TM 474 – TRYPTOSE BLOOD AGAR BASE W/ YEAST EXTRACT

INTENDED USE

For cultivation and maintenance of various fastidious microorganisms & determining the haemolytic reactions.

PRODUCT SUMMARY AND EXPLANATION

Tryptose Blood Agar Base w/ Yeast Extract 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 w/ Yeast Extract provides additional nutrients (yeast extract) to the fastidious organisms. Tryptose Blood Agar Base w/ Yeast Extract can be used as a general-purpose medium without supplementation of blood. This medium can be used to determine the heamolytic reactions of fastidious organisms.
The four different types of haemolysis observed are as follows:
a) Alpha haemolysis: partial lysis of the erythrocytes surrounding a colony, causing a gray 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.

COMPOSITION

Ingredients	Gms / Ltr
Tryptose	10.000
Beef extract	3.000
Yeast extract	1.000
Sodium chloride	5.000
Agar	15.000

PRINCIPLE

Tryptose, beef extract and yeast 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. Tryptose Blood Agar with Yeast Extract favours the good growth of *Neisseria meningitides* and *Streptococcus pneumoniae*. However, it can be used with or without blood supplementation. Perform biochemical test for further identification.

INSTRUCTION FOR USE

- Suspend 34 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- For preparing Blood Agar cool the autoclaved medium to 45 - 50°C and aseptically add 5% v/v sterile defibrinated blood. Mix thoroughly, avoiding air bubbles and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Yellow coloured clear to slightly opalescent gel forms in Petri plates. Basal medium: After addition of 5% v/v sterile defibrinated blood : Cherry red coloured opaque gel forms in Petri plates.
pH (at 25°C) : 7.3±0.2

INTERPRETATION

Cultural characteristics observed after incubation with added 5% v/v sterile defibrinated blood.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth w/o blood	Recovery w/o blood	Growth w/ blood	Recovery w/ blood	Haemolysis	Incubation Temperature	Incubation Period
Neisseria meningitidis	13090	50-100	Luxuriant	>=70%	Luxuriant	>=70%	None	35-37°C	18-48 Hours
Staphylococcus aureus	25923	50-100	Luxuriant	>=70%	Luxuriant	>=70%	Beta	35-37°C	18-48 Hours
Staphylococcus epidermidis	12228	50-100	Luxuriant	>=70%	Luxuriant	>=70%	Gamma	35-37°C	18-48 Hours
Streptococcus pneumoniae	6303	50-100	Luxuriant	>=70%	Luxuriant	>=70%	Alpha	35-37°C	18-48 Hours
Streptococcus pyogenes	19615	50-100	Luxuriant	>=70%	Luxuriant	>=70%	Beta	35-37°C	18-48 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°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 provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

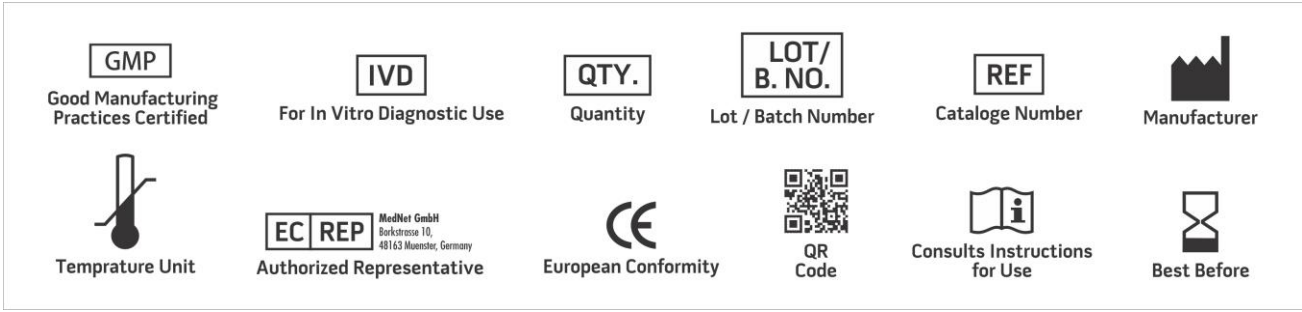
DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Casman E. P., 1942, J. Bacteriol., 43:33.
2. Casman E. P., 1947, Am. J. Clin. Pathol., 17: 281.

3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
4. Koneman E. W., Allen S. D., Janda W. M., Schreckenberger P. C. Winn W. C. Jr., 1992, Colour Atlas and Textbook of Diagnostic Microbiology, 4 th Ed., J. B. Lippinccott Company



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

***For Lab Use Only**

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