



Anaerobic Blood Agar Base

M1345

Anaerobic Blood Agar Base is recommended for isolation and cultivation of Group A and Group B Streptococci from throat cultures and other clinical samples.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	14.500
Papaic digest of soyabean meal	5.000
Sodium chloride	5.000
Growth Factors	1.500
Agar	14.000
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 40 grams in 990 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure(121°C) for 15 minutes. Cool to 45-50°C. Aseptically add rehydrated contents of 1 vial of Neomycin Supplement (FD149), and 5% v/v sterile defibrinated sheep blood. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Group B streptococcus (GBS) infection is a common bacterial infection that is rarely serious in adults, but can be life-threatening to newborns. Group A Streptococci commonly causes strep throat and rarely, a potentially deadly destruction of flesh. Anaerobic Blood Agar Base with Neomycin Supplement is used for the isolation of Group A and Group B Streptococci from clinical specimens (1). This medium was originally formulated by Blanchette and Lawrence (2), by addition of the antibiotic Neomycin to sheep blood agar. This addition improved the detection of Group A & B Streptococci, while inhibiting the growth of the other accompanying haemolytic organisms. Casein enzymic hydrolysate and papaic digest of soyabean meal in the medium provide carbon and nitrogenous compounds. Growth factors and defibrinated sheep blood together supply enrichment for growth of fastidious organisms. Sodium chloride helps in maintaining the osmotic equilibrium. Addition of Neomycin supplement (FD149) helps to suppress the normal flora thereby enhancing recovery of Group A and Group B Streptococci.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.4% Agar gel.

Colour and Clarity of prepared medium

Basal medium : Yellow coloured clear to slightly opalescent gel. After addition of 5% v/v sterile defibrinated blood : Cherry red coloured , opaque gel forms in Petri plates

Reaction

Reaction of 4.0% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH

7.10-7.50

Cultural Response

M1345: Cultural characteristics observed in presence of 5-10% CO₂ with added 5% v/v sterile defibrinated sheep blood and Neomycin Supplement (FD149), after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Haemolysis
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Cultural Response

<i>Escherichia coli</i> ATCC 25922	50-100	none-poor	<=10%	none
<i>Staphylococcus aureus</i> ATCC 25923	50-100	none-poor	<=10%	none
<i>Streptococcus agalactiae</i> ATCC 13813	50-100	good-luxuriant	>=50%	beta
<i>Streptococcus pyogenes</i> ATCC 19615	50-100	good-luxuriant	>=50%	beta

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on label.

Reference

1. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Tenover F. C., (Ed.). 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
2. Blanchette and Lawrence, 1967, Am. J. Clin. Pathol., 48-411

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