

TM 2179 - M-BISMUTH SULPHITE BROTH

INTENDED USE

For the detection of Salmonellae by the membrane filter technique.

PRODUCT SUMMARY AND EXPLANATION

Salmonella is a gram-negative, non-sporulation, facultative anaerobic, non-motile rod in the family *Enterobacteriaceae*. They are widely distributed in animals causing diseases mainly in stomach and the intestines. It is difficult to differentiate these organisms biochemically from *Escherichia coli*. Clark et al formulated M-Bismuth Sulphite Broth and recommend for detection of *Salmonella Typhi* by the membrane filtration technique from water and various clinical specimens. Preliminary enrichment on a non-selective medium is not necessary. M-Bismuth Sulphite Broth share same composition with Bismuth Sulphite Agar except Agar. All the constituents are in double concentration in the broth medium.

COMPOSITION

Ingredients	Gms / Ltr
Dextrose	10.000
Beef Extract	10.000
Ferrous sulphate	0.600
Brilliant Green	0.050
Disodium Phosphate	8.000
Bismuth sulphate indicator	16.000
Peptic digest of animal tissue	20.000

PRINCIPLE

Essential growth nutrients provided by peptic digest of animal tissue, dextrose and beef extract. H₂S indicators act by ferrous sulphate and bismuth sulphite indicator together. Brilliant green acts as selective agent after 30 hour's incubation at 35°C luxuriant growth of *Salmonella Typhi* is obtained but metallic sheen and brown-black halo is not developed before 40 hours. The medium importance relies on membrane filter technique for the detection of *Salmonella Typhi*.

INSTRUCTION FOR USE

- Dissolve 64.65 grams in 1000ml distill water.
- Heat the medium to dissolve completely if necessary. Excessive heating can destroy selective properties of the medium. Do not Autoclave
- The medium contains flocculent precipitate that should be dispersed evenly by swirling the flask just before use.
- Cool at 35°C and saturate sterile absorbent cotton pad with 2ml of the broth.
- The medium should be used 24 hours of rehydration.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Light yellow to greenish yellow homogeneous free flowing powder
Appearance of prepared medium pH (at 25°C)	: Greenish yellow colored opalescent solution with flocculent precipitate : 7.7 ± 0.2

INTERPRETATION

Cultural characteristics observed in humid atmosphere, after an incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Color of the colony(on membrane filter)	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	25922	50-100	None-poor	0-10%	Brown green, if any	35-37°C	40-48 hours
<i>Salmonella Typhi</i>	6539	50-100	Luxuriant	>=70%	Black with metallic sheen	35-37°C	40-48 hours
<i>Salmonella Typhimurium</i>	14028	50-100	Luxuriant	>=70%	Black with metallic sheen	35-37°C	40-48 hours
<i>Staphylococcus aureus</i>	25923	>=10 ³	Inhibited	>=70%	-	35-37°C	40-48 hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.













Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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, Williams and Wilkins, Baltimore.R.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Barkstrasse 10, 48163 Moenster, Germany</small>	 CE European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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