



Ready Prepared Media

## Technical Information

### BHI Agar Plate w/ Blood

**Product Code: PM 6380**

**Application:** Recommended for the cultivation of fastidious pathogenic bacteria, yeasts and moulds from clinical and non clinical samples.

### Composition\*\*

Ingredients	Gms / Litre
HM infusion powder #	12.500
BHI powder	5.000
Proteose peptone	10.000
Dextrose (Glucose)	2.000
Sodium chloride	5.000
Disodium hydrogen phosphate	2.500
Agar	15.000
Defibrinated Sheep Blood	50.00 ml
Final pH ( at 25°C)	7.4±0.2

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

# Equivalent to Calf brain infusion from

### Principle & Interpretation

BHI Agar is highly nutritious and can support luxuriant growth of wide variety of microorganisms (1,2). It can be further enriched by the addition of blood or rendered selective by adding different antibiotics (3,4,5). It is a general purpose medium used for primary isolation of aerobic bacteria from clinical specimens.

Proteose peptone and infusions used in the media serves as sources of carbon, nitrogen, vitamins, amino acids, along with essential growth factors. Dextrose is the energy source. Sodium chloride maintains the osmotic equilibrium of the medium while disodium phosphate buffers the medium. Defibrinated sheep blood added to the basal medium provides essential growth factors for the more fastidious bacteria, yeasts and moulds (2,3).

### Type of specimen

Clinical samples -all other types of specimens where fastidious organisms, slow growing fungi, actinomycetes areinvolved in infection .

### Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6).After use, contaminated materials must be sterilized by autoclaving before discarding.



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## 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. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3. Since the medium is nonselective, specimens heavily contaminated with normal flora should be inoculated on selective media.
4. Further biochemical tests must be carried out for complete 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.

## Methodology

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

## Quality Control

### Appearance

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

### Colour

Cherry red coloured medium

### Quantity of medium

25 ml of medium in 90 mm Petri plate

### pH

7.20-7.60

### Sterility Check

Passes release criteria

### Cultural Response

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

Organism	Inoculum (CFU)	Growth	Recovery	Haemolysis
Streptococcus pneumoniae ATCC 6303	50-100	luxuriant	>=70%	alpha
Streptococcus pyogenes ATCC 19615	50-100	luxuriant	>=70%	beta
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	50-100	luxuriant	>=70%	beta
Staphylococcus aureus subsp. aureus ATCC 6538(00033*)	50-100	luxuriant	>=70%	beta
Enterococcus faecalis ATCC 29212 (00087*)	50-100	luxuriant	>=70%	beta
Escherichia coli ATCC25922(00013*)	50-100	luxuriant	>=70%	none



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Key : (\*) Corresponding WDCM numbers.

## 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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

## Further Reading

1. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
2. Roseburg T. et al, 1944, J. Infect. Dis., 74:131.
3. Ajello L., Georg L., Kaplan W. and Kaufman L., 1963, CDC Laboratory Manual for Medical Mycology, PHS Publication No. 994, U.S. Govt. Office, Washington, D.C.
4. Conant N. F., 1950, Diagnostic Procedures and Reagents, 3rd Ed., APHA Inc
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
6. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1

## Disclaimer

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate
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