**Alkaline Saline Peptone Water (ASPW) Intended Use:**
Recommended for enrichment of *Vibrio* species from food and water samples in accordance with ISO.

**Composition**

*Ingredients* | *Gms/Litre*
--- | ---
Peptone | 20.000
Sodium chloride | 20.000
pH after sterilization (at 25°C) | 8.6±0.2

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

**Directions**
Suspend 40 grams in 1000 ml purified/distilled water. Heat if necessary to dissolve the medium completely. Dispense as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C.

**Principle And Interpretation**

*Vibrio* have played a significant role in human history. Outbreaks of cholera, caused by *Vibrio cholera*, can be traced back in time to early recorded descriptions of enteric infections. The *Vibrios* have also received the attention of marine microbiologists who observed that the readily cultured bacterial population in near-shore waters and those associated with fish and shell fish were predominantly *Vibrio* species (8). *Vibrio* species are mainly responsible for causing cholera and food poisoning in humans. *Vibrio cholera* causes cholerae due to the intake of contaminated food such as raw oysters. *Vibrio parahaemolyticus* is a major cause of food borne infections, causing food poisoning (1). Since *Vibrio* species naturally occur in sea water, worth special mention is their need for sodium chloride, although some species can grow with minimum sodium chloride concentration (8). The widely used media for *Vibrio* isolation are TCBS Agar and Alkaline Peptone Water (3).

Alkaline Saline Peptone Water (ASPW) is in accordance with ISO/TS 21872-1:2017 which specifies a horizontal method for the detection of the two main pathogenic *Vibrio* species causing intestinal illness in humans: *V. parahaemolyticus* and *V. cholera* (4). It is applicable to products intended for human consumption and the feeding of animals, and environmental samples in the area of food production and food handling.

Peptone provides carbonaceous, nitrogenous and essential nutrients to the organisms. High concentration of sodium chloride in addition to maintaining the osmotic equilibrium also has an inhibitory action on the accompanying microflora.

**Type of specimen**
Food samples; Water samples

**Specimen Collection and Handling**
For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (7). For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (2). 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 expiry period when stored at 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 4% w/v aqueous solution at 25°C. pH : 8.6±0.2

pH
8.40-8.80

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

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vibrio cholerae ATCC 15748</td>
<td>50-100</td>
<td>luxuriant</td>
</tr>
<tr>
<td>Vibrio parahaemolyticus ATCC 17802 (00037*)</td>
<td>50-100</td>
<td>luxuriant</td>
</tr>
</tbody>
</table>

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. Use before expiry date on the label. 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 (4,5).

Reference

Disclaimer :
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