

TETRATHIONATE BROTH BASE

Enrichment medium for isolating *Salmonella typhi* and other salmonellae from feces, sewage, etc.

TYPICAL FORMULA (g/l)

Peptospecial	5.0
Calcium Carbonate	10.0
Bile Salts	1.0
Sodium Thiosulphate	30.0

Final pH = 8.4 ± 0.2 at 25°C.*

*Misured before iodine solution is added.

DIRECTIONS

Suspend 46.0 g of powder in 980 ml of distilled or deionized water.

Cool to below 45°C and add 20 ml of Iodine supplement (code 81009) immediately before use.

Mix continuously whilst dispensing 10 ml volumes into sterile tubes. Use the complete medium (with added iodine) on the day of preparation.

Iodine supplement

1 Vial contents (each vial is sufficient for 500 ml of medium):

Iodine	6.0 g
Potassium iodide	5.0 g
Distilled water	20.0 ml

DESCRIPTION

TETRATHIONATE BROTH BASE is an American formulation which complies with the description given in the US Pharmacopoeia for the enrichment of specimens undergoing examination for salmonellae.

The selectivity of the medium depends on the ability of thiosulphate and tetrathionate in combination to suppress commensal coliforms organisms.

Organisms which possess the enzyme tetrathionate reductase grow in the medium.

Salmonella and *Proteus* species possess the enzyme; *Escherichia coli* and shigellae do not.

Proteus can be inhibited by adding 40 µg/ml of novobiocin to the incomplete medium before the addition of iodine.

TECHNIQUE

Inoculate the broth with 1-2 g of the specimen and mix thoroughly to disperse the sample. Incubate at 36±1°C for 18-24 hours and then subculture on a selective medium for salmonella isolation.

QUALITY CONTROL

Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: white to off-white, may have a slight greenish tint.

Prepared medium

Appearance: supernatant over a heavy white precipitate.

Color: nearly colorless to yellow.

Incubation conditions: 36 ± 1 °C for 18-24 hours.

Microorganism	ATCC	Growth
<i>Escherichia coli</i>	25922	none
<i>Salmonella typhimurium</i>	14028	good

STORAGE

The powder is very hygroscopic: store the powder at 10-30 °C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared tubes, without iodide-iodide solution, at 2-8 °C. Iodide-iodide solution can then be added at the time of use to the quantity of medium needed.



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REFERENCES

1. The United States Pharmacopeia XXI (1985). Microbial Limit Tests. Rockville, Md.
2. American Public Health Association (1980). Standard methods for the examination of water and wastewater. 15th ed. APHA Inc. Washington DC.

PRESENTATION

Product	REF	Σ
TETRATHIONATE BROTH BASE (10.8 l)	610183	500 g
TETRATHIONATE BROTH BASE (2.1 l)	620183	100 g

TABLE OF SYMBOLS

LOT Batch code	 Caution, consult accompanying documents	 Manufacturer	 Contains sufficient for <n> tests	IVD <i>In Vitro</i> Diagnostic Medical Device
REF Catalogue number	 Fragile, handle with care	 Use by	 Temperature limitation	 Keep away from heat source



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