LM Glucose Cysteine Broth

M1322

Intended Use:

Recommended for cultivation of fastidious anaerobes.

Composition**

Ingredients	Gms / Litre
HML Base #	29.500
Glucose	2.000
L-Cysteine hydrochloride	0.500
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters
Equivalent to Liver meat base

Directions

Suspend 32.0 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Dispense into tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Anaerobic bacteria live in an oxygen-free environment. Some anaerobic bacteria actually die if oxygen is present, while others fail to grow and multiply (1).
LM Glucose Cysteine Broth is recommended for the cultivation of fastidious anaerobic organisms. The medium contains HML Base which is a rich source of vitamins, the haem group and other nutrients that support the growth of strict and nutritionally fastidious anaerobes. Besides, it also provides sufficient degree of anaerobiosis in the medium. L-Cysteine hydrochloride has a dual function in that it acts as a nutrient and the sulphydral group present in it helps to create anaerobic conditions. Glucose provides source of energy.

Type of specimen

Clinical samples; Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (2,3).
For food samples, follow appropriate techniques for sample collection and processing as per guidelines (4).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Further biochemical and serological test must be carried out for complete identification.

Performance and Evaluation

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

Appearance
Yellow to brownish yellow homogeneous free flowing powder
Colour and Clarity of prepared medium
Amber coloured clear to slightly opalescent solution
Reaction
Reaction of 3.2% w/v aqueous solution at 25°C. pH : 7.4±0.2
pH
7.20-7.60

Cultural Response
Cultural characteristics observed after in an anaerobic environment after an incubation at 35-37°C for 24-48 hours.

Organism	Growth
Bacteroides vulgatus ATCC 8482	good-luxuriant
Clostridium botulinum ATCC 25763	luxuriant
Clostridium perfringens ATCC 12924	luxuriant

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in 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.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

Reference

1. Alcamo E. I., 2001, Fundamentals of Microbiology, 6th Ed., Jones and Bartlett Publishers.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. 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.
4. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

Revision : 02/2020