

TECHNICAL DATA SHEET

Blood Agar Base (Infusion Agar)

Principle

Blood agar base is modification of blood agar base with slight deviation in composition and pH. The media is composed of peptone, tryptone, sodium chloride and agar. Peptone and tryptone provide nitrogen, amino acids, carbon, vitamins and other necessary growth factors necessary for growth of microorganisms. Sodium chloride to maintain osmotic balance and agar as a solidifying agent. The media need supplementation of blood (5-10%), which provides additional growth factors for fastidious microorganisms and is the basis for determining hemolytic reactions. The media can also be used as general-purpose media without the addition of blood.

Use: For isolation and cultivation of various fastidious pathogenic microorganisms after addition of blood

Contents*

Ingredients	Gram/Liter
Peptone	10.000
Tryptone	10.000
Sodium Chloride	5.000
Agar	15.000
pH at 25°C	7.4 ±0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 40.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs. pressure (121 °C) for 15 min, cool it to 42-45 °C, and aseptically add 5% v/v sterile defibrinated blood. Mix well and pour into sterile petri plates. Ensure complete solidification and inoculate test sample aseptically.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples, food and dairy samples etc.

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Precautions to be taken

All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Beige colored free flowing, homogeneous powder
Reaction of 4.0% solution	7.4 ±0.2 at 25°C
pH	7.20- 7.60
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Without blood: dark amber, slightly opalescent gel. With 5% blood: cherry red, opaque gel.
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Cultural characteristics observed after incubation at 33-37°C for 18-48 hours.

Organism	ATCC	Inoculum (CFU)	Growth	Recovery	Hemolysis
<i>Staphylococcus aureus</i>	25923	50-100	Luxuriant	≥ 70%	Beta
<i>Streptococcus pneumoniae</i>	6303	50-100	Luxuriant	≥ 70%	Alpha
<i>Escherichia coli</i>	8739	50-100	Luxuriant	≥ 70%	No hemolysis

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.

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Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
2. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
3. Salfinger Y., and Tortorello M.L., (2015), *Compendium of Methods for the Microbiological Examination of Foods*, 5th Ed., American Public Health Association, Washington, D.C.
4. Murray P. R., Baron J. H., Jorgensen J. H., Pfaller M. A., Tenover F. C., Tenover F. C., (Eds.), (2003), *Manual of Clinical Microbiology*, ASM, Washington, D.C. 8th Ed.

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