Mannitol Selenite Broth

LQ146

Intended use

Recommended for selective enrichment of *Salmonellae* from clinical specimens.

Composition**

Ingredients	g / L
Peptone	5.000
Mannitol	4.000
Sodium phosphate	10.000
Sodium hydrogen selenite(Sodium biselenite)	4.000
Final pH (at 25°C)	7.1±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Label the ready to use LQ146 bottle. Inoculate the sample and Incubate at specified temperature and time.

Principle And Interpretation

Selenite-containing media for the enrichment of *Salmonella* was first described by Guth (1). This medium was further modified by Leifson (2) for the enrichment and isolation of *Salmonella* from clinical specimens. Mannitol Selenite Broth is a selective enrichment medium, more or less similar to Leifson (2) enrichment medium, described by Hobbs and Allison (3) for the isolation of *Salmonella* Typhi and *Salmonella* Paratyphi B from clinical specimens. Mannitol Selenite Broth can also be used for the selective enrichment of *Salmonella* from water and foodstuffs.

Peptone provides amino acids and other nitrogenous substances to *Salmonellae*. Mannitol serves as fermentable carbohydrate, Sodium phosphate maintains a uniform pH and also lessens the toxicity of selenite. Do not incubate longer than 24 hours as the inhibitory effect of selenite is reduced after 6-12 hours incubation (4). Subculture broth from the upper third of the broth column to greater or lesser inhibitory selective agars.

Type of specimen

Clinical samples - faeces

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5).

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

Warning and Precautions

In Vitro diagnostic Use only. For professional use only. 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 clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Discard the prepared medium if large amount of selenite is reduced (indicated by red precipitate at the bottom of the tube).
2. Do not incubate longer than 24 hours as the inhibitory effect of selenite is reduced after 6 - 12 hours incubation (4).

Performance and Evaluation

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

Quality Control

Appearance

Sterile clear Mannitol Selenite Broth in glass bottles

Colour
Light yellow coloured clear solution
Quantity of Medium
10 ml of medium in glass bottle.
Sterility Check
Passes release criteria
pH
6.90-7.30
Cultural Response
Cultural characteristics observed when subcultured on MacConkey Agar (M081), after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Recovery (increase in numbers)	Colour of Colony
Escherichia coli ATCC 25922 (00013*)	50-100	little-none	pink with bile precipitate
Salmonella Enteritidis ATCC 13076	50-100	luxuriant	colourless
Salmonella Paratyphi B ATCC 8759	50-100	luxuriant	colourless
Salmonella Typhi ATCC 6539	50-100	luxuriant	colourless

Key: (*) corresponding WDCM numbers

Storage and Shelf Life

On receipt store between 2-8°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 clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (7,8).

Reference

1. Guth F., 1916, Zentralbl. Bakteriol. Parasitenk. Indektionskr. Hyg. Abt. 77:487.
2. Leifson E., 1936, Am. J. Hyg., 24(2):423.
3. Hobbs B. C. and Allison V. D., 1945, Mon. Bull. Min. Hlth. Publ. Hlth. Lab. Serv., 4:12.
4. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
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.
6. Lipps WC, Braun-Howland EB, Baxter TE,eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.
7. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
8. 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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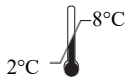
HiMedia Laboratories Pvt. Limited,
Plot No.C-40, Road No.21Y,
MIDC, Wagle Industrial Area,
Thane (W) -400604, MS, India

IVD ***In vitro* diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE **CE Marking**

Do not use if package is damaged

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