

# Bile Esculin Agar

Medium used for the differentiation and isolation of *enterococci* and group D *streptococci* from food and pharmaceutical products.

## • CONTENTS (Liter)

Beef Extract	3.0 g
Peptone	5.0 g
Esculin	1.0 g
Oxgall	20.0 g
Ferric Citrate	0.5 g
Agar	14.0 g
Final pH = 6.8 ± 0.2 at 25°C.	

## • PROCEDURE

Suspend 43.5 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 petri dishes.

## • INTERPRETATION

Bile Esculin Agar is a medium used for the differentiation and isolation of *enterococci* and group D *streptococci* from food and pharmaceutical products. Beef extract and peptone provide nitrogen, carbon, vitamins and minerals. Oxgall inhibits gram-positive bacteria. Esculin is hydrolyzed to esculetin and dextrose. Esculin reacts with ferric citrate and forms a zone of black or dark brown precipitate around the colonies. Agar is the solidifying agent.

## • TECHNIC

Inoculate the plates with spreading the specimen on surface of medium using a sterile loop. 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: dark beige.

### Prepared medium

Appearance: slightly opalescent.

Color: yellowish-brown.

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

Microorganism	ATCC	Inoculum CFU	Growth	Esculin hydrolysis
<i>Enterococcus faecalis</i>	29212	50-100	good	+
<i>Enterococcus faecium</i>	19434	50-100	good	+
<i>Streptococcus mutans</i>	25175	50-100	inhibited	-
<i>Streptococcus pneumoniae</i>	6305	50-100	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

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## • PACKAGE

Cat. No : MB-B1210 Bile Esculin Agar	500 G
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## • MICROBIAL CULTURE IMAGES



*Enterococcus faecium* ATCC 19434



*Enterococcus faecalis* ATCC 29212



*S. mutans*  
ATCC 25175 (100 CFU)

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