

## Halophilic HiVeg™ Agar / Broth

MV590/MV591

Halophilic HiVeg Agar / Broth is used for the isolation and cultivation of extremely halophilic bacteria.

## Composition\*\* :

Ingredients	MV590	MV591
	Grams/Litre	Grams/Litre
HiVeg acid hydrolysate	10.00	10.00
Yeast extract	10.00	10.00
HiVeg peptone No.3	5.00	5.00
Trisodium citrate	3.00	3.00
Potassium chloride	2.00	2.00
Magnesium sulphate	25.00	25.00
Sodium chloride	250.00	250.00
Agar	20.00	—

Final pH (at 25°C) 7.2 ± 0.2

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

## Directions :

Suspend 32.5 grams of MV590 or 30.5 grams of MV591 in 100 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

## Principle and Interpretation :

These media are prepared by completely replacing animal based peptone by vegetable peptones which is free from BSE/TSE risks. Halophilic HiVeg media are the modification of Halophilic media which are formulated for isolation and cultivation of extreme halophilic species of *Halobacterium* and *Halococcus* from foods (1, 2). For optimum growth they require high salt concentration of about 20 - 30%. These bacteria can cause pink discoloration on the outer surface accompanied by putrefaction and decomposition of fish, bacon and hides preserved in sea salts.

Halophilic media contains HiVeg acid hydrolysate, HiVeg peptone No.3 and yeast extract which provide all the necessary nutrients, mainly nitrogenous and vitamins to the halophilic bacteria. Trisodium citrate serves as selective agent and prevents loss of halophiles in mixed population; as it suppresses Gram positive organisms and coliforms (2). Magnesium is an essential ion for the growth of extreme halophiles and is incorporated in the medium as magnesium sulphate.

10 gm sample is added to 90 ml Halophilic HiVeg Broth and incubated at 35°C for upto 12 days. The organisms are then isolated onto Halophilic HiVeg Agar from this enriched culture.

## Product Profile :

Vegetable based (Code MV)©	Animal based (Code M)
MV590/MV591 HiVeg acid hydrolysate HiVeg peptone No. 3	M590/M591 Casein acid hydrolysate Proteose peptone

**Recommended for** : Isolation and cultivation of extremely halophilic bacteria.

**Reconstitution** : (MV590) : 325.0 g/l  
: (MV591) : 305.0 g/l

**Quantity on preparation (100g)** : (MV590) : 0.30 L  
**(100g)** : (MV591) : 0.32 L

**pH (25°C)** : 7.2 ± 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

Off white coloured, homogeneous, free flowing powder.

## Gelling

Firm, comparable with 2.0% Agar gel of MV590.

## Colour and Clarity

Amber coloured, slightly opalescent gel forms in petri plates, hazy solution containing heavy precipitate at the bottom in tubes.

## Reaction

Reaction of 32.5% w/v of MV590 or 30.5% w/v of MV591 aqueous solution is pH 7.2 ± 0.2 at 25°C.

## Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 12 days.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
<i>Halococcus morrhuae</i> (17082)	10 <sup>2</sup> -10 <sup>3</sup>	luxuriant	>70%
<i>Halobacterium salinarium</i> (33171)	10 <sup>2</sup> -10 <sup>3</sup>	luxuriant	>70%

## References :

- Dundas I.E., 1977, Advances In Microbiology and Physiology, Rose H. and Tempest D.W. (Eds.), A.P. London.
- Gibbons N.E., 1969, Methods In Microbiology, Vol. 3B, Norris J.R., and Ribbons D.W. (Eds.), A.P., New York, pp.169-183.