# Violet Red HiVeg™ Broth MV458

Violet Red HiVeg Broth is a selective medium used for the isolation and detection of coliform organisms from water, milk and other food products.

## Composition ** :

| Ingredients | MV458 Grams/Litre |
|---|---|
| HiVeg peptone | 7.0 |
| Yeast extract | 3.0 |
| Sodium chloride | 5.0 |
| Synthetic detergent No. I | 1.5 |
| Lactose | 1.5 |
| Neutral red | 0.03 |
| Crystal violet | 0.002 |

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

## Directions :

Suspend 26.53 grams in 1000 ml distilled water. Heat to boiling with stirring to dissolve the media completely. DO NOT AUTOCLAVE. If desired the media can be sterilized by autoclaving at 15 lbs pressure (121°C) for 15 minutes, dispense in tubes.

## Principle and Interpretation :

Violet Red HiVeg Broth is prepared by completely replacing animal based peptones by vegetable peptones which makes the medium free of BSE/TSE risks. Voilet Red HiVeg media like the conventional Violet Red Bile media is recommended by APHA for the detection and isolation of coliform organisms in water, milk, dairy and other food products (1,2,).
The medium is selective due to the presence of the inhibitors - synthetic detergent No.1 and crystal violet. Crystal violet inhibits gram-positive microorganisms especially *Staphylococci*. Neutral red is the pH indicator. Organisms which rapidly ferment lactose will produce pink to red colour (3). Lactose non-fermenters and late lactose fermenters produce pale colour. Other related gram-negative bacteria can be suppressed by incubation at >42°C or by anaerobic incubation. Incubation may be carried out at > 42°C for 18 hours, 32°C for 24-48 hours or 4°C for 10 days depending on the temperature characteristics of the organisms to be recovered (4).

**Product Profile :**

| Vegetable based (Code MV)◉ | Animal based (Code M) |
|---|---|
| **MV458**<br>HiVeg peptone<br>Synthetic detergent No. I | **M458**<br>Peptic digest of animal tissue<br>Bile salts mixture |

| | | |
|---|---|---|
| **Recommended for** | : | Isolation and detection of coliform organisms from water, milk and food. |
| **Reconstitution** | : | 26.53 g/l |
| **Quantity on preparation (500g)** | : | 18.84 L |
| **pH (25°C)** | : | 7.4 ± 0.2 |
| **Supplement** | : | None |
| **Sterilization** | : | Boiling or 121°C / 15 minutes, if desired |

**Storage :** Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.

## Quality Control :

**Appearance of powder**
Pinkish beige coloured, homogeneous, free flowing powder.
**Colour and Clarity**
Reddish purple coloured, clear solution in tubes.
**Reaction**
Reaction of 2.65% w/v aqueous solution is pH 7.4 ± 0.2 at 25°C.
**Cultural Response**
Cultural characteristics observed after an incubation at 35-37°C for 18 - 24 hours.

| Organisms (ATCC) | Inoculum (CFU) | Growth | Colour of Medium |
|---|---|---|---|
| *Enterobacter aerogenes* (13048) | $10^2$-$10^3$ | luxuriant | pinkish-red |
| *Escherichia coli* (25922) | $10^2$-$10^3$ | luxuriant | pinkish red |
| *Salmonella* serotype Enteritidis (13076) | $10^2$-$10^3$ | luxuriant | orangish-yellow |
| *Staphylococcus aureus* (25923) | $10^2$-$10^3$ | inhibited | - |

## References :


1. Frances Pouch Downes and Keith Ito (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.
2. Standard Methods for the Examination of Dairy Products. 17th Edition, 2004 Edited by H. Michael Wehr and Joseph H.Frank.
3. Davis J.G., 1951, Milk Testing, Dairy Industries Limited, London; pg 131
4. Mossel D.A.A. and Vega C.L., 1973, Hlth. Lab. Sci., 11:303.




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