

## Plate Count HiVeg™ Agar

## MV091/MV091A

Plate Count HiVeg Agar medium is recommended for the plate count of microorganisms in food, water and waste water.

**Composition \*\* :**

Ingredients	MV091	MV091A
	Grams/Litre	Grams/Litre
HiVeg hydrolysate	5.00	5.00
Yeast extract	2.50	2.50
Dextrose	1.00	1.00
Agar	15.00	9.00

Final pH (at 25°C) 7.0 ± 0.2

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

**Directions :**

Suspend 23.5 grams of MV091 or 17.5 grams of MV091A in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

**Principle and Interpretation :**

This medium is prepared by replacing Casein enzymic hydrolysate with HiVeg hydrolysate which is free from BSE/TSE risks. Plate Count HiVeg Agar medium is the modification of Plate Count Agar formulated as described by Buchbinder et al (1) and which is also recommended by APHA (2,3,4).

HiVeg hydrolysate provides amino acids and other complex nitrogenous substances. Yeast extract supplies Vitamin B complex. The samples are diluted and appropriate dilutions are placed in petri plates. Sterile molten agar is added to these plates and plates are rotated gently to ensure uniform mixing of the sample with agar. Plate Count HiVeg Agar like the conventional medium is also suitable for finding out bacterial count from sterile rooms.

To obtain countable plates for foods having low colony counts, low dilutions must be used. For some food this results in the presence of food particles in the plate, which makes it difficult to distinguish easily for accurate counting. This problem can be overcome by adding 1 ml of 0.5% 2,3,5-triphenyltetrazolium chloride (TTC) per 100 ml of melted agar medium just prior to pouring the plates. Most bacteria form red colonies on an agar medium containing TTC.

**Quality Control :****Appearance of powder**

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

**Gelling**

Firm, comparable with 1.5% of MV091 or 0.9% of MV091A Agar gel.

**Colour and Clarity**

Light yellow coloured, clear to slightly opalescent gel forms in petri plates.

**Reaction**

Reaction of aqueous solution of 2.35% w/v of MV091 or 1.7% w/v of MV091A is pH 7.0 ± 0.2 at 25°C.

**Product Profile :**

Vegetable based (Code MV)©	Animal based (Code M)
MV091/MV091A HiVeg hydrolysate	M091/M091A Casein enzymic hydrolysate
<b>Recommended for</b>	: Plate count of microorganisms in food, water and waste water.
<b>Reconstitution</b>	: (MV091) : 23.5 g/l : (MV091A) : 17.5 g/l
<b>Quantity on preparation (500g)</b>	: (MV091) : 21.27 L : (MV091A) : 28.57 L
<b>(100g)</b>	: (MV091) : 4.25 L : (MV091A) : 5.71 L
<b>pH (25°C)</b>	: 7.0 ± 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.

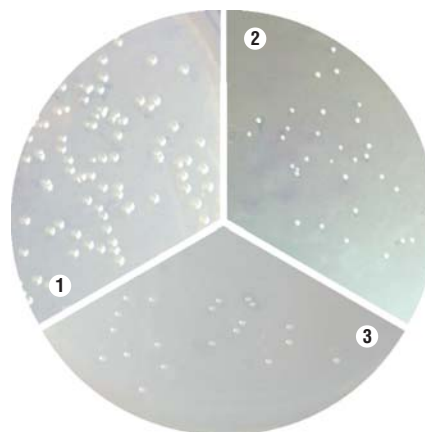
**Cultural Response**

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

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
<i>Bacillus subtilis</i> (6633)	10 <sup>2</sup> -10 <sup>3</sup>	luxuriant	>70%
<i>Escherichia coli</i> (25922)	10 <sup>2</sup> -10 <sup>3</sup>	luxuriant	>70%
<i>Lactobacillus casei</i> (9595)	10 <sup>2</sup> -10 <sup>3</sup>	luxuriant	>70%
<i>Staphylococcus aureus</i> (25923)	10 <sup>2</sup> -10 <sup>3</sup>	luxuriant	>70%
<i>Enterococcus faecalis</i> (29212)	10 <sup>2</sup> -10 <sup>3</sup>	luxuriant	>70%
<i>Streptococcus pyogenes</i> (19615)	10 <sup>2</sup> -10 <sup>3</sup>	luxuriant	>70%

**References :**

- Buchbinder, Baris and Goldstein, 1951, Publ. Hlth. Rep., 66:327.
- Standard Methods for the Examination of Dairy Products. 17<sup>th</sup> Edition, 2004 Edited by H. Michael Wehr and Joseph H. Frank.
- Downes FP and Ito K (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4<sup>th</sup> ed., APHA, Washington, D.C.
- Eaton A.D., Clesceri L.S. and Greenberg A.E., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> ed, APHA, Washington DC.



**MV091 Plate Count HiVeg Agar**  
(Against dark background)

- Escherichia coli*
- Staphylococcus aureus*
- Enterococcus faecalis*