M-Bismuth Sulphite Broth

Intended Use
M-Bismuth Sulphite Broth is a selective medium used for the detection of Salmonellae by the membrane filter technique.

Summary
Salmonella is a Gram-negative, facultatively anaerobic, non-sporulating, non-motile rod in the family *Enterobacteriaceae*. They are widely distributed in animals affecting mainly the stomach and the intestines. These organisms are difficult to differentiate biochemically from *Escherichia coli*. M-Bismuth Sulphite Broth was formulated by Clark *et al.,* and is particularly recommended for detection of *Salmonella* Typhi from water and various clinical specimens by the membrane filtration technique. Preliminary enrichment on a non-selective medium is not necessary. M-Bismuth Sulphite Broth has a composition similar to Bismuth Sulphite Agar, except Agar.

Principle
Peptic digest of animal tissue, cara beef extract and dextrose provides essential growth nutrients. Ferrous sulphate and bismuth sulphite indicator together act as H_2S indicators. Brilliant green acts as selective agent. Luxuriant growth of *Salmonella* Typhi is obtained after 30 hours incubation at 35°C but metallic sheen and brown-black halo is not developed before 40 hours. The importance of this medium has been repeatedly mentioned for detection of *Salmonella* Typhi by membrane filter technique.

Formula*

Ingredients	g/L
Peptic Digest of Animal Tissue	20.0
Cara Beef Extract#	10.0
Dextrose	10.0
Disodium Phosphate	8.0
Ferrous Sulphate	0.6
Bismuth Sulphite Indicator	16.0
Brilliant Green	0.05
Final pH (at 25°C)	7.7 ± 0.2

*Adjusted to suit performance parameters.
Equivalent to Beef Extract

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Clinical samples; Water samples

Specimen Collection and Handling
Ensure that all samples are properly labelled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 64.65 g of the powder in 1000 mL purified / distilled water.
2. Heat if necessary to dissolve the powder completely. Excessive heating destroys the selective properties of the medium. DO NOT AUTOCLAVE.
3. The medium usually contains flocculent precipitate, which should be dispersed evenly by swirling the flask just before use.
4. Cool to 35°C and saturate sterile absorbent cotton pad with 2 mL of the broth. The medium should be used within 24 hours of rehydration.

Quality Control

Dehydrated Appearance: Light green to greenish yellow coloured, homogeneous, free flowing powder.
Prepared Appearance: Green to pale green coloured, opalescent solution with flocculent precipitate.
Cultural Response: Cultural characteristics observed in humid atmosphere, after an incubation at 35°C-37°C for 40-48 hours.

Organism (ATCC)	Growth	Colour of Colony
Escherichia coli (25922)	Partial Inhibition	Brown - green, if any
Salmonella Typhi (9027)	Good	Black with metallic sheen
Salmonella enterica subsp. *enterica* serovar *Typhimurium* (14028)	Good	Black with metallic sheen
Staphylococcus aureus subsp. *aureus* (25923)	Inhibited	-

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

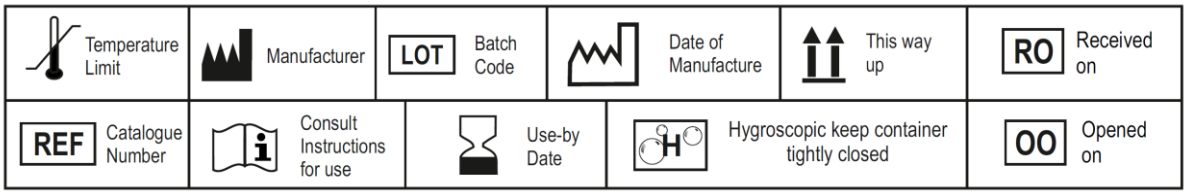
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Clark H. F., Geldreich E. E., Jeter M. L. and Kabler P. W., 1951, Pub I. Hlth. Reports, 66:951.
2. Goets A. and Tsuneishi N., 1951, J. Am. Water Works Assoc., 43:943.
3. Goets A. and Tsuneishi N., 1952, J. Am. Water Works Assoc., 44:471.
4. Goets A. and Tsuneishi N., 1953, J. Am. Water Works Assoc., 45 and 1196.
5. MacFaddin J. F., 1985, Media for Isolation-Identification- Cultivation-Maintenance of Medical Bacteria, Vol. I, Williamsm and Wilkins, Baltimore.
6. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201130030100	Dehydrated Culture Media	100 g
201130030500	Dehydrated Culture Media	500 g



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Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.