TMT 016- TERTRATHIONATE BROTH

INTENDED USE

For selective isolation of Salmonellae from foods and other pathological materials.

PRODUCT SUMMARY AND EXPLANATION

Tetrathionate Broth Medium was originally described by Mueller and found that the medium selectively inhibit coliforms and permit unrestricted growth of enteric pathogens. The medium is now formulated according to Indian Pharmacopoeia. Compendium of Microbiological Examination of Foods and Standard Methods for the Examination of Water and Wastewater specify this medium as enrichment medium for *Salmonella* species. *Salmonella* is the common causative agent of mild gastroenteritis to typhoid. It is common contaminant in food and other biological products. This medium supports the rejuvenation of *Salmonella* cells injured by food processing which are incapable of forming colonies on plate, but on injection can cause infection.

COMPOSITION

Ingredients	Gms / Ltr
Beef extract	0.900
Peptone	4.500
Yeast extract	1.800
Sodium chloride	4.500
Calcium carbonate	25.000
Sodium Thiosulphate	40.700

PRINCIPLE

The selectivity depends on the ability of thiosulphate and tetrathionate (formed by addition of Iodine and Potassium iodide) in combination to suppress commensal coliform organisms. The microorganism harboring tetrathionate reductase flourish in this broth. Sodium thiosulphates are inactivators of halogens and can minimize its toxicity in the testing sample, if any during microbial limit tests. Yeast extract, meat extract B and peptone provides essential nutrients, growth factors and vitamins in this medium. Calcium carbonate neutralizes the acidic tetrathionate decomposition products. Sodium chloride maintains osmotic balance.

INSTRUCTION FOR USE

Inoculate the sample and Incubate at specified temperature and time.

QUALITY CONTROL SPECIFICATION

Appearance of prepared medium	:	Complete medium with added brilliant green and iodine solutio - Light green opalescent with white precipitate, on standing the precipitate settles down.
Quantity of Medium	:	10 ml of medium in tubes.
pH (at 25°C)	:	7.8 ± 0.2
Sterility Check	:	Passes release criteria

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Salmonella Typhimurium	14028	50-100	Luxuriant	>=50 %	Red with black centres	35-37°C	18-72 Hours

PACKAGING:

Pack of 25 Ready-To-Use Liquid Medium tubes containing 10 ml in each tube.
Pack of 50 Ready-To-Use Liquid Medium tubes containing 10 ml in each tube.

STORAGE

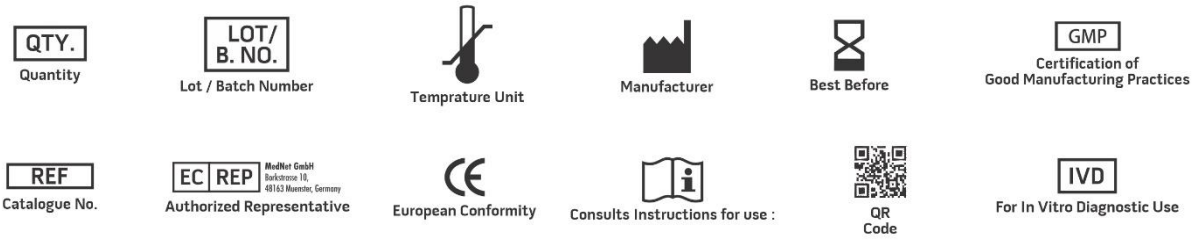
On receipt, store tubes in the dark at 10-25°C. Avoid freezing and overheating. Do not open until ready to use. Minimize exposure to light. Tubed media stored as labeled until just prior to use may be inoculated up to the expiration date and incubated for the recommended incubation times. Allow the medium to warm to room temperature before inoculation.

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.

REFERENCES

1. Mueller, 1923, Compt. Rend. Sco. Biol., 89:434.
2. The Indian Pharmacopoeia (1996), Vol. II.
3. Downes F P and Ito K(Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.
4. Eaton A. D., Clesceri L. S. and Greenberg A W,(Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st ed., APHA, Washington, D.C.
5. Pollock M.R. and Knor R., 1943, Biochem J., 37:476.
6. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria., Vol. 1, Williams and Wilkins, Baltimore.



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

***For Lab Use Only**

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