

AESCULIN BILE AZIDE AGAR

Selective medium with sodium azide for the isolation and differentiation of Group D streptococci

Typical formula (g/l)

Tryptone	17.00
Peptone	3.00
Yeast Extract	5.00
Oxgall	10.00
Sodium Chloride	5.00
Sodium Citrate	1.00
Aesculin	1.00
Fe-Ammonium Citrate	0.50
Sodium Azide	0.25
Agar	13.00

Directions

Suspend 55.7 in 1000 ml of cold distilled water. Heat to boiling with frequent agitation and sterilise by autoclaving at 121° C for 15 minutes. Do not exceed sterilisation time and temperature.

Final pH 7.1 ± 0.2

Description

Aesculin Bile Azide Agar is a selective and diagnostic medium for the detection of group D streptococci. These microorganisms grow in the presence of sodium azide and bile salts and are additionally capable of hydrolysing aesculin to glucose and aglycone 6-7 dihydroxycumarin: the aglycone reacts with the iron salts in the medium, giving them a black colouring. Aesculin Bile Azide Agar can be used with 8 mcg/ml of vancomycin for the screening of Vancomycin Resistant Enterococci.

Technique

Prepare tenfold dilutions of the sample with peptone water. Within 3 hours from the sample preparation, spread 0.1 ml of the inoculum onto the plates. Incubate at 35°C or at 42°C for 18-24 hours (the higher incubation temperature increases the selectivity of the medium). Colonies of enterococci on Aesculin Bile Azide Agar (after 24 hours of incubation at 37°C) have the following characteristic appearance: Convex colonies, translucent or whitish, 1-2 mm diameter, dark brown or black surrounding zone; incubation should not be prolonged beyond 24 hours, because extensive blackening of the medium makes reading difficult. Using a sterile inoculating loop, inoculate broth with well-isolated colonies. Incubate at 37°C for 18-24 hours and observe for growth and blackening.

User quality assurance (37°C-24 and 48 h)

Productivity control

E.faecalis ATCC 29212*: good growth with blackening of medium around the colonies

Selectivity control

S.pyogenes ATCC 19615*: partially inhibited

E.coli ATCC 25922*: inhibited

*NCCLS M22-A2 recommended strains.

Storage

Dehydrated media: 10-30°C

Ready to use tubes: 2-8°C

User prepared plates: up to 7 days at 2-8°C

User prepared tubes and flasks: 1 month at 2-8°C

References

- Isenberg, H.D., Goldberg, D. & Sampson, J. (1970) Appl. Micro., **20**, 433-436.
- Jensen Bette, J. (1996) Lab.Med. **27**, 53

- NCCLS document M22-A2, 1996. Quality Assurance for Commercially prepared Microbiological Culture Media-2nd ed.; Approved Standard.
- Swan, A. (1954) J. Clin. Path, **7**, 160-163.
- Williams, R.E.O. & Hirsch, A. (1950). J. Hyg (Camb.), **48**, 504.

Packaging

4010142	Aesculin Bile Azide Agar,	500 g (9 l)
551014	Bile Aesculin Azide Agar,	20 ready to use slanted tubes