

Lysine Lactose HiVeg™ Broth**MV330**

Lysine Lactose HiVeg Broth is used for determination of lysine decarboxylase activity of lactose non-fermenting members of *Enterobacteriaceae* especially *Salmonellae*.

Composition ** :

Ingredients	Grams/Litre
HiVeg 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.

Directions :

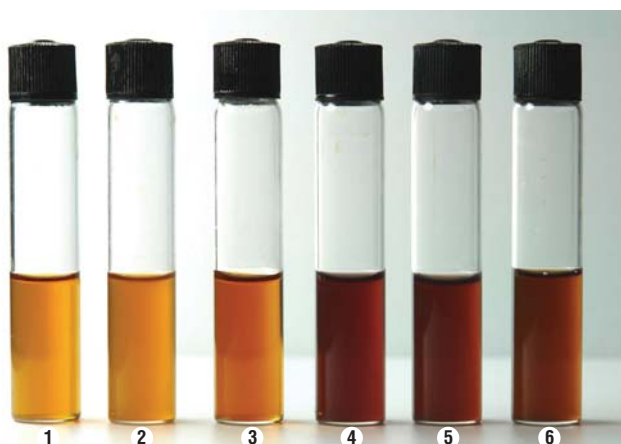
Suspend 24 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Dispense in tubes in 5 ml amounts and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle and Interpretation :

Lysine Lactose HiVeg Broth is prepared by using HiVeg peptone No. 2 in place of Pancreatic digest of gelatin which makes the medium free of 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.

HiVeg peptone No.2 and yeast extract provide nitrogenous and carbonaceous nutrients. Dextrose and lactose are the fermentable sugars. L-Lysine is the substrate which is decarboxylated due to decarboxylase enzyme activity. Bromo cresol purple acts as pH indicator.

The enteric bacilli produce acid in an initial fermentation. 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.

**MV330 Lysine Lactose HiVeg Agar**

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|----------------------------|---|
| 1. Control | 4. <i>Salmonella</i> serotype Typhimurium |
| 2. <i>Escherichia coli</i> | 5. <i>Salmonella</i> serotype Enteritidis |
| 3. <i>Proteus vulgaris</i> | 6. <i>Serratia marcescens</i> |

Product Profile :

Vegetable based (Code MV)Ⓞ	Animal based (Code M)
MV330 HiVeg peptone No.2	M330 Pancreatic digest of gelatin
Recommended for	: Determination of lysine decarboxylase activity of lactose non-fermenting members of <i>Enterobacteriaceae</i> .
Reconstitution	: 24.0 g/l
Quantity on preparation (500g)	: 20.83 L
pH (25°C)	: 6.8 ± 0.2
Supplement	: None
Sterilization	: 121°C / 15 minutes.
Storage	: Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.

Quality Control :**Appearance of powder**

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

Colour and Clarity

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.

Cultural Response

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

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

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

References :

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