

Bile Esculin Agar

Catalog : HB0175-3-250

Bile Esculin Agar is used to differentiate enterococci and the Streptococcus bovis group from other streptococci.

Approximate Formula:

Ingredients	gm/liter
Peptone	8.0
Bile Salts	20.0
Ferric Citrate	0.5
Esculin	1.0
Agar	15.0
Final pH7.1±0.2 at 25 °C	

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 44.5g of the medium in one liter of deionized or distilled water. Mix well and heat with frequent agitation. Boil for 1 minute. Dispense into tubes or flasks. Sterilize in the autoclave at 121 °C (15 lbs) for 15 minutes.

Principle and Interpretation:

Enterococci and certain streptococci hydrolyze the glycoside esculin to esculetin and dextrose. Esculetin reacts with an iron salt to form a dark brown or black complex. Ferric citrate is incorporated into the medium as an indicator of esculin hydrolysis and resulting esculetin formation. Oxgall is used to inhibit gram-positive bacteria other than enterococci.

Appearance:

Dehydrated medium is a free-flowing yellowish powder. The prepared medium is a kind of brown-yellow transparent gel.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

Plate Count Agar must be stored tightly capped in the original container at 5-30 °C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8 °C.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 36±1 °C for 24-48 h.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Recovery	Remarks
<i>Enterococcus faecium</i>	ATCC 6057	10-100	Luxuriant	≥70%	Brown-black colonies, fluorescence disappears
<i>Enterococcus faecalis</i>	ATCC 29212	10-100	Luxuriant	≥70%	Brown-black colonies, fluorescence disappears
<i>Escherichia coli</i>	ATCC 25922	10-100	Luxuriant	≥70%	Colorless colonies
<i>Staphylococcus aureus</i>	ATCC 25923	100-1000	Inhibited	/	/

References:

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2. Facklam, Sahm and Teixeira. 1999. In Murray, Baron, Pfaller, Tenover and Tenover (ed.), Manual of clinical microbiology, 7th ed. American Society for Microbiology, Washington, D.C.
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