EC0157:H7 Enrichment Broth

M1772

Used as enrichment broth for the rapid growth of *E. coli* 0157:H7 from food samples.

Composition**

Ingredients	Gms / Litre
Tryptone	15.000
Yeast extract	6.000
Bile Salts Mixture	1.500
Final pH (at 25°C)	7.1±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 22.5 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 mins. Mix well and dispense into sterile test tubes.

Principle And Interpretation

E. coli 0157:H7 is a cause of food borne disease in the health industry. Most of the illnesses are associated with eating undercooked, contaminated ground beef; however, contaminated fruits and vegetables are currently increasingly implicated as sources of *E. coli* O157:H7 infections (1). The major concern is the outbreak of *E. coli* 0157:H7 food poisoning in United States and Japan. *E. coli* 0157:H7 has been recognized as a cause of haemorrhagic colitis (3). EC0157:H7 Enrichment broth is based on the formulation described by Rappaport and Henigh (2). EC0157:H7 Enrichment Broth was designed for the rapid enrichment of *E. Coli* 0157: H7.

Tryptone provides nitrogenous, carbonaceous compounds and other essential growth nutrients. Yeast extract serves as a source of vitamin B complex and other nutrients. Bile salt mixture inhibits most of the gram-positive organisms.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium
Light amber clear solution without any precipitate

Reaction
Reaction of 2.25% w/v aqueous solution at 25°C. pH : 7.1±0.2

pH
6.90-7.30

Cultural Response
M1772: Cultural characteristics observed after an incubation at 35 - 37°C for 4 - 6 hours.

Organism	Inoculum (CFU)	Growth
Cultural Response		
Escherichia coli ATCC 25922	50-100	luxuriant
Escherichia coli O157:H7 NCTC 12900	50-100	luxuriant
**Cronobacter sakazakii ATCC 12868*	50-100	luxuriant
Klebsiella pneumoniae ATCC 13883	50-100	luxuriant
Salmonella Enteritidis ATCC 13076	50-100	luxuriant

Enterococcus faecalis ATCC 29212	>=10^3	inhibited
Staphylococcus aureus ATCC 25923	>=10^3	inhibited

Key: *: Formerly known as *Enterobacter sakazakii*

Storage and Shelf Life

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

Reference

1. Ackers, M. L., B. E. Mahon, E. Leahy, B. Goode, T. Damrow, P. S. Hayes, W. F. Bibb, D. H. Rice, T. J. Barrett, L. Hutwagner, P. M. Griffin, and L. Slutsker. 1998. An outbreak of *Escherichia coli* O157:H7 infections associated with leaf lettuce consumption. J. Infect. Dis. 1771588-1593.
2. Rappaport F and Henigh E., J. Clin. Path., 5:361.
3. Karmali M. A., Petric M., Lim C., et al, 1985, J. Infect. Dis., 151:775.

Revision : 2 / 2015