

## Alkaline HiVeg™ Peptone Water

MV618

### Intended use

Recommended for enrichment of *Vibrio* species from various samples.

### Composition\*\*

| Ingredients         | g / L   |
|---------------------|---------|
| HiVeg™ peptone      | 10.000  |
| Sodium chloride     | 10.000  |
| Final pH ( at 25°C) | 8.4±0.2 |

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

### Directions

Suspend 20.0 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Dispense in tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C.

### Principle And Interpretation

Clinical materials containing small numbers of *Vibrio* should be inoculated into an enrichment medium prior to plating onto a selective medium, such as TCBS Agar (M189). Alkaline Peptone Water is a suitable enrichment broth for this purpose (1,2,3). The relatively high pH of the medium (approximately 8.4) provides a favorable environment for the growth of *Vibrio*'s. This medium is recommended by APHA (4) for enrichment of *Vibrio* species from seafood, infectious materials and other clinical specimens such as faeces (5). Alkaline HiVeg™ Peptone Water is prepared by completely replacing animal based peptones with vegetable peptones to avoid BSE/TSE risks associated with animal peptones. HiVeg™ peptone provides nitrogen and carbon source, long chain amino acids, vitamins and other essential nutrients. Sodium chloride maintains osmotic equilibrium.

Add 10 grams of seafood to 90 ml of Alkaline HiVeg™ Peptone Water and incubate for upto 18-20 hours at 37°C. Prolonged incubation will result in growth of the suppressed contaminating organisms to develop (6). Growth in tubes is indicated by turbidity compared to an un-inoculated tube (control). Growth from the enrichment broth is used for plating on selective media. For biochemical identification a pure culture is recommended.

### Type of specimen

Food samples; Water samples.

### Specimen Collection and Handling:

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (4).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (7).

After use, contaminated materials must be sterilized by autoclaving before discarding.

### Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

### Limitations :

1. Certain strains of *Vibrio* species requiring higher sodium chloride concentration may show poor growth.
2. Further recovery from this enriched broth onto selective media is required.
3. Biochemical characterization is carried out from pure isolates for complete identification.

### Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the recommended temperature.

## Quality Control

### Appearance

Cream to yellow homogeneous free flowing powder

### Colour and Clarity of prepared medium

Light yellow coloured clear solution without any precipitate

### Reaction

Reaction of 2% w/v aqueous solution at 25°C. pH : 8.4±0.2

### pH

8.20-8.60

### Cultural Response

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

| Organism   | Inoculum (CFU) | Growth    |
|--|----------------|-----------|
| <i>Vibrio cholerae</i> ATCC 15748                  | 50-100         | luxuriant |
| <i>Vibrio parahaemolyticus</i> ATCC 17802 (00037*) | 50-100         | luxuriant |

Key : (\*) Corresponding WDCM numbers.

## Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

## Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,8).

## Reference

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