# Technical Information

## VP MiVeg Medium

## Product Code :VM1662

**Application:-** VP MiVeg Medium is recommended for the isolation of *Vibrio parahaemolyticus* from clinical specimens, foodstuffs and environmental samples.

## Composition

| Ingredients | Gms / Litre |
|---|---|
| MiVeg peptone | 10.0 |
| Yeast extract | 5.0 |
| Synthetic detergent No. V | 5.0 |
| Sodium thiosulphate | 10.0 |
| Sodium chloride | 20.0 |
| Sodium lauryl sulphate | 0.2 |
| Sodium citrate | 10.0 |
| Sucrose | 20.0 |
| Bromo thymol blue | 0.04 |
| Thymol blue | 0.04 |
| Agar | 20.0 |
| Final pH (at 25°C) | 8.6 ± 0.2 |

** Formula adjusted, standardized to suit performance parameters.

## Principle & Interpretation

VP MiVeg Medium is prepared by adding MiVeg peptone in place of Peptic digest of animal tissue thereby making the medium BSE/TSE risks free. This medium is the modification of VP Medium which is formulated as described by De et al (1) and recommended for selective isolation of *Vibrio* species, especially *Vibrio parahaemolyticus* from clinical specimens, foodstuffs, and environmental sample (2).

MiVeg peptone and yeast extract supplies nitrogenous compounds, vitamin B complex and certain other essential growth nutrients. Sucrose is the necessary fermentable carbohydrate. Sodium citrate, sodium lauryl sulphate, synthetic detergent No. V and sodium thiosulphate as well as high alkalinity of the medium inhibit most of the contaminating organisms thereby makes the medium selective for the isolation of *Vibrio parahaemolyticus*. Bromolthymol blue and thymol blue are pH indicators. The alkaline pH of the medium and higher concentration of sodium chloride helps in the recovery of *Vibrio parahaemolyticus*. Sucrose fermenting organisms like *Vibrio cholerae* and *Vibrio alginolyticus* produce yellow coloured colonies while *Vibrio parahaemolyticus* is a sucrose non-fermenter thus produce blue-green colonies, as does *Vibrio vulnificus*. Occasionally a few enteric sucrose non-fermenters may exhibit growth e.g. *Proteus* group.

## Methodology

Suspend 100.28 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Pour into sterile petri plates.

## Quality Control

**Physical Appearance**

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

**Gelling**

Firm, comparable with 2.0% Agar gel.

**Colour and Clarity of prepared medium**

Bluish green coloured, clear to slightly opalascent gel forms in petri plates.

**Reaction**

Reaction of 10% w/v aqueous solution is pH 8.6 ± 0.2 at 25°C.

**pH Range**

8.4-8.8

**Cultural Response/Characteristics**

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

| Organisms (ATCC) | Inoculum (CFU) | Growth | Recovery | Colour of Colony |
|---|---|---|---|---|
| *Enterococcus faecalis* (29212) | $10^2$-$10^3$ | poor | <20% | Yellow |
| *Escherichia coli (25922)* | $10^2$-$10^3$ | inhibited | 0% | - |
| *Shigella flexneri* (12022) | $10^2$-$10^3$ | inhibited | 0% | - |
| *Vibrio cholerae* (15748) | $10^2$-$10^3$ | good | >50% | Yellow |
| *Vibrio parahaemolyticus* (11344) | $10^2$-$10^3$ | good- luxuriant | >70% | Blue-green |
| *Vibrio vulnificus* | $10^2$-$10^3$ | good | >50% | Greenish yellow |

## Storage and Shelf Life

**Dried Media:** Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
**Prepared Media:** 2-$8^0$ in sealable plastic bags for 2-5 day.

## Further Reading

1. De, S.P. et al (1977), Indian J. Med. Res. 66,398.
2. MacFaddin J., 1985, Media for Isolation - Cultivation - Identification -Maintenance of Medical Bacteria Vol. 1, Williams and Wilkins, Baltimore.

## Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
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