



HiEnviro-Sponge™ Stick Hydrated w/10ml Buffered Peptone water w/gloves, sterile

EST001A

Intended use

Recommended for microbiological sample collection from food processing equipment and other environmental surfaces.

Composition

Ingredients	g / L
Peptone #	10.000
Sodium chloride	5.000
Disodium hydrogen phosphate dodecahydrate	9.000
Potassium dihydrogen phosphate	1.500
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Enzymatic digest of casein

Directions

1. A white printed area has been provided to label the sample.
2. Tear the bag along the tear-line and pull the tabs to open the bag.
3. Guide the sponge stick out of the bag by holding the handle, without touching the bag's internal surface (wearing sterile hand gloves is preferable while getting the sponge stick out).
4. Swab the surface ensuring that the entire sponge head comes in contact with the surface of the collection site.
5. Place the sponge stick halfway in the bag, hold the sponge head from outside and snap off the stick from the sponge head. Discard the stick, while the sponge remains inside the bag.
6. Roll the top opening of the sampling bag by holding the tapped wires. Seal the bag by folding the tapped wires at both ends.
7. Incubate the sampled bag at 35 -37°C for 18-24hours.

Principle And Interpretation

Microorganisms that are subjected to environmental stresses may become structurally or metabolically damaged or injured. These microorganisms are unable to replicate in selective environments. Therefore, these injured organisms must be resuscitated or permitted to repair the damage by incubation in an appropriate, non-selective environment. Edel and Kampelmacher (1) noted that sub-lethal injury to *Salmonellae* may occur in many food preservation processes. Enriching injured cells in Lactose Broth (pH 6.9) may be further detrimental to their recovery (2). Pre-enrichment in Buffered Peptone Water at 35°C for 18-24 hours results in repair of injured cells (3). The buffering system prevents bacterial damage due to change in the pH of the medium. Recently ISO committee has also recommended this pre-enrichment medium for the detection of *Enterobacteriaceae* from food stuffs and animal feeding stuffs, water, milk, milk products and other products (4).

Type of specimen

Environmental samples, food industry samples

Specimen Collection and Handling

For environmental samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (5,6). 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. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement or observation.
2. Individual strain of a microorganism may have unique growth requirements with respect to nutrients and physical conditions. Based on which the growth pattern of each varies on a medium and some even may display significant delay.

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

Sterile HiEnviro-Sponge™ Stick (Cellulose sponge) Hydrated w/ 10ml Buffered Peptone water w/ gloves in wired sampling bag.

Dose of Irradiation (kGy)

> 25 kGy

Sterility check

Passes release criteria

Cultural Response

Check for recovery of low CFU Organisms (~10 CFU/ml), inoculated on hydrated sponge w/10ml Buffered Peptone water with hold time of 1 hr ± 15 mins at 20-25°C. Further enrichment in Soyabean Casein Digest Medium is carried out with incubation at 30-35°C for 18-24 hrs, followed by recovery on Selective media.

Organism	Growth
<i>Escherichia coli</i> ATCC 25922 (00013*)	good-luxuriant (Recovery on MacConkey Agar, MP081)
<i>Salmonella</i> Typhimurium ATCC 14028 (00031*)	good-luxuriant (Recovery on XLD Agar, MP031I)
<i>Listeria monocytogenes</i> ATCC 19111 (00020*)	good-luxuriant (Recovery on HiCrome™ <i>Listeria</i> Ottaviani-Agosti Agar Base, MP1540I)

Key : (*) Corresponding WDCM numbers.

Storage and Shelf life

Store between 15-30°C. 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 (5,6).

Reference

1. Edel W. and Kampelmacher E. H., 1973, Bull. Wld. Hlth. Org., 48: 167.
2. Angelotti R., 1963, "Microbiological Quality of Foods", Academic Press, New York.
3. Sadowski A. Y., 1977, J. Food Technol., 12:85.
4. International Organization for Standardization (ISO), 2017, Draft ISO/DIS, 6579.
5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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Disclaimer :

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