Tryptose Blood Agar Base

Intended Use
Tryptose Blood Agar Base is recommended for the isolation of fastidious organisms and determining the haemolytic reactions.

Summary
Tryptose Blood Agar Base is a tryptose-based medium that can be used for the cultivation of fastidious organisms, on supplementation with blood. This medium is devoid of dextrose and therefore useful in determining the haemolytic reactions. Tryptose Blood Agar Base is recommended by FDA and APHA. Tryptose Blood Agar Base can be used as a general-purpose medium without supplementation of blood. These media can be used to determine the heamolytic reactions of fastidious organisms.

Principle
Tryptose and beef extract provide nitrogenous and carbonaceous compounds, sulphur, vitamin B complex and trace elements essential for bacterial metabolism. Blood provides additional nutrients and serves as a base to study haemolytic reactions. This medium not only keeps the blood cells in a good state but also help in forming distinct haemolysis. Perform biochemical test for further identification.

Formula*

Ingredients	**g/L**
Tryptose	10.0
Beef extract	3.0
Sodium Chloride	5.0
Agar	15.0
Final pH (at 25°C)	7.2 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 33.00 g of the powder in 950 mL purified / distilled water.
2. Heat to boiling to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle. Cool the medium to 45°C-50°C, and aseptically add 5% v/v sterile defibrinated blood into sterile petridishes.
4. Mix thoroughly, avoiding air bubbles and pour into sterile petridishes.

Quality Control
Dehydrated Appearance: Light yellow to yellow coloured, homogenous, free flowing powder.
Prepared Appearance: Basal Medium: Light yellow to amber coloured, slightly opalescent gel.
With addition of 5% defibrinated blood: Cherry red opaque gel forms in petridishes.
Cultural Response: Growth is observed after an incubation at 35 ± 2°C for 48 hours under anaerobic condition.

Organism (ATCC)	Growth	Haemolysis
Streptococcus pyogenes Strain Bruno (19615)	Good	Beta
Staphylococcus aureus subsp. *aureus* (25923)	Good	Beta
Streptococcus pneumoniae (6305)	Good	Alpha
Escherichia coli (25922)	Good	Beta
Neisseria gonorrhoeae (49226)	Good	None

Interpretation of Results

The four different types of haemolysis observed are as follows:

a. Alpha haemolysis: partial lysis of the erythrocytes surrounding colony, causing a grey green or brownish discolouration in the media.
b. Beta haemolysis: complete lysis of the red blood cells surrounding a colony, causing a clearing of blood from the medium.
c. Gamma haemolysis: no haemolysis and consequently, no colour change of the medium surrounding a colony. Organisms showing no haemolysis are generally termed non-hemolytic rather than gamma haemolytic.
d. Alpha-prime or wide zone alpha: a small zone of intact erythrocytes immediately adjacent to the colony, with a zone of complete red cell haemolysis surrounding the zone of intact erythrocytes. This type of haemolysis may be confused with beta haemolysis (6).

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

References

1. Casman E. P., 1942, J. Bacteriol., 43:33.
2. Casman E. P., 1947, Am. J. Clin. Pathol., 17: 281.
3. FDA Bacteriological Analytical Manual, 8th Ed., 1995, AOAC International, Gaithersburg, Md.
4. American Public Health Association, 1970, Diagnostic Procedures and Reagents, 5th Ed., APHA Inc., New York.
5. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
6. Koneman E. W., Allen S. D., Janda W. M., Schreckenberger P. C., Winn W. C. Jr., 1992, Colour Atlas and Textbook of Diagnostic Microbiology, 4th Ed., J. B. Lippinccott Company.
7. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201200220500	Dehydrated Culture Media	500 g