 ³	inhibited
<i>Staphylococcus aureus</i> ATCC 25923	≥10 ³	inhibited
<i>Bacillus subtilis</i> ATCC 6633	≥10 ³	inhibited

Storage and Shelf Life

Store below 30°C in tightly closed container and prepared medium at 2-8°C. Use before expiry date on the label.

Reference

1.Hajna A.A., a. Perry C.A., 1943, Am. J. Pbl. Hlth. 33:550-556.

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