Blood Agar Base

For preparing blood plates and boiled blood (chocolate) plates used for the isolation and cultivation of various fastidious microorganisms, especially of pathogenic species, and for establishing their forms of haemolysis.

REF: V/BH1.100	100 Gram	REF: V/BH1.500	500 Gram
REF: V/BH1.250	250 Gram		

CLCINICAL SIGNIFICANCE

Blood Agar Base is a highly nutritious medium generally used as a basal medium for preparing blood agar by supplementation with blood. It can also be used as general-purpose media without the addition of blood. Blood Agar Base media can be used with added phenolphthalein phosphate (7) for the detection of phosphate producing Staphylococci, with added salt and agar for assessment of surface contamination on equipment and pig carcass (2) and to determine salinity range of marine Flavobacteria (3). It can also be used for preparation of Salmonella Typhi antigens (9). Blood Agar Base is recommended by APHA (8) and Standard Methods (11, 1) for testing of food samples.

METHOD PRINCIPLE

Beef extract and tryptose provides carbon, nitrogen, amino acids and vitamins. Sodium chloride helps in maintaining the osmotic equilibrium of the medium. Addition of blood makes the medium more nutritious by providing additional growth factors required by fastidious organisms. It also helps in visualizing the haemolytic reactions. However, haemolytic reactions depend on the animal blood used. Sheep blood gives best results for Group A Streptococci (10). But sheep blood fails to support growth of Haemophilus haemolyticus since sheep blood is deficient in pyridine nucleotides. However when horse blood is used H. haemolyticus colonies produce haemolysis and mimic Streptococcus pyogenes
(6).

MEDIA COMPOSITION

Ingredient	Concentration (g/l)
Beef extract	10
Tryptose	10
Sodium chloride	5
Agar	15

Final pH 7.2 ± 0.2 at 25°C.

PRECAUTIONS AND WARNINGS

Reagent to be handled by entitled and professionally educated person. Do not ingest or inhale as reagent contains sodium azide which is classified as dangerous substance for environment.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point.

S57: use appropriate container to avoid environmental contamination.

S61: avoid release in environment.

For further information, refer to the Blood Agar Base material safety data sheet.

STORAGE AND STABILITY

Lab.Vie. Blood Agar Base should be stored between 10-30°C in a firmly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Deterioration

Lab.Vie. Blood Agar base is cream to yellow homogeneous free flowing powder. Prepared basal medium is Light amber colored clear to slightly opalescent gel. After addition of 5% v/v sterile defibrinated blood: Cherry red colored opaque gel forms in Petri plates. If there are any physical changes, discard the medium. Media should not be used if there are any signs of deterioration (shrinking, cracking, or discoloration), and contaminations

SPECIMEN COLLECTION AND PRESERVATION

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (7,8). After use, contaminated materials must be sterilized by autoclaving before discarding.

TYPE OF SPECIMEN

Clinical samples Food samples

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile cups
- Sterile plates
- Incubator
- Autoclave

PROCEDURE

1. Suspend 40 grams in 1000 ml purified / distilled water.
2. Adjust pH to pH 7.2 ± 0.2 at 25°C.
3. Heat to boiling to dissolve the medium completely.
4. Sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 minutes.
5. Cool to 45-50°C and aseptically add 5% v/v sterile defibrinated blood.
6. Mix well and pour into sterile Petri plates.

PERFORMANCE CHARACTERISTICS

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact **Lab.Vie.** Technical support.

RESULTS AND INTERPRETATION

Organisms	Growth	Hemolysis
Neisseria meningitidis ATCC 13090	Luxuriant	None
Staphylococcus aureus subsp. aureus ATCC 25923	Luxuriant	Beta
Staphylococcus epidermidis ATCC 12228	Luxuriant	None
Streptococcus pneumoniae ATCC 6303	Luxuriant	Alpha
Streptococcus pyogenes ATCC 19615	Luxuriant	Beta

SYMBOLS IN PRODUCT LABELLING			
IVD	For in-vitro diagnostic use	Σ	Number of <n> test in the pack
LOT	Batch Code/Lot number		Caution
REF	Catalogue Number		Do not use if package isdamaged
	Temperature Limitation		
	Expiration Date		Consult Instruction for use
	Manufactured by		

RERREFERENCES

1. Atlas R. M., 1993, Handbook of Microbiology of Microbiological Media, CRC Press, Boca Raton, Fla.
2. Hansen N. H., 1962, J. Appl. Bacteriol., 25:46.
3. Hayes P. R., 1963, J. Gen. Microbiol., 30:1.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition
5. Jorgensen,J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual Clinical Microbiology, 11th Edition. Vol. 1.
6. Murray P. R., Baron J. H., Jorgensen J. H., Pfaller M. A., Yolken R. H., (Eds.), 8th Ed., 2003, Manual of Clinical Revision : 04 / 2019 Microbiology, ASM, Washington, D.C.
7. Noble W. C., 1962, J. Clin, Pathol., 15:552.
8. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium
9. of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
10. Schuber J. H., Edwards P. R. and Ramsere C. H., 1959, J. Bacteriol., 77:648.
11. Snavely J. G. and Brahier J., 1960, Am. J. Clin. Pathol., 33:511.
12. U.S. Food and Drug Administration, 1995, Bacteriological Analytical Manual, 8th Ed., AOAC International, Gaithersburg, Md.

Post code-41511
E-mail : admin@labvielab.com
Website: www.labvielab.com