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Esculin Fermentation Broth

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

REF: BS.1/NZ01.100.0100	100 Gram	REF: BS.1/NZ01.250.0250	250 Gram
REF: BS.1/NZ01.500.0500	500 Gram		

PRINCIPLE AND INTERPERTATION :

Esculin Fermentation Broth is used for the cultivation and differentiation of bacteria capable of hydrolyzing esculin (3). Tryptose and HM infusion B provide essential amino acids and other nitrogen-containing compounds required for bacterial growth. Sodium chloride maintains osmotic balance within the medium. Esculin, a glycoside, is included as a differential component to aid in the identification of different microorganisms. Upon hydrolysis, esculin is broken down into esculetin and dextrose.

MEDIA COMPOSITION

Item	Formula per liter of medium
HM infusion B from #	500.00 gm
Tryptose	10.00 gm
Sodium chloride	5.00 gm
Esculin	1.00 gm
Agar	1.00 gm

Final pH (at 25°C) 7.0 ± 0.2 ** Formula adjusted, standardized to suit performance parameters.

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.
  S56: dispose of this material and its container at hazardous or special waste collection point.
  S57: use appropriate container to avoid environmental contamination.
  S61: avoid release in environment.

For further information, refer to the Esculin Fermentation Broth material safety data sheet.

STORAGE AND STABILITY

BioScien Esculin Fermentation Broth Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

PREPARATION

Suspend 34.50 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Dispense into tubes or flasks as desired. 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/litr

Deterioration

The color of ***BioScien*** Esculin Fermentation Broth Cream to yellow homogeneous free flowing powder. prepared medium amber coloured, very slightly opalescent with purplish tinge.

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile petri dishes
- Incubator
- Autoclave

PERFORMANCE CHARACTERISTICS

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

Organisms (ATCC)	Growth	Esculin hydrolysis
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

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control still out of range please contact ***BioScien*** technical support.

REFERENCE

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. Shigei 1992, In Isenberg (ed.); Clinical microbiology procedures handbook, Vol-1, American Society for Microbiology, Washington, D.C

SYMBOLS IN PRODUCT LABELLING

IVD	For in-vitro diagnostic use	Σ	Number of <n> test in the pack
LOT	Batch Code/Lot number		Caution
REF	Catalogue Number		Do not use if package is damaged
	Temperature Limitation		Consult Instruction for use
	Expiration Date		
	Manufactured by		