# Listeria Enrichment HiVeg™ Broth, Modified MV888

Listeria Enrichment HiVeg Broth, Modified is used for selective enrichment of *Listeria* species.

## Composition ** :

| Ingredients | Grams/Litre |
|---|---|
| HiVeg hydrolysate No. 1 | 10.0 |
| Yeast extract | 5.0 |
| HiVeg extract | 5.0 |
| Sodium chloride | 20.0 |
| Disodium hydrogen phosphate | 9.6 |
| Monopotassium hydrogen phosphate | 1.35 |
| Esculin | 1.0 |
| Nalidixic acid | 0.02 |
| Acriflavin hydrochloride (Trypaflavin) | 0.012 |

Final pH (at 25°C ) 7.4 ± 0.2
** Formula adjusted, standardized to suit performance parameters.

## Directions :

Suspend 52 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Dispense in tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

## Principle and Interpretation :

Listeria Enrichment HiVeg Broth, Modified is prepared by completely replacing animal based peptones with vegetable peptones which make the medium free of BSE/ TSE risks. Listeria Enrichment HiVeg Broth, Modified is used for selective enrichment of *Listeria* species from milk, milk products and other foods.
This medium contains HiVeg hydrolysate No.1, yeast extract and HiVeg extract which provide essential nutrients like carbon and nitrogenous compounds including vitamins, amino acids and trace ingredients. Phosphates provide buffering action to the medium while sodium chloride maintains osmotic equilibrium. Nalidixic acid and Acriflavin inhibits the growth of gram-negative and gram-positive organisms respectively (1, 2, 3) except *Listeria* species.
For the enrichment, 25 g or 25 ml sample is added to 225 ml medium in a stomacher bag. Homogenize the material if required. Incubation is carried out at 30°C for upto 7 days and the sample is subcultured on Listeria Selective HiVeg Agar (MV567) after 1, 2 and 7 days.

## Quality Control :

**Appearance of powder**
Light yellow coloured may have slight greenish tinge, homogeneous, free flowing powder.
**Colour and Clarity**
Yellow coloured, clear to slightly opalescent solution with a bluish tinge.
**Reaction**
Reaction of 5.2% w/v aqueous solution is pH 7.4 ± 0.2 at 25°C.

**Product Profile :**

| Vegetable based (Code MV)◉ | Animal based (Code M) |
|---|---|
| **MV888**<br>HiVeg hydrolysate No. 1<br>HiVeg extract | **M888**<br>Tryptose<br>Beef extract |

| | | |
|---|---|---|
| **Recommended for** | : | Selective enrichment of *Listeria* species. |
| **Reconstitution** | : | 52.0 g/l |
| **Quantity on preparation (500g)** | : | 9.61 L |
| **(100g)** | : | 1.92 L |
| **pH (25°C)** | : | 7.4 ± 0.2 |
| **Supplement** | : | None |
| **Sterilization** | : | 121°C / 15 minutes. |

**Storage :** Dry Medium and Prepared Medium 2 - 8°C.

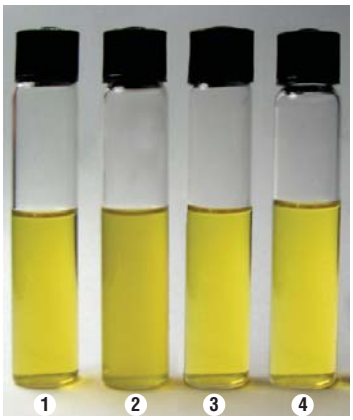
## Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24 - 48 hours.

| Organisms (ATCC) | Inoculum (CFU) | Growth |
|---|---|---|
| *Escherichia coli* (25922) | 2 X $10^3$-$10^4$ | inhibited |
| *Listeria monocytogenes* (19111) | $10^2$-$10^3$ | luxuriant |
| *Listeria monocytogenes* (19112) | $10^2$-$10^3$ | luxuriant |
| *Listeria monocytogenes* (19117) | $10^2$-$10^3$ | luxuriant |
| *Listeria monocytogenes* (19118) | $10^2$-$10^3$ | luxuriant |
| *Staphylococcus aureus* (25923) | 2 X $10^3$-$10^4$ | inhibited |

## References :

1. Lovette J., Francis D.W. and Hunt J.M., 1987, J. Food Prot., 50:188
2. Lee W.K. and McClain D., 1986, Appl. Environ. Microbiol., 52:1215
3. McClain D. and Lee W.H., 1988, J. Assoc. Off. Anal. Chem., 71:660.




**MV888 Listeria Enrichment HiVeg Broth, Modified**

1. Control
2. *Listeria monocytogenes*
3. *Escherichia coli*
4. *Staphylococcus aureus*



◉ Prepared from GMO free Vegetable proteins replacing Animal based peptones. Freedom from BSE/TSE worries.