

Blood Agar Base (i23020)

For preparing blood plates and boiled blood plates used for the isolation and cultivation of various fastidious microorganisms, especially of pathogenic species, and for establishing their forms of hemolysis. Industry: Clinical / Antimicrobial susceptibility testing

Principles & Uses

Blood Agar Base is a versatile culture medium with a pH of 6.8 suitable for various microorganisms. When combined with fresh, defibrinated sheep blood, it encourages clear hemolysis zones. The addition of boiled blood can create a nutrient-rich "chocolate agar." Adjusting the pH to 7.2 to 7.4 when not using blood is ideal for the earlier growth of bacterial colonies in a slightly alkaline medium.

Blood Agar Base is highly nutritious and can be used as a general-purpose medium, with potential applications in the detection of phosphate-producing *Staphylococci*, surface contamination assessment, marine Flavobacteria salinity testing, and *Salmonella Typhi* antigen preparation. Peptones contribute essential nutrients, while the addition of blood enhances growth factors for fastidious organisms and aids in visualizing hemolytic reactions. The type of blood used can impact the results, with sheep blood being optimal for Group A *Streptococci* but unsuitable for *Haemophilus haemolyticus*, which requires horse blood.

Composition (gr/L)

Peptone Meat 15, Heart Extract 5, Sodium Chloride 5, Agar 15.

Final pH at 25°C 6.8 ± 0.2

Preparation from dehydrated Powder

Suspend 40 g of the medium in 1 L of distilled water. Mix thoroughly. Autoclave at 121°C for 15 minutes. Cool as quickly as possible. For preparation of blood agar, cool the base to 45-50°C and aseptically add 5% sterile, defibrinated blood. Mix well and pour into petri plates.

Quality Control

Dehydrated Appearance: Free flowing, homogeneous, beige.

Prepared Appearance: Plain – Medium, yellow to tan, clear to slightly hazy. With 5% sheep blood – Cherry red, opaque.

Reaction of 4.0 % Solution at 25°C: pH 6.8 ± 0.2

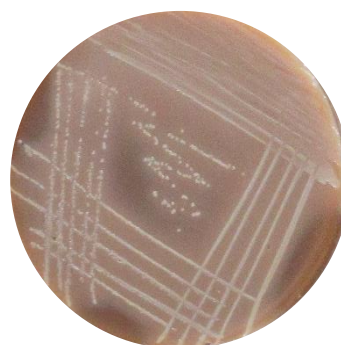
Cultural Response

Inoculate and incubate at 35 ± 2°C for 18-24 hours (incubate *streptococci* with 3-5% CO₂).

Organism (ATCC*)	Recovery	Hemolysis
<i>Escherichia coli</i> (25922)	Good	Beta
<i>Staphylococcus aureus</i> (25923)	Good	Beta
<i>Streptococcus pneumoniae</i> (6305)	Good	Alpha
<i>Candida albicans</i> (10231)	Good	No hemolysis
<i>Pseudomonas aeruginosa</i> (27853)	Good	N/A**

*ATCC is a registered trade mark of the American Type Culture Collection.

** Not available



Beta hemolysis of *S. pneumoniae* on blood agar.

Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.