

# Bile Esculin Broth



Differential medium used for the isolation of group D *Streptococci* in foods and pharmaceutical products.

## • CONTENTS (Liter)

Beef Extract	3.0 g
Peptone	5.0 g
Esculin	1.0 g
Oxgall	40.0 g
Ferric Citrate	0.5 g
Final pH = 6.6 ± 0.2 at 25°C.	

## • PROCEDURE

Suspend 49.5 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45-50°C in water bath. Mix well. Dispense in tubes. If necessary, dispense the medium before autoclave.

## • INTERPRETATION

Bile Esculin Broth is a differential medium for the isolation of group D *Streptococci* in foods and pharmaceutical products. Beef extract and peptone provide nitrogen, carbon, vitamins and minerals. Organisms positive for esculin hydrolysis hydrolyze the esculin to esculetin and dextrose. The esculetin reacts with the ferric citrate to form a dark brown or black complex. Oxgall inhibits gram-positive bacteria other than *Enterococci*.

## • TECHNIC

Inoculate the specimen with stab using a sterile needle to the medium. Shake gently for spreading microorganism. Incubate at 35 ± 2°C for 18 - 24 hours. Refer appropriate references for recommended test procedure.

## • QUALITY CONTROL FOR USE

### Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: light to medium beige.

### Prepared medium

Appearance: slightly opalescent.

Color: medium.

Incubation conditions: 35 ± 2°C / 18 - 24 hours

Microorganism	ATCC	Inoculum CFU	Growth	Esculin hydrolysis
<i>Enterococcus faecalis</i>	29212	50-100	good	+
<i>Streptococcus pyogenes</i>	19615	≥10 <sup>3</sup>	inhibited	-

## • STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared medium at 2-8°C.

## • REFERENCES

1. Ruoff, K.L. 1995. Streptococcus. Manual of Clinical Microbiology, 6th ed. American Society for Microbiology, Washington, D.C.
2. Facklam, R.R., and M.D. Moody.1970. .Presumptive identification of group D streptococci: The bile esculin test. Appl. Microbiol.20:245.
3. NCCLS document M22-A2, 1996. Approved Standard.

## • PACKAGE

Cat. No : MB-B1151 Bile Esculin Broth	500 G
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## • MICROBIAL CULTURE IMAGES



None

*E. faecalis*  
ATCC 29212

*S. pneumoniae*  
ATCC 6305

Incubation conditions : 36±1°C 24h