Technical Information

Lysine Lactose MiVeg Broth

Product Code : VM1330

Application:- Lysine Lactose MiVeg Broth is used to determine of lysine decarboxylase activity of lactose non-fermenting members of *Enterobacteriaceae* especially *Salmonellae*.

Composition

Ingredients	Gms / Litre
MiVeg peptone No. 2	5.0
Yeast extract	3.0
Dextrose	1.0
L-Lysine	5.0
Lactose	10.0
Bromo cresol purple	0.02
Final pH (at 25°C)	6.8 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Lysine Lactose MiVeg Broth is prepared by adding MiVeg peptone No. 2 in place of Pancreatic digest of gelatin thus making the medium free from BSE/TSE risks. This medium is the modification of medium formulated by Falkow (1) for detection of lysine decarboxylase by means of a colour reaction in enteric bacilli.

MiVeg peptone No.2 and yeast extract supply nitrogenous and carbonaceous nutrients for the microbial growth. Dextrose and lactose are the fermentable carbohydrates. L-Lysine is the substrate which is decarboxylated due to decarboxylase enzyme activity. Bromo cresol purple is the pH indicatorof the medium. On initial fermentation enteric bacilli produce acid. The lactose non-fermenters produce acid from dextrose resulting in yellow colour. L-Lysine is decarboxylated to form cadaverine resulting in an alkaline reaction and the broth reverts to purple colour.

Methodology

Suspend 24 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat if necessary to boiling to dissolve the medium completely. Dispense in tubes in 5 ml amounts and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

Light yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

Colour and Clarity of prepared medium

Purple coloured, clear solution without any precipitate.

Reaction

Reaction of 2.4% w/v aqueous solution is pH 6.8 ± 0.2 at 25°C.

pH Range

6.6-7.0

Cultural Response/Characteristics

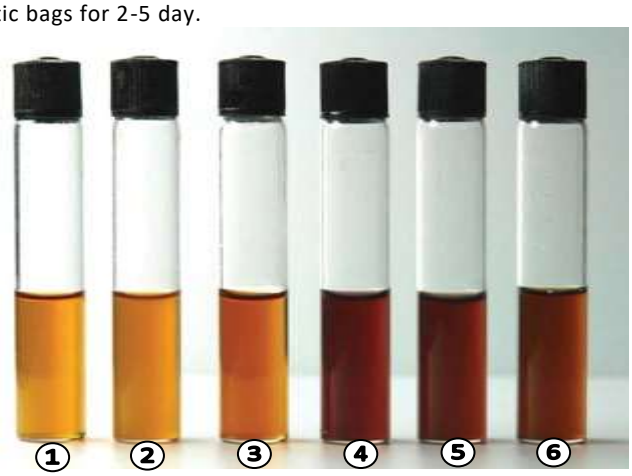
Cultural characteristics observed after an incubation at 35-37°C for 24 hours.

Organisms (ATCC)	Inoculum (CFU)	Colour of medium	Lactose Fermenation	Lysine decarboxylation
Escherichia coli (25922)	10^2-10^3	yellow	+	-
Proteus vulgaris (13315)	10^2-10^3	greenish yellow	-	(+)
Salmonella serotype Typhimurium (14028)	10^2-10^3	purple	-	+
Salmonella serotype Enteritidis (13076)	10^2-10^3	purple	-	+
Serratia marcescens (8100)	10^2-10^3	purple	-	+

Key : + = positive reaction
- = negative reaction
(+) = delayed positive reaction

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 day.



VM1330 Lysine Lactose MiVeg Agar

1. Control
2. *Escherichia coli*
3. *Proteus vulgaris*
4. *Salmonella* serotype Typhimurium
5. *Salmonella* serotype Enteritidis
6. *Serratia marcescens*

Further Reading

1. Falkow A., 1958, J.Clin.Path., 29:598.
2. Ewing, Davis and Reavis, 1959, U.S. Dept.H.E.W., C.D.C., Atlanta.
3. Ewing and Johnson, 1960, Internat. Bull. Bact. Nomen. and Tax., 10:223.
4. Edwards and Ewing, 1962, Burgess Publ. Co., Minneapolis, Minn.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
- **Central Drug House 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 diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for in fingement of any patents.Do not use the products if it fails to meet specificatons for identity and performens parameters.