

Also known as

ASPW

Specification

Liquid culture medium for the pre-enrichment and selective enrichment of potentially enteropathogenic vibrios, in food samples, according to ISO.

Formula * in g/L

Peptone 20,00
Sodium chloride..... 20,00

Final pH 8,6 ± 0,2 at 25 °C

* Adjusted and /or supplemented as required to meet performance criteria

Directions

Dissolve 40 g of the powder in 1 L of distilled water, heating if required. Distribute into suitable containers and sterilize in the autoclave at 121°C for 15 minutes.

Technique

Technical specifications ISO 21872 in parts 1 and 2 describe this liquid culture medium for use in the pre-enrichment and selective enrichment of potentially enteropathogenic vibrios, from food samples.

For pre-enrichment, the sample diluted in the medium is incubated at 37°C for 6 ± 1 hours and from this culture the selective enrichment medium is inoculated and incubated at the same temperature for 18 ± 1 hours before proceeding to isolation on selective media.

If the presence of *V.parahaemolyticus* or *V.cholerae* is suspected then the pre-enrichment is carried out in the same manner only if the sample is a frozen food sample. With fresh foods the incubation must be carried out at 41,5°C, always for 6 ± 1 hours. Similarly the selective enrichment is carried out at 41,5°C for a period of 18 ± 1 h for these species of *Vibrio*, before proceeding to a selective medium for isolation.

Quality control

Incubation temperature: 37°C ± 1°C

Incubation time: 6±1h / 24±3h

Inoculum: Pre-enrichment: 10³-10⁴ CFU (Productivity) according to ISO 11133. Recovery into TCBS A.

Microorganism
Growth
Remarks

Vibrio alginolyticus ATCC® 17749

Good. Yellowish colonies.

Recovery in TCBS 24±3h

Vibrio parahaemolyticus ATCC® 17802

Good. Green colonies.

Recovery in TCBS 24±3h

Vibrio furnissii NCTC® 11218

Good. Yellowish colonies.

Recovery in TCBS 24±3h

References

- APHA AWWA WEF (1998) Standard Methods for the examination of water and wastewater. 20th ed. APHA. Washington, DC.
- ATLAS, R.M.& L.C. PARKS (1993) Handbook of Microbiological Media, CRC Press Inc., London.
- DOWNES, F.P.& K. ITO (2001). Compendium of Methods for the Microbiological Examination of Food. 4th Ed. APHA, Washington.
- ISO 21872-1 Technical Specification (2017) Microbiology of Food chain- Horizontal method for the detection of potentially enteropathogenic *Vibrio* spp. - Part 1: Detection of *Vibrio parahaemolyticus* and *Vibrio cholerae* and *Vibrio vulnificus*.
- ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.

Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 °C to 30 °C).