

Todd Hewitt Broth

Cat. 1236

For the cultivation of β -hemolytic streptococci for serologic typing from clinical samples

Practical information

Applications	Categories
Enrichment	Streptococcus



Principles and uses

Todd Hewitt Broth is recommended for the cultivation of streptococci and other fastidious microorganisms. It was originally developed for the production of streptococcal hemolysin. The broth was modified by Updyke and Nickle and is used preferentially to cultivate beta-hemolytic strains, especially for serological typing, from clinical specimens and for epidemiological studies.

The medium is also recommended as an enrichment medium for the growth of streptococcal cells in the identification of Groups A and B. This medium was used as an enrichment broth for Group A streptococci in a comparison study of a rapid antigen test.

Bacteriological Peptone and Beef Heart infusion provide nitrogen, vitamins, minerals and amino acids essential for growth. Disodium phosphate and Sodium carbonate act as a buffer to prevent the destruction of the hemolysin by the acid produced through fermentation of the carbohydrate Dextrose, source of carbon and energy. Sodium chloride maintains the osmotic balance of medium.

Formula in g/L

Bacteriological peptone	20	Dextrose	2
Disodium phosphate	0,4	Sodium carbonate	2,5
Sodium chloride	2	Heart infusion	3,1

Preparation

Suspend 30 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into appropriate containers and sterilize in autoclave at 121°C for 15 minutes.

Instructions for use

Inoculate and incubate tubes at $35 \pm 2^\circ\text{C}$ for 18 - 48 hours.

To prepare Todd Hewitt Agar, add 13 - 15 g/l of Bacteriological Agar (Cat. 1800/1802) to the broth and sterilize as above.

Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
w/o rests	Fine powder	Clear beige	Amber	$7,8 \pm 0,2$

Microbiological test

Incubation conditions: ($35 \pm 2^\circ\text{C}$ / 18-48 h)

Microorganisms	Specification
Neisseria meningitidis ATCC 13090	Good growth

Streptococcus pyogenes ATCC 19615
Streptococcus pneumoniae ATCC 6305

Good growth
Good growth

Storage

Temp. Min.:2 °C
Temp. Max.:25 °C

Bibliography

Todd and Hewitt J. Path I Bact. 35:973. 1932 Updyke and Nickle. Applied. Microbiol 2: 117. 1954
Diagnostic Procedures and Reagents. 4th Ed. APHA Inc. New York 1963.
Isenberg H.D. (ed) 1992. Clinical Microbiology procedures handbook, American Society for Microbiology, Washington, D.C. Murray, P.R., E. J. Baron,
M.A. Pfaller, F.C, Tenover and R.H. Tenover (ed) 1995 Manual of clinical Microbiology, 6th ed. American Society for Microbiology, Washington, D.C