Salmonella Selective Enrichment Broth base

M1843

Intended Use:

Recommended for selective isolation and differentiation of *Salmonella* species.

Composition**

Ingredients	Gms / Litre
Peptone	5.000
Yeast extract	5.000
Buffer mixture	10.000
Growth mixture	5.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 25 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add the rehydrated contents of one vial of Salmonella Selective Enrichment Supplement (FD275). Mix well and dispense as desired.

Principle And Interpretation

Salmonella are ubiquitous in the environment. These organisms are usually present in small numbers compared to coliforms; therefore it is necessary to examine a relatively large sample to isolate the organisms (1). *Salmonella* present in food samples may be sublethally damaged during various stages of food processing where they may be exposed to low temperatures, heat drying, radiations, various chemicals (2). These damaged cells are able to cause spoilage, and if ingested cause diseases under favourable conditions. Therefore it is important to resuscitate these damaged bacteria before enumeration. Salmonella Enrichment Broth Base is recommended for the selective enrichment of *Salmonella* species within 18-24 hours.

Type of specimen

Food samples.

Specimen Collection and Handling

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (5).
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. Further biochemical testing on pure colony is required for complete identification of organisms.

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 2.5% w/v aqueous solution 25°C. pH : 7.0±0.2

Cultural Response
Cultural characteristics observed with added Salmonella Selective Enrichment Supplement (FD275) after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth
Salmonella Typhimurium *ATCC 14028* (00031*)	50 -100	good-luxuriant
Salmonella Enteritidis *ATCC 13076* (00030*)	50 -100	good-luxuriant
Salmonella Abony *NCTC 6017* (00029*)	50 -100	good-luxuriant
Staphylococcus aureus subsp. aureus ATCC 25923 (00034*)	>=10^4	inhibited

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°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 clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. Cherry et al, 1972, Appl. Microbiol., 24:334
2. Hartman and Minich, 1981, J. Food and Prot., 44:385
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. 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.
5. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

Revision : 01/ 2019