

Bile Esculin Azide Broth

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

• CONTENTS (Liter)

Casein Enzymic Hydrolysate	17.0 g
Proteose Peptone	3.0 g
Yeast Extract	5.0 g
Oxgall	10.0 g
Esculin	1.0 g
Ferric Ammonium Citrate	0.5 g
Sodium Chloride	5.0 g
Sodium Azide	0.25 g
Final pH = 7.1 ± 0.2 at 25°C.	

• PROCEDURE

Suspend 42.0 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 Azide Broth is a selective medium for isolation of group D *Streptococci* in foods and pharmaceutical products. It is suggested also for enumeration of faecal *Enterococci* in water. Peptones and beef extract 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 and sodium azide inhibits most of the other accompanying bacteria. Ferric ammonium citrate is component of H₂S indicator system. Sodium chloride maintains osmotic balance.

• 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: very slightly opalescent without precipitate.

Color: amber.

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

Microorganism	ATCC	Inoculum CFU	Growth	Esculin hydrolysis
<i>Enterococcus faecalis</i>	19433	50-100	good	+
<i>Staphylococcus aureus</i>	25923	50-100	good	-
<i>Streptococcus pyogenes</i>	25853	≥10 ³	none poor	-
<i>Escherichia coli</i>	25922	≥10 ³	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. Isenberg et al (1970) Appl. Microbiol. 20: 433.
2. Swan A., 1954, J. Clin. Pathol., 7:160
3. Facklam R. R. and Moody M. D., 1970, Appl. Microbiol., 20:245

• PACKAGE

Cat. No : MB-B2125 Bile Esculin Azide Broth	500 G
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