



Sheep Blood Agar Base

RDM-SBA-01

Principle

Sheep blood agar base is modification of blood agar base with slight deviation in composition and pH. The media is composed of peptone, tryptone (equivalent to liver digest), yeast extract, sodium chloride and agar. Peptone and tryptone provide nitrogen, amino acids, carbon, vitamins and other necessary growth factors necessary for growth of microorganisms. Yeast extract provides additional nutritional sources and vitamins and other growth factors. 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: Recommended for isolating and cultivating fastidious microorganisms with or without added blood.

Contents*

Ingredients	Gram/Litre
Peptone	15.000
Tryptone	2.500
Yeast Extract	5.000
Sodium Chloride	5.000
Agar	12.500
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.

Precautions to be taken

These microbial media are intended for the in-vitro use only. 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 1.25% 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

Organism	Inoculum	Growth	Recovery	Hemolysis	Incubation
<i>Streptococcus pneumoniae</i> (ATCC 6303)	50-100	Luxurious	60-70%	Alpha (media become light green hued around the colonies)	33-37 °C, 18-48 h
<i>Streptococcus pyogenes</i> (ATCC 19615)	50-100	Luxurious	60-70%	Beta (media become light yellow and transparent around the colonies)	33-37 °C, 18-48 h

Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

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. Brown, J. H. (1919). *The use of blood agar for the study of streptococci*, NY Monograph No. 9. The Rockefeller Institute for Medical Research.
3. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
4. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), *Standard methods for the examination of water and wastewater*. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.

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