TM 1125 – L.D. EGG YOLK AGAR BASE

INTENDED USE

For identification of lecithinase activity by anaerobic microorganisms.

PRODUCT SUMMARY AND EXPLANATION

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 urinogenital 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.

L. D. Medium or Lombard-Dowell Medium was developed by Dowell and Lombard 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.

COMPOSITION

Ingredients	Gms / Ltr
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

PRINCIPLE

This medium is essentially a casein digest agar, enriched with hemin, vitamin K1, L-cystine and yeast extract. 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.

INSTRUCTION FOR USE

- Dissolve 40.23 grams in 990 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 60°C and aseptically add 100 ml sterile Egg Yolk Emulsion. 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: Medium amber coloured clear to slightly opalescent gel. After addition of sterile egg yolk emulsion : Yellow coloured opaque gel forms in Petri plates.

pH (at 25°C) : 7.4 ± 0.2

INTERPRETATION

Cultural characteristics observed under anaerobic condition, with added Egg Yolk Emulsion after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Lecithinase/ Halos	Lipase	Proteolysis	Incubation Temperature	Incubation Period
Clostridium perfringens	12924	50-100	Luxuriant	>=70%	Positive reaction, opaque zone of insoluble precipitate	Negative reaction	Negative reaction	35-37 °C	24 - 48 Hours
Clostridium sporogenes	11437	50-100	Luxuriant	>=70%	Negative reaction	Positive reaction, irridescent sheen on the colony surface and medium	Positive reaction, clear zone surrounding colonies	35-37 °C	24 - 48 Hours
Fusobacterium necrophorum	25286	50-100	Luxuriant	>=70%	Negative reaction	Positive reaction, irridescent sheen on the colony surface and medium	Negative reaction	35-37 °C	24 - 48 Hours

PACKAGING:

In pack size of 100 gm and 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.

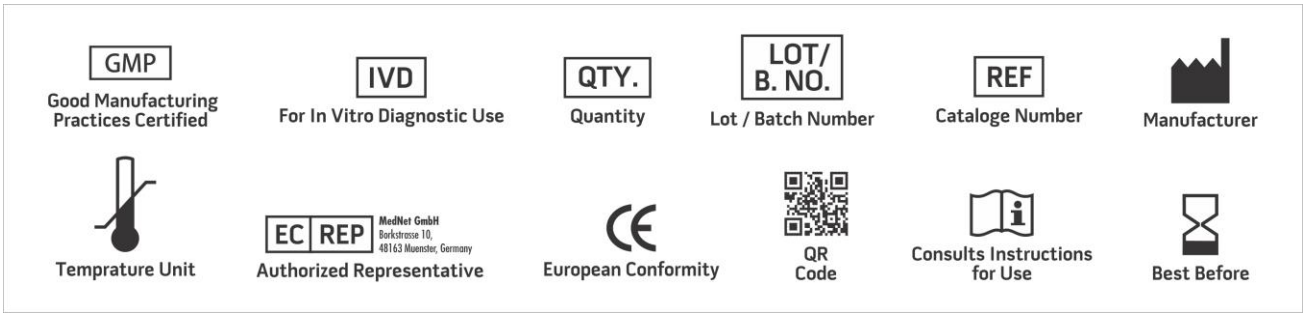
DISPOSAL

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

REFERENCES

1. Dowell V. and Lombard G., June 1977, U.S., DHEW, Center for Disease Control (CDC), Atlanta. Ga.
2. Finegold S. M., Baron E. J., Bailey and Scotts Diagnostic Microbiology, 8th Ed., 1990, The C.V. Mosby Company.

3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
4. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.



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

***For Lab Use Only**

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