

## Sheep Blood Agar Plate

MP1301

### Intended Use:

Used for cultivation of fastidious organisms and studying haemolytic reactions. It provides improved and enhanced haemolysis.

### Composition\*\*

Ingredients	g / L
Tryptone	14.000
Peptone	4.500
Yeast extract	4.500
Sodium chloride	5.000
Agar	12.500
Sterile sheep blood	70 ml
Final pH ( at 25°C)	7.3±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

### Principle And Interpretation

Haemolysins are exotoxins produced by bacteria that lyse red blood cells. The haemolytic reaction can be visualized on blood agar plates. On blood agar plates colonies of haemolytic bacteria may be surrounded by clear, colourless zone where the red blood cells have been lysed and the haemoglobin destroyed to a colourless compound. This is beta haemolysis. Other types of bacteria can reduce haemoglobin to methaemoglobin which produces a greenish zone around the colonies and is called alpha haemolysis (1). Gamma haemolysis is no haemolysis where no change in the medium is observed (2). Blood Agar Base No. 2 (M834), supplemented with sheep blood is used to study haemolytic reactions (patterns) of organisms. But this gave mixed haemolytic (a and b) reactions due to the physiological differences between sheep blood and horse blood (3).

Sheep Blood Agar Base with added sheep blood was developed to allow maximum recovery of organisms without interfering with their haemolytic reactions. Sheep Blood Agar Base was formulated to be compatible with sheep blood and give improved haemolytic reactions of organisms.

Tryptone, peptone and yeast extract provide nitrogen, carbon, amino acids and vitamins. Sodium chloride maintains the osmotic balance. Sheep Blood Agar Base showed considerable improvement and the expected beta haemolytic reactions with *S.pyogenes* in comparison to other blood agar bases supplemented with blood.

### Type of specimen

Clinical material : Urine, faeces, pus, other pathological material

### Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5).

After use, contaminated materials must be sterilized by autoclaving before discarding.

### Warning and Precautions

In Vitro diagnostic use only. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

### Limitations

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Further biochemical and serological tests must be carried out for further identification.

### Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

## Quality Control

### Appearance

Sterile Sheep Blood Agar in 90 mm disposable plates with smooth surface and absence of black particles/ cracks/ bubbles.

### Colour of medium

Red coloured medium

### Quantity of medium

25ml of medium in disposable plate

### pH

7.10-7.50

### Sterility Check

Passes release criteria

### Cultural Response

Cultural characteristics observed after incubation at 35-37°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Haemolysis
<i>Streptococcus pneumoniae</i> ATCC 6303	50-100	luxuriant	≥70%	alpha
<i>Streptococcus pyogenes</i> ATCC 19615	50-100	luxuriant	≥70%	beta

## Storage and Shelf Life

On receipt store between 2-8°C. Use before expiry date on the label. Product performance is best if used within stated expiry period.

## Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5)

## Reference

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2. Koneman E. W., Allen S. D., Janda W. M., Schreckenberger P. C., Winn W. C. Jr., 1992, Colour Atlas and Textbook of Diagnostic Microbiology, 4th Ed., J. B. Lippincott Company.
3. Spector W. S., (Ed.), 1961, Handbook of Biological Data, W. B. Saunder Company, Philadelphia and London.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition
5. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual Clinical Microbiology, 11th Edition. Vol. 1.

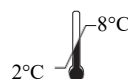
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HiMedia Laboratories Pvt. Limited,  
Plot No.C-40, Road No.21Y,  
MIDC, Wagle Industrial Area,  
Thane (W) -400604, MS, India



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