Mannitol Selenite Broth w/Brilliant Green (Twin Pack) M1537

Intended Use:

Recommended for enrichment of Salmonellae from faeces, foodstuffs and other materials.

Composition**

Ingredients	g/ L
Part A	-
HM peptone #	5.000
Yeast extract	5.000
Sodium taurocholate	1.000
Brilliant green	0.005
Potassium dihydrogen phosphate	3.400
Dipotassium hydrogen phosphate	4.350
Mannitol	5.000
Part B	-
Sodium selenite	4.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters
Equivalent to Meat peptone

Directions

Suspend 4.0grams of Part B in 1000 ml purified/distilled water. Add 23.75grams of Part A. Mix well. If desired add 0.5g/L sodium sulpha pyridine, warm to dissolve the medium completely. Dispense as desired and sterilize in a boiling water bath or free flowing steam for 10 minutes. **DO NOT AUTOCLAVE**. Excessive heating is detrimental. Discard the prepared medium if large amount of selenite is reduced (indicated by red precipitate at the bottom of tube/bottle).

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 w/Brilliant green is prepared as per the formulation of Stocks and Osborne (3). This medium is recommended for isolation or enrichment of *Salmonella* from small inocula. Also the strong buffering capacity of the medium prevents damage to cultures due to over-acidification when mannitol is fermented.

HM peptone and yeast extract provides amino acids and other nitrogenous substances to *Salmonella*. Mannitol serves as fermentable carbohydrate, a sugar alcohol which also helps in maintaining a uniform pH along with the phosphates. Phosphates also lessen 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; Food samples; Water samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6).

For food 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.(8)

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

Warning and Precautions :

In Vitro diagnostic Use. 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. Excessive heating is detrimental for the medium.
2. Discard the prepared medium if large amount of selenite is reduced (indicated by red precipitate at the bottom of the tube).
3. 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

Part A : Cream to pale green homogeneous free flowing powder Part B : White to cream homogeneous free flowing powder

Colour and Clarity of prepared medium

Green coloured Opalescent to slightly hazy solution of complete medium

Reaction

Reaction of 2.37% w/v of Part A + 0.4% w/v of Part B at 25°C. pH : 7.0±0.2

pH

6.80-7.20

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 (00030*)	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

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 (5,6).

Reference

1. Guth F., 1916, Zentralbl. Bakteriol. Parasitenk. Indektionskr. Hyg. Abt. 77:487
2. Leifson E., 1936, Am. J. Hyg., 24 (2):423.
3. Stockes J. L. and Osborne W. W., 1955, Appl. Microbiol., 3-4,217
4. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
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.
7. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, American Public Health Association, Washington, D.C.
8. Lipps WC, Braun-Howland EB, Baxter TE,eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.

Revision: 04/2024

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**

30°C
10°C **Storage temperature**

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

CE Marking

Do not use if package is damaged

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory,diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.