



L. D. Egg Yolk Agar Base

M744

Intended Use:

Used for detecting lecithinase activity of anaerobic microorganisms.

Composition**

Ingredients	g / L
Tryptone	5.000
Yeast extract	5.000
Sodium chloride	2.500
Sodium sulphite	0.100
L-Cystine	0.400
L-Tryptophan	0.200
Dextrose (Glucose)	2.000
Disodium hydrogen phosphate	5.000
Magnesium sulphate	0.010
Hemin	0.010
Vitamin K1	0.010
Agar	20.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 40.23 grams in 900 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 60°C and aseptically add 100 ml sterile Egg Yolk Emulsion (FD045). Mix well and pour into sterile petri plates.

Principle And Interpretation

Organisms that grow in the absence of oxygen are termed as anaerobes. Depending upon their ability to tolerate oxygen, they are classified as either facultative or obligate anaerobes. The anaerobic gram-negative bacteria are part of the normal flora of the upper respiratory tract, mouth, intestinal tract and urogenital tract of human and animals. The bile-resistant *Bacteroides fragilis* group is the most commonly recovered anaerobe in clinical specimens and is more resistant to antimicrobial agents than any other anaerobe. *Fusobacterium necrophorum* is a very virulent anaerobe that may cause severe infections, usually in children or young adults (1).

L. D. Medium or Lombard-Dowell Medium was developed by Dowell and Lombard (2) for the cultivation and identification of fastidious anaerobic bacteria. L. D. Egg Yolk Agar Base, along with egg yolk emulsion is used for the detection of lipase; lecithinase and proteolytic activity of both spore forming and non-spore-forming obligate anaerobes (3). L. D. Agar is essentially a casein digest agar enriched with hemin, vitamin K1, L-cystine and yeast extract (4). This medium contains various nutritious substances, which can promote the growth of fastidious anaerobic bacteria. Tryptone and yeast extract provide the necessary nitrogenous nutrients while hemin and vitamin K1 supply additional growth factors. L-cystine and L-tryptophan serve as the amino acid sources. Sodium sulphite is an antioxidant. Sodium chloride maintains osmotic balance of the medium.

L. D. Egg Yolk Agar with Egg Yolk Supplement contains egg yolk, which is the source of lecithin in the medium. Magnesium sulphate helps in sporulation. Disodium phosphate buffers the medium.

Type of specimen

Clinical samples - wound samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic Use only. For professional use only. 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 clinical 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

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared medium

Basal medium : Medium amber coloured clear to slightly opalescent gel. After addition of sterile egg yolk emulsion : Yellow coloured opaque gel forms in Petri plates

Reaction

Reaction of 4.02% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

Cultural characteristics observed under anaerobic condition, with added Egg Yolk Emulsion (FD045), after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Lecithinase/ Halos	Lipase	Proteolysis
<i>Clostridium perfringens</i> ATCC 12924	50 - 100	luxuriant	positive reaction, opaque zone of insoluble precipitate	negative reaction	negative reaction
<i>Clostridium sporogenes</i> ATCC 11437	50 - 100	luxuriant	negative reaction	positive reaction, iridescent sheen on the colony surface and medium	positive reaction, clear zone surrounding colonies
<i>Fusobacterium necrophorum</i> ATCC 25286	50 - 100	luxuriant	negative reaction	positive reaction, iridescent sheen on the colony surface and medium	negative reaction

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°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 clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5.6).

Reference

1. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Tenover F. C., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
2. Dowell V. and Lombard G., June 1977, U.S., DHEW, Center for Disease Control (CDC), Atlanta. Ga.
3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
4. Finegold S. M., Baron E. J., Bailey and Scotts Diagnostic Microbiology, 8th Ed., 1990, The C.V. Mosby Company
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition
6. 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.

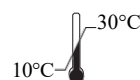
Revision :04/2024



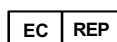
HiMedia Laboratories Pvt. Limited,
Plot No.C-40, Road No.21Y,
MIDC, Wagle Industrial Area,
Thane (W) -400604, MS, India



**In vitro diagnostic
medical device**



Storage temperature



CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu



CE Marking



**Do not use if
package is damaged**

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.