

Tetrathionate Broth



Medium used for the isolation and cultivation of *Salmonella* spp.

*Equally use with MFDS(MB-T1183K).

• CONTENTS (Liter)

| | |
|------------------------------|--------|
| Polypeptone | 5.0 g |
| Bile Salts | 1.0 g |
| Calcium Carbonate | 10.0 g |
| Sodium Thiosulfate | 30.0 g |
| Final pH = 8.0 ± 0.2 at 25°C | |

• PROCEDURE

Suspend 46.0 G of powder in 1 L of distilled or deionized water. If necessary, adjust the pH to 8.4 ± 0.2. Heat to boiling until completely dissolved. DO NOT AUTOCLAVE. Cool to 45 - 50°C in water bath. Aseptically add 2 vials of Tetrathionate Broth A supplement (MB-T0810) and add 2 vials of Tetrathionate Broth B supplement (MB-T0757). Mix well. Pour into tubes. This complete medium should be used on the day of preparation.

Tetrathionate Broth A supplement

1 vial contents (each vial is sufficient for 500 mL of medium)

| | |
|------------------|-------|
| Iodine | 3.0 g |
| Potassium Iodine | 2.5 g |

Tetrathionate Broth B supplement

1 vial contents (each vial is sufficient for 500 mL of medium)

| | |
|-----------------|---------|
| Brilliant Green | 0.005 g |
|-----------------|---------|

• INTERPRETATION

Tetrathionate Broth is a medium used for the isolation and cultivation of *Salmonella* spp. Polypeptone provides essential nutrients, growth factors and vitamins. Bile salts inhibits growth of Gram-positive bacteria. Calcium carbonate neutralizes the acidic tetrathionate decomposition products. The selectivity of the medium depends on the ability of thiosulfate and tetrathionate which suppress commensal coliforms. Organisms which possess tetrathionate reductase will grow in the medium.

• TECHNIC

Inoculate the specimen using a sterile needle to the medium. Incubate at 35 ± 2°C for 18 - 24 hours and then subculture onto MacConkey Agar and incubate plated media at 35 ± 2°C for 18 - 24 hours. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous

Color: light beige, may have a slight greenish tint

Prepared medium

Appearance: supernatant over a heavy white precipitate

Color: light green

Incubation conditions: 35 ± 2 °C / 18 - 24 hours

then subculture onto MacConkey Agar / 35 ± 2 °C / 18 - 24 hours

| Microorganism | ATCC | Inoculum CFU | Growth |
|-------------------------------|-------|------------------|---------------------|
| <i>Salmonella typhimurium</i> | 14028 | 50-100 | good |
| <i>Escherichia coli</i> | 25922 | ≥10 ³ | partially inhibited |

• STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label. Store prepared medium at 2 - 8°C.

• 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.
3. Refer to the MFDS.

• PACKAGE

| | |
|---|-------|
| Cat. No : MB-T1183 Tetrathionate Broth | 500 G |
|---|-------|