

Todd Hewitt Broth

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NCM0061

Intended Use

Todd Hewitt Broth is used for the cultivation of streptococci and other fastidious microorganisms. Todd Hewitt Broth is not intended for use in the diagnosis of disease or other conditions in humans.

Description

Todd Hewitt Broth was originally developed for the production of antigenic streptococcal hemolysin. Todd Hewitt Broth is prepared according to the formula described by Updyke and Nickle, who compared media for type specific extract production of group A streptococci. This study was performed using Todd Hewitt Broth prepared with infusion of fresh beef heart as a control. Results showed Todd Hewitt Broth was particularly satisfactory for growth of group A streptococci for serological typing. Todd Hewitt Broth is recommended as an enrichment medium for growth of streptococcal cells in the identification of groups A and B by IF staining. Todd Hewitt Broth was used as an enrichment broth for group A streptococci in a comparison study of a rapid antigen test.

Typical Formulation

Heart Infusion (dehydrated)	3.1 g/L
Yeast Enriched Peptone	20.0 g/L
Dextrose	2.0 g/L
Sodium Chloride	2.0 g/L
Disodium Phosphate	0.4 g/L
Sodium Carbonate	2.5 g/L

pH: 7.8 ± 0.2 at 25°C

Formula is adjusted and/or supplemented as required to meet performance specifications.

Precaution

1. Refer to SDS

Preparation

1. Dissolve 30 g of the medium in one liter of purified water.
2. Mix thoroughly.
3. Autoclave at 121°C for 15 minutes.

Test Procedure

For a complete discussion on the isolation, identification, and serological procedures of streptococci and other fastidious microorganisms, refer to the procedures described in appropriate references.

Quality Control Specifications

Dehydrated Appearance: Powder is homogeneous, free flowing, and beige.

Prepared Appearance: Prepared medium is gold to amber, and clear to trace hazy, with none to light precipitate.

Expected Cultural Response: Cultural response in Todd Hewitt Broth incubated aerobically at 35 ± 2°C and examined for growth after 18 - 24 hours.

Technical Specification Sheet



Microorganism	Approx. Inoculum (CFU)	Expected Growth
<i>Enterococcus faecalis</i> ATCC® 29212	10-100	Good to excellent
<i>Staphylococcus aureus</i> ATCC® 25923	10-100	Good to excellent
<i>Streptococcus pneumoniae</i> ATCC® 6305	10-100	Good to excellent
<i>Streptococcus pyogenes</i> ATCC® 19615	10-100	Good to excellent
<i>Streptococcus agalactiae</i> ATCC® 13813	10-100	Good to excellent

The organisms listed are the minimum that should be used for quality control testing.

Results

Refer to appropriate references and procedures for results.

Expiration

Refer to the expiration date stamped on container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.
2. Todd Hewitt Broth cannot be used unbuffered for bile solubility testing.

Storage

Store dehydrated culture media at 2-30°C away from direct sunlight. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

References

1. **Todd, E. W., and L. F. Hewitt.** 1932. A new culture medium for the production of antigenic streptococcal haemolysin. J. Pathol. Bacteriol. **35**:973.
2. **Updyke, E. L., and M. I. Nickle.** 1954. A dehydrated medium for the preparation of type specific extracts of group A streptococci. Appl. Microbiol. **2**:117.
3. **Moody, M. D., A. C. Siegel, B. Pittman, and C. C. Winter.** 1963. Fluorescent-antibody identification of group A streptococci from throat swabs. Am. J. Public Health. **53**:1083.
4. **Facklam, R. R., and R. B. Carey.** 1985. *Streptococci and Aerococci*, p. 154-175. In E. H. Lennette, A. Balows, W. J. Hausler, Jr., and H. J. Shadomy (eds.). Manual of clinical microbiology, 4th ed. American Society for Microbiology, Washington, D.C.
5. **Bourbeau, P. P., B. J. Heiter, J. P. Anhalt, and D. W. Naumovitz.** 1993. Comparison of direct specimen testing utilizing testpack strep A with testing of specimens following a two-hour broth enrichment. Diagn. Microbiol. Infect. Dis. **17**:93-96.
6. **MacFaddin, J. F.** 1985. Media for isolation-cultivation-identification maintenance of medical bacteria, vol.1, p. 755-762. Williams & Wilkins, Baltimore, MD.
7. **Isenberg, H. D. (ed.).** 1992. Clinical microbiology procedures handbook, vol. 1, American Society for Microbiology, Washington, D.C.



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