TM 2010 – BLOOD AGAR BASE, MODIFIED

INTENDED USE

For recommended as a base to which blood may be added for use in the isolation and cultivation of fastidious pathogenic microorganisms.

PRODUCT SUMMARY AND EXPLANATION

Blood Agar Base, Modified 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.

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. 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*.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	7.500
Meat peptone	2.500
Sodium chloride	8.000
L-Lysine	0.040
Potassium dihydrogen phosphate	0.250
Disodium hydrogen phosphate	1.750
Sodium bisulphite	0.100
Agar	13.500

PRINCIPLE

Tryptone and meat peptone provides carbon, nitrogen, amino acids and vitamins. Sodium chloride helps in maintaining the osmotic equilibrium of the medium. Phosphates buffer the medium and Sodium bisulphite is a reducing agent.

INSTRUCTION FOR USE

- Dissolve 33.64 grams in 1000 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add 5% v/v sterile defibrinated blood.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.

Appearance of prepared medium : Basal medium: Light amber coloured clear to slightly opalescent gel. After addition of 5% v/v sterile defibrinated blood : Cherry red coloured opaque gel forms in Petri plates.

pH (at 25°C) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth w/o blood	Recovery w/o blood	Growth with blood	Recovery with blood	Haemolysis	Incubation Temperature	Incubation Period
Staphylococcus aureus subsp. aureus	25923	50-100	Good	40-50%	Luxuriant	>=70%	Beta	35-37°C	48-72 Hours
Streptococcus pneumoniae	6303	50-100	Fair-good	20-40%	Luxuriant	>=70%	Alpha	35-37°C	48-72 Hours
Streptococcus pyogenes	19615	50-100	Fair-good	20-40%	Luxuriant	>=70%	Beta	35-37°C	48-72 Hours
Staphylococcus aureus subsp. aureus	6538	50-100	Good	40-50%	Luxuriant	>=70%	Beta	35-37°C	48-72 Hours
Enterococcus faecalis	29212	50-100	Good	40-50%	Luxuriant	>=70%	Gamma	35-37°C	48-72 Hours
Escherichia coli	8739	50-100	Good	40-50%	Luxuriant	>=70%	Gamma	35-37°C	48-72 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.

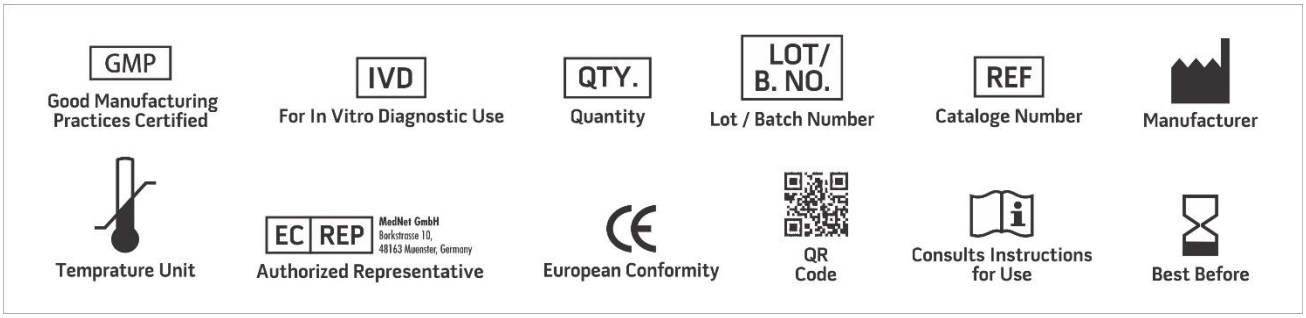
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. 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.
3. Murray P. R., Baron J. H., Jorgensen J. H., Pfaller M. A., Yolken R. H., (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C.
4. Snavely J. G. and Brahier J., 1960, Am. J. Clin. Pathol., 33:511.



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

***For Lab Use Only**

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