
TRYPTIC SOY BROTH

INTENDED USE

Remel Tryptic Soy Broth is a liquid medium recommended for use in qualitative procedures for isolation and cultivation of a wide variety of microorganisms. This medium is widely used for the isolation of bacteria from clinical specimens and will support the growth of the majority of pathogenic bacteria.

SUMMARY AND EXPLANATION

Tryptic Soy Broth (TSB) was originally developed for testing the susceptibility of pneumococci and other organisms to sulfonamides without adding serum or blood to the medium.¹ Spink and Hamilton used TSB to promote the growth of aerobic and facultative microorganisms such as *Brucella* species, while Garrison and Hedgecock used the medium to cultivate pathogenic fungi.²⁻⁵

PRINCIPLE

Casein and soy peptones provide nitrogen, amino acids, and peptides necessary to support the growth of bacteria. Sodium chloride is a source of essential electrolytes and maintains osmotic equilibrium. Dextrose is the energy source. Dipotassium phosphate is added as a buffer to maintain the pH.

REAGENTS (CLASSICAL FORMULA)*

Casein Peptone.....	17.0 g	Dextrose	2.5 g
Sodium Chloride.....	5.0 g	Dipotassium Phosphate	2.5 g
Soy Peptone.....	3.0 g	Deminerlized Water.....	1000.0 ml

pH 7.3 ± 0.2 @ 25°C

*Adjusted as required to meet performance standards.

PROCEDURE

1. Inoculate TSB as soon as possible after the specimen is received in the laboratory.
2. Incubate tubes with caps loosened in the appropriate atmospheric environment at 33-37°C for 18-48 hours or up to 7 days.

QUALITY CONTROL

All lot numbers of Tryptic Soy Broth have been tested using the following quality control organisms and have been found to be acceptable. This quality control testing meets or exceeds CLSI standards.⁶ Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, patient results should not be reported.

CONTROL

- Bacillus subtilis* ATCC® 6633
- Candida albicans* ATCC® 10231
- **Escherichia coli* ATCC® 25922
- Pseudomonas aeruginosa* ATCC® 27853
- **Staphylococcus aureus* ATCC® 25923

*CLSI recommended organism

INCUBATION

- Aerobic, 18-24 h @ 33-37°C
- Aerobic, 18-24 h @ 33-37°C
- Aerobic, 18-24 h @ 33-37°C
- Aerobic, 18-24 h @ 33-37°C
- Aerobic, 18-24 h @ 33-37°C

RESULTS

- Good growth
- Good growth
- Good growth
- Good growth
- Good growth

BIBLIOGRAPHY

1. McCullough, N.B. 1949. Am. J. Public Health. 39:866-869.
2. Spink, W.W. 1952. Am. J. Clin. Pathol. 22:201-210.
3. Hamilton, P.K. 1954. Am. J. Clin. Pathol. 24:580-587.
4. Garrison, L.G. 1961. J. Infect. Dis. 108:120-124.
5. Hedgecock, L.W. 1961. J. Bacteriol. 82:115-123.
6. Clinical and Laboratory Standards Institute (CLSI). 2004. Quality Control for Commercially Prepared Microbiological Culture Media; Approved Standard, 3rd ed. M22-A3. CLSI, Wayne, PA.

Refer to the front of Remel *Technical Manual of Microbiological Media* for **General Information** regarding precautions, product storage and deterioration, specimen collection, storage and transportation, materials required, quality control, and limitations.

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