TM 2104 - HEART INFUSION AGAR, MODIFIED

INTENDED USE

For isolation and cultivation of fastidious pathogenic microorganisms like *Neisseria, Streptococci* etc. and for confirmation of diarrheagenic *Escherichia coli* in accordance with FDA BAM, 1998.

PRODUCT SUMMARY AND EXPLANATION

A liquid medium containing an infusion of meat was one of the first media used for the cultivation of bacteria. These infusion media need not be further supplemented by the addition of supplements in case of fastidious bacteria. Heart Infusion Agar, modified is used in the isolation and cultivation of diarrheagenic *Escherichia coli* in accordance with FDA BAM, 1998. *E. coli* is a Gram negative, facultatively anaerobic bacterium that is found as commensals in human intestine. This medium is cited in BAM for primary screening in the conventional biochemical screening and identification of diarrheagenic *Escherichia coli.* Enrichment of the sample on BHI and TP broths is recommended as the first step in primary screening of diarrheagenic *E. coli.* This may induce the growth and proliferation of other members of *Enterobacteriaceae* including non-lactose fermenting strains of *E. coli.* Hence additional tests may need to be performed for isolation. Transfer suspicious colonies to TSI agar, Heart Infusion Agar, Modified slants, Tryptone Broth, Arabinose Broth, and Urea Broth and incubate for 20 hrs at 35°C. Organisms isolated on primary screening are processed for secondary screening and confirmed using genotypic, biochemical and serological reactions. On supplementation of blood, Heart Infusion Agar, modified can be used to study haemolytic reactions.

COMPOSITION

Ingredients	Gms / Ltr
Heart muscle, infusion from	375.000
Soya peptone	10.000
Sodium Chloride	5.000
Agar	15.000

PRINCIPLE

Heart muscle, infusion from and soya peptone provide nutritional requirements for the pathogenic bacteria. Sodium chloride maintains the osmotic equilibrium of the medium.

INSTRUCTION FOR USE

- Dissolve 37.5 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 20 minutes.
- Cool to 45-50°C.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) : 7.3±0.2

INTERPRETATION

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

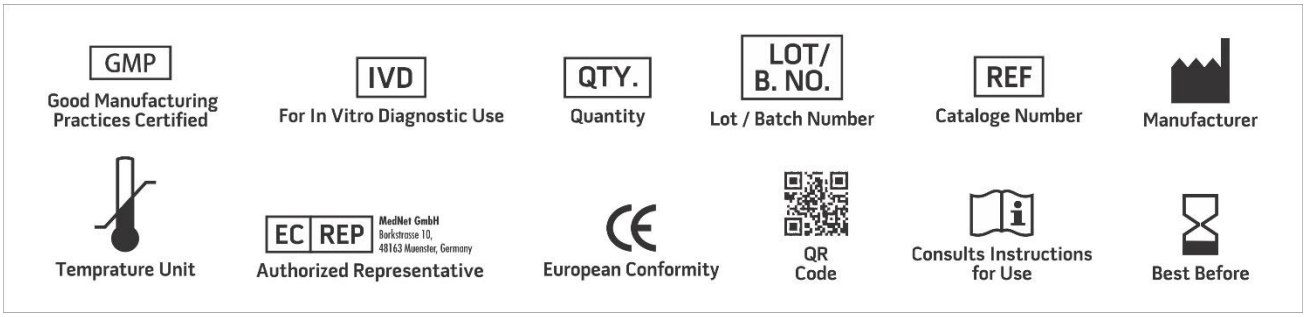
Microorganism	ATCC	Inoculum (CFU/ml)	Growth w/o blood	Recovery w/o blood	Growth with blood	Recovery with blood	Haemolysis	Incubation Temperature	Incubation Period
Neisseria meningitidis	13090	50-100	Fair	20-30 %	Luxuriant	>=70%	None	35 - 37°C	18-48 Hours
Staphylococcus aureus subsp. aureus	25923	50-100	Good	40-50%	Luxuriant	>=70%	Beta	35 - 37°C	18-48 Hours
Staphylococcus epidermidis	12228	50-100	Good	40-50%	Luxuriant	>=70%	None	35 - 37°C	18-48 Hours
Streptococcus pneumoniae	6303	50-100	Fair-good	20-40 %	Luxuriant	>=70%	Alpha	35 - 37°C	18-48 Hours
Streptococcus pyogenes	19615	50-100	Fair-good	20-40 %	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. FDA, U.S. 1998. Bacteriological Analytical Manual. 8 ed. Gaithersburg, MD: AOAC International.
2. Hansen, N. H. 1962. J. Appl. Bacteriol., 25.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. Salfinger Y., and Tortorello M.L, 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.



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

***For Lab Use Only**

Revision: 08 Nov., 2019