



BLOOD AGAR BASE (INFUSION AGAR)

TM 360

INTENDED USE

For isolation and cultivation of fastidious pathogenic microorganisms after addition of blood

COMPOSITION

Ingredients	Gms/Ltr
Beef Heart infusion, from 500 gm	10.000
Agar	15.000
Tryptone	10.000
Sodium chloride	5.000

PRODUCT SUMMARY AND EXPLANATION

Blood Agar Base (Infusion Agar) has been used as a base for preparation of blood agar and to support good growth of a wide variety of fastidious microorganisms. Because it is a highly nutritious medium it can also be used as a general purpose growth media without adding blood. Blood Agar Base is recommended by APHA and Standard Methods for testing of food samples

PRINCIPLE

Medium contains a rich nutrient base, which provides optimal growth conditions for all relevant microorganisms. Tryptone and Brain Heart infusion supplies amino acids, minerals and other essential growth factors in the medium for the growth of microorganisms. Sodium chloride maintains the osmotic balance of the medium. Agar is a solidifying agent. On addition of blood the pH value of 6.8 stabilizes and favours the formation of clear hemolysis zones. Fresh, defibrinated sheep blood is most suitable for detergent hemolysis forms.

If the culture medium base is to be used without blood, the pH should, however, be adjusted to 7.3 ± 0.2 since most bacterial colonies appear somewhat earlier and grow better in a slightly alkaline medium.

This medium inhibits gram-positive bacteria especially bacilli and fecal Streptococci with α - hemolytic activity, however, Neisseria sp. showed none of the hemolytic activity with good growth pattern of culture after incubation period of 48 hours.

Boiled blood agar ("chocolate agar") is an extremely rich culture medium and can be prepared by heating after the blood has been added. The blood agar can be used with added phenolphthalein phosphate for the detection of phosphatase producing Staphylococci, with added salt and agar for assessment of surface contamination on equipment and carcasses and to determine salinity range of marine flavabacteria. It was used for preparation of *Salmonella typhi* antigens.



INSTRUCTIONS FOR USE

1. Dissolve 40.0gms in 950ml distilled water.
2. Gently heat to boiling with gentle swirling and dissolve the medium completely.
3. Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.
4. Cool to 45 - 50°C and aseptically add 5-7% v/v sterile defibrinated blood. Mix properly and dispense sterile into Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance Dehydrated powder: Cream to yellow colour, homogeneous free flowing powder

Appearance of the prepared medium:

Basal medium: Light amber colour, clear to slightly opalescent gel.

After addition of 5% v/v sterile defibrinated blood: Cherry red colour opaque gel.

pH (at 25°C): 7.3 ± 0.2

CULTURE RESPONSE

Cultural characteristics observed with added 5% w/v sterile defibrinated blood, after incubation at 35-37°C for 18-48 hours.

<i>Organism</i>	ATCC	Inoculum (CFU)	Growth w/o blood	Recovery w/o blood	Growth With blood	Recovery with blood	Haemolysis
<i>Streptococcus pyogenes</i>	19615	50 – 100	Fair-Good	40-50%	Luxuriant	≥ 70%	Beta
<i>Staphylococcus aureus</i>	25923	50 – 100	Good	50-70%	Luxuriant	≥ 70%	Beta
<i>Streptococcus pneumoniae</i>	6303	50 – 100	Fair-Good	40-50%	Luxuriant	≥ 70%	Alpha
<i>Neisseria meningitidis</i>	13090	50 - 100	Fair-good	40-50%	Luxuriant	≥ 70%	None
<i>Staphylococcus epidermidis</i>	12228	50 – 100	Good	50-70%	Luxuriant	≥ 70%	None

STORAGE & STABILITY

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space



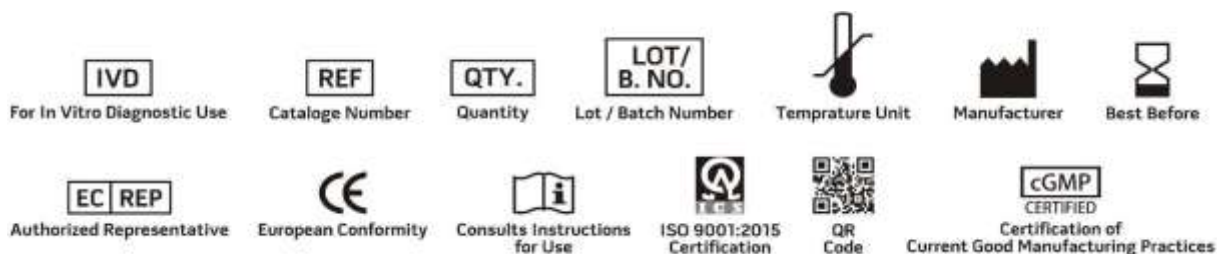
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PRODUCT DATA SHEET

provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

REFERENCES

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NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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