

**Lactobacillus MRS HiVeg™ Agar / Broth****MV641 / MV369**

Lactobacillus MRS HiVeg Agar / Broth is recommended for cultivation, isolation and enumeration of all *Lactobacilli*.

**Composition\*\* :**

	<b>MV641</b>	<b>MV369</b>
<b>Ingredients</b>	<b>Grams/Litre</b>	<b>Grams/Litre</b>
HiVeg peptone No. 3	10.00	10.00
HiVeg extract	10.00	10.00
Yeast extract	5.00	5.00
Dextrose	20.00	20.00
Polysorbate 80	1.00	1.00
Ammonium citrate	2.00	2.00
Sodium acetate	5.00	5.00
Magnesium sulphate	0.10	0.10
Manganese sulphate	0.05	0.05
Dipotassium phosphate	2.00	2.00
Agar	12.00	—

Final pH (at 25°C) 6.5 ± 0.2

\*\* Formula adjusted, standardized to suit performance parameters

**Directions :**

Suspend 67.15 grams of MV641 or 55.15 grams of MV369 in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Distribute in tubes, bottles or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

**Principle and Interpretation :**

These media are prepared by completely replacing animal based peptones with vegetable peptones, which makes the medium free of BSE/TSE risks. Lactobacillus MRS HiVeg media are the modification of Lactobacillus MRS Agar / Broth which are based on the formulation of deMan, Rogosa and Sharpe (1) with slight modification. These media like the conventional media supports luxuriant growth of all *Lactobacilli* from oral cavity (1), dairy products (2), foods (3), faeces (4) and other sources (5). HiVeg peptone No. 3 and HiVeg extract supply nitrogenous and carbonaceous compounds. Yeast extract provides vitamin B complex and dextrose is the fermentable carbohydrate and energy source. Polysorbate 80 supplies fatty acids required for the metabolism of *Lactobacilli*. Sodium acetate and ammonium citrate inhibit *Streptococci*, moulds and many other microorganisms. Magnesium sulphate, Manganese sulphate provide essential ions for multiplication of *Lactobacilli*. Phosphate provide good buffering action in the media.

**Quality Control :****Appearance of Powder**

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

**Product Profile :**

<b>Vegetable based (Code MV)©</b>	<b>Animal based (Code M)</b>
<b>MV641/MV369</b>	<b>M641/M369</b>
HiVeg peptone No. 3	Proteose peptone
HiVeg extract	Beef extract
<b>Recommended for</b>	: Cultivation, isolation and enumeration of <i>Lactobacillus</i> species
<b>Reconstitution</b>	: (MV641) : 67.15 g/l
	: (MV369) : 55.15 g/l
<b>Quantity on preparation (500g)</b>	: (MV641) : 7.44 L
	: (MV369) : 9.06 L
<b>(100g)</b>	: (MV641) : 1.48 L
	: (MV369) : 1.81 L
<b>pH (25°C)</b>	: 6.5 ± 0.2
<b>Supplement</b>	: None
<b>Sterilization</b>	: 121°C / 15 minutes.
<b>Storage</b>	: Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.

**Gelling**

Firm, comparable with 1.2% Agar gel of MV641

**Colour and Clarity**

Medium amber coloured, clear to slightly opalescent gel forms in petri plates, clear solution in tubes.

**Reaction**

Reaction of 6.71% w/v of MV641 or 5.51% w/v of MV369 aqueous solution is pH 6.5 ± 0.2 at 25°C.

**Cultural Response**

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

<b>Organisms (ATCC)</b>	<b>Inoculum</b>	<b>Growth</b>	<b>Recovery</b>
<i>Lactobacillus fermentum</i> (9338)	10 <sup>2</sup> –10 <sup>3</sup>	luxuriant	>70%
<i>Lactobacillus leichmannii</i> (7830)	10 <sup>2</sup> –10 <sup>3</sup>	luxuriant	>70%
<i>Lactobacillus plantarum</i> (8014)	10 <sup>2</sup> –10 <sup>3</sup>	luxuriant	>70%

**References :**

- deMan J., Rogosa M. and Sharpe M., 1960, J. Appl. Bacteriol., 23:130.
- Standard Methods for the Examination of Dairy Products. 17<sup>th</sup> Edition, 2004 Edited by H. Michael Wehr and Joseph H. Frank.
- Frances Pouch Downes and Keith Ito (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4<sup>th</sup> ed., APHA, Washington, D.C.
- Sabine and Vaselekos, 1965, Nature, 206:960.
- MacFaddin J., 2000, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, 3<sup>rd</sup> edition, Williams and Wilkins, Baltimore.