Esculin Fermentation Broth

M1382

Esculin Fermentation Broth is used for cultivation and differentiation of bacteria which hydrolyze esculin.

Composition**

Ingredients	Gms / Litre
Beef heart, infusion from	500.000
Tryptose	10.000
Sodium chloride	5.000
Esculin	1.000
Agar	1.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 34.50 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Dispense as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Note : Esculin hydolysis is observed on addition of Ferric citrate 0.1 gm/litre

Principle And Interpretation

Esculin Fermentation Broth is used for cultivation and differentiation of bacteria which hydrolyze esculin (1). Tryptose and infusion from beef heart provide amino acids or other nitrogenous substances that support bacterial growth. Sodium chloride maintains osmotic equilibrium. Esculin is a glycoside incorporated as a differential agent to facilitate the identification of various organisms. Hydrolysis of esculin yields esculetin and dextrose.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Coloured and Clarity of prepared medium

Amber coloured clear to slightly opalescent with purplish tinge

Reaction

Reaction of 3.45% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

M1382: Cultural characteristics observed after an incubation at 35- 37°C for 18- 24 hours.

Organism	Growth	Esculin hydrolysis
Cultural Response		
Escherichia coli ATCC 25922	good	Negative reaction
Enterococcus faecalis ATCC 29212	luxuriant	Positive reaction, blackening of medium
Enterococcus faecium ATCC 19434	luxuriant	Positive reaction,

		blackening of medium
Yersinia enterocolitica ATCC 27729	luxuriant	Positive reaction, blackening of medium

Storage and Shelf Life

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

Reference

1.Shigei 1992, In Isenberg (ed.); Clinical microbiology procedures handbook, Vol-1, American Society for Microbiology, Washington, D.C.

Revision : 2 / 2015