Technical Information

Anaerobic Blood Agar Base

Product Code: DM 1975A

Application: - Anaerobic Blood Agar Base is used for cultivation of anaerobic microorgansisms, including very fastidious organisms from clinical specimens.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	15.000
Papaic digest of soyabean meal	5.000
Yeast extract	5.000
Sodium chloride	5.000
L-Cysteine	0.500
Hemin	0.005
Agar	13.500
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Anaerobic Blood Agar base serves as a nutritious, nonselective medium allowing the cultivation of not only fastidious anaerobes but also of aerobic and microaerophillic microorganisms (1). It promotes both typical pigment formation in *Bacteroides melaningenicus* and displays double haemolytic reaction in *Clostridium perfringens* with added blood to the medium base. The inner zone of haemolysis is due to toxin and the outer zone of incomplete haemolysis to toxin (lecithinase activity).

In the medium Casein peptone, papaic digest of soyabean meal and yeast extract provides carbon and nitrogenous compounds. Presence of Haemin and Vitamin K1 supports the growth of typical fastidious bacteria like *Bacteroides* species and gram positive spore bearers like *Clostridium* species. Addition of blood provides nutrients and helps to differentiate haemolytic organisms. Sodium chloride helps in maintaining the osmotic equilibrium.

Methodology

Suspend 44.0 grams of dehydrated culture media in 1000 ml distilled water. Mix thoroughly & heat to boiling to dissolve the medium completely. Add the rehydrated contents of 1 vial of Vitamin K1 solution (MS 2114). Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45 50°C. Aseptically add 5% v/v sterile defibrinated sheep blood. Shake well and pour into sterile petri plates.

Quality Control

Appearance

Yellow to tan coloured homogeneous free flowing powder

Colour and Clarity

Basal medium : Yellow coloured; with addition of 5% v/v sterile, defibrinated sheep blood : cherry red coloured Basal medium : slightly opalescent; After addition of 5% v/v sterile, defibrinated sheep blood : opaque gel in petri plates

Reaction

Reaction of 4.4% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH Range

7.20-7.60

Cultural Response
DM 1975A: Cultural characteristics observed after 24-48 hours at 35-37°C with 5-10% CO_2

Organism	Growth
Bacteroides fragilis ATCC 25285	luxuriant
Bacteroides melaninogenicus ATCC25611	luxuriant
Peptostreptococcus anaerobius ATCC 27337	luxuriant

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.
Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Dowell,Jr., V.R., Lombard,G.L, Thompson,F.S, Armfield,A.Y.: Media for isolation, characterization and identification of obligately anaerobic bacteria- US Department of Health and Human services, centers for Disease Control (1977).

Disclaimer :

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