Blood Agar Base

Cat. 1108

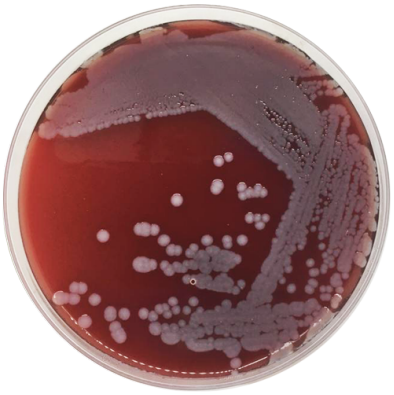
For the isolation, cultivation and detection of hemolytic activity.

Practical information

Aplications	Categories
Selective isolation	Fastidious microorganisms
Detection	Hemolytic reactions

Industry: Clinical / Antimicrobial susceptibility testing

CE
IVD



Principles and uses

Blood Agar Base is used for the isolation, cultivation and detection of hemolytic reaction of fastidious microorganisms.

It is suitable for isolating and cultivating a wide range of microorganisms with difficult growth characteristics. Upon adding blood, it can be utilized for determining hemolytic reactions.

The heart infusion and meat peptone are rich sources of nitrogen, vitamins, minerals and amino acids essential for growth. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Bacteriological agar is the solidifying agent.

The addition of blood provides extra growth factors for fastidious microorganisms and is the basis for determining hemolytic reactions. Hemolytic patterns may vary with the type of blood or base medium used. For example, defibrinated sheep blood gives best results for Group A streptococci.

Formula in g/L

Bacteriological agar	15	Meat peptone	10
Sodium chloride	5	Heart infusion	10

Typical formula g/L * Adjusted and/or supplemented as required to meet performance criteria.

Preparation

Suspend 40 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 121 ºC for 15 minutes. Cool to 45-50 ºC and aseptically add 5-10% of sterile defibrinated blood, homogenize and pour intro Petri dishes. Be careful to avoid bubble formation when adding the blood to the cooled medium and rotate the flask or bottle slowly to create a homogeneous solution. If desired, Polyenrichment Supplement (Cat. 6011) may be added to increase growth.

Instructions for use

For clinical diagnosis, the type of sample is secretions of the respiratory tract.
- Use standard procedures to obtain isolated colonies from specimens.
- Incubate at 35±2 ºC for 24-48 hours.
- Since many pathogens require carbon dioxide on primary isolation, plates may be incubated in an atmosphere containing approximately 5-10% CO2.

Results:
1. Alpha-hemolysis: greenish discoloration of medium.
2. Beta-hemolysis: clear zone surrounding colony.
3. Gamma-hemolysis: no change.

Quality control

Solubility	Appareance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25ºC)
w/o rests	Fine powder	Toasted	Opaque cherry red	7,3±0,2

Microbiological test

Incubation conditions: (35±2 ºC, CO2 atmosphere /24-48 h).

Microorganisms	Specification	Characteristic reaction
Staphylococcus epidermidis ATCC 12228	Good growth	
Neisseria meningitidis ATCC 13090	Good growth	
Streptococcus pyogenes ATCC 19615	Good growth	Beta hemolysis
Staphylococcus aureus ATCC 25923	Good growth	Beta hemolysis
Streptococcus pneumoniae ATCC 6305	Good growth	Alpha hemolysis

Storage

Temp. Min.:2 ºC
Temp. Max.:25 ºC

Bibliography

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Schubert, Edwards and Ramsey J. Bact. 77:648, 1959. APHA Diagnostic Procedures and Reagents 3.a edition, 1951. Tharshis and Frish AM. J. Clin. Path. 21:101. 1951.