



Soyabean Bile Broth Base

M1286

Soyabean Bile Broth Base with supplement is recommended for enrichment and isolation of *Escherichia coli* O15:H7 from food samples.

Composition**

Ingredients	Gms / Litre
Tryptone	17.000
Soya peptone	3.000
Bile salts mixture	1.120
Dextrose (Glucose)	2.500
Sodium chloride	5.000
Dipotassium hydrogen phosphate	4.000
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 32.62 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 minutes. Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of Novobiocin Selective Supplement (FD290). If desired, aseptically add rehydrated contents of 1 vial of EC O157 : H7 Selective Supplement (FD247) for isolation of *Escherichia coli* O157 from foods Mix well and dispense as desired.

Principle And Interpretation

Soyabean Bile Broth Base is formulated as recommended by FDA (1) for the enrichment and isolation of *E. coli* O157:H7.

Tryptone and soya peptone provide carbonaceous, nitrogenous compounds and other essential growth nutrients. Dextrose is the fermentable carbohydrate and energy source. Bile salts mixture inhibits gram-positive bacteria. Sodium chloride maintains osmotic equilibrium while phosphate buffers the medium well. Novobiocin renders the medium selectivity.

Whenever low levels of *E. coli* O157:H7 are suspected, the food is enriched in Soyabean Bile Broth and further plated on selective medium as Sorbitol MacConkey Agar (M298I) or Hemorrhagic coli (HC) Agar (M1158) for isolation and identification.

Blend 25 grams food sample to be tested in 224 ml Soyabean Bile Broth and incubate with shaking (about 100 rpm) at 37°C for 18-24 hours. Prepare dilution of the enrichment culture with phosphate buffer and spread 0.1 ml of each dilution on HC Agar or Sorbitol MacConkey Agar (M298I) plates and incubate at 43°C for 24 hours.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light amber coloured clear solution

Reaction

Reaction of 3.26% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH

7.10-7.50

Cultural Response

M1286: Cultural characteristics observed after an incubation at 35-37°C or 41.5 °C for 18-48 hours with added Novobiocin Selective Supplement (FD290) and if desired EC O157 : H7 Selective Supplement (FD247). Recovery done on Sorbitol MacConkey Agar(M298I).

Organism	Inoculum (CFU)	Growth (on M298I)
<i>Escherichia coli</i> O157:H7 NCTC12900	50-100	good-luxuriant
<i>Escherichia coli</i> ATCC 25922	50-100	good
<i>Staphylococcus aureus</i> ATCC 25923	$\geq 10^3$	none
<i>Enterococcus faecalis</i> ATCC 29212	$\geq 10^3$	none

Storage and Shelf Life

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

Reference

1. FDA Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, D.C.

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