

MAST® Culture Media and Supplements

Technical Information Sheet

Product Code DM 219



Tetrathionate Broth

A selective enrichment medium for the detection and isolation of salmonellae in faeces, water and food.

1. Description

This selective enrichment broth for the detection and isolation of salmonellae was originally formulated by Mueller in 1923.1 Tetrathionate is produced by the addition of iodine to thiosulphate. The ability of

salmonellae to reduce tetrathionate and the inhibitory effect of tetrathionate on most other enteric organisms makes the broth selective. The bile salts present also act to inhibit other enteric organisms.

2. Technical Formula*

Formula	grams per litre
Peptone	5.0
Bile salts	1.0
Calcium carbonate	10.0
Sodium thiosulphate (anhydrous)	30.0
pH approx. 8.2	

4. In Use

Suspend, by thorough mixing, approximately 2g of the material to be tested in 10ml of Tetrathionate Broth. Incubate for 12 to 24 hours then use to inoculate plates of differential culture media (Bismuth Sulphite Agar, DM103 and DM103s, Desoxycholate Citrate Agar DM130, XLD Agar DM230 etc).

3. Directions

1. Suspend by swirling 46g in 1 litre of distilled or deionised water.
2. Boil the suspension, cool to below 45°C and add 20ml of iodine solution.
3. Mix well and distribute 10ml amounts in test tubes.

N.B.

After the addition of iodine the medium should be used on the same day. The base only will keep for several weeks at 4°C.

Iodine solution

Iodine solution	
Iodine	6g
Potassium iodide	5g
Distilled water	20ml

5. References

1. Mueller 1923. Un Nouveau Milieu d'Enrichissement pour la Recherche du Bacille Typhique et des Paratyphiques. *C.R. Soc Biol (Paris)* **89**: 434.



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*Formulation may be modified to meet performance criteria

SJW|10/17|V.2