OXFORD LAB FINE CHEM LLP
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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

Mannitol Selenite Broth w/Brilliant Green (Twin Pack)

Principle

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.

Use: For the enrichment of Salmonellae from faeces, food and other materials.

Contents*

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

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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).

Specimens' types analyzed

Clinical samples - Faeces; Food samples; Water samples

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	**Part A : Cream to pale green homogeneous free flowing powder** **Part B : White to cream homogeneous free flowing powder**
Color and clarity of ready medium	**Green colored 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**

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Different Microbial Response
Cultural characteristics observed when subcultured on MacConkey Agar (M081), after an incubation at 35-37°C for 18-24 hours.

Organism	ATCC	Inoculum (CFU)	Recovery (increase in numbers)	Colour of Colony
Escherichia coli	25922	50-100	Little-None	Pink With Bile Precipitate
Salmonella Enteritidis	13076	50-100	Luxuriant	Colourless
Salmonella Paratyphi B	8759	50-100	Luxuriant	Colourless
Salmonella Typhi	6539	50-100	Luxuriant	Colourless

Storage and Shelf Life: **The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.**

Disposal: **To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.**

Reference

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