# Todd Hewitt Broth

## Intended Use
Todd Hewitt Broth is used for the cultivation of group A Haemolytic Streptococci used for serological studies.

## Summary
Todd Hewitt Broth, which was initially developed to produce streptococcal haemolysin was further modified by Updyke and Nickle for cultivation of beta-haemolytic streptococci for different serological tests. This medium is also recommended for selective isolation of group B streptococci with added gentamicin and nalidixic acid. This medium has been recommended as an alternative type in epidemiologic studies of group A streptococci as well as pathogenic microorganisms. With the addition of 15 g/L agar, the medium can be solidified and used as an excellent substrate for the production of capsules in streptococci.

## Principle
Todd Hewitt Broth medium is very nutritious due to the presence of peptic digest of animal tissue and beef heart infusion. Dextrose stimulates haemolysin production. The medium is well buffered by sodium phosphate and sodium carbonate to neutralize the acid produced during dextrose fermentation. This restricts destruction of antigenic streptococcal haemolysin. It is also found that sodium phosphate has a stimulating effect on the pneumococcal growth. Todd Hewitt Broth can be employed as an alternative to serum broth or horse flesh digest broth for the cultivation of streptococci prior to serological typing.

## Formula*

| **Ingredients** | **g/L** |
|---|---|
| Beef heart, infusion from | 10.0 |
| Peptic Digest of Animal Tissue | 20.0 |
| Dextrose | 2.0 |
| Sodium Chloride | 2.0 |
| Disodium Phosphate | 0.4 |
| Sodium Carbonate | 2.5 |
| Final pH (at 25°C) | 7.8 ± 0.2 |

*Adjusted to suit performance parameters.

## Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

## Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

## Directions
1. Suspend 37.00 g of the powder in 1000 mL purified / distilled water.
2. Mix well and dispense as desired.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

## Quality Control
**Dehydrated Appearance:** Cream to Yellow coloured, homogenous, free flowing powder.
**Prepared Appearance:** Medium amber coloured, clear solution without any precipitate.
**Cultural Response:** Cultural characteristics observed after an incubation of 18-48 hours at 30°C-35°C.

| Organism (ATCC) | Growth |
|---|---|
| *Streptococcus pneumoniae* (6305) | Good |
| *Streptococcus pyogenes* Strain Bruno (19615) | Good |
| *Neisseria gonorrhea* (49226) | Good |

## Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

## Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

## References


1. Todd E. W. and Hewitt L. F., 1932, J. Pathol. Bacteriol., 35:973.
2. Updyke E. L. and Nickle M. I., 1954, Appl. Microbiol., 2:117.
3. Forbes B. A., Sahm D. F. and Weissfeld A. S., 1998, Bailey & Scotts Diagnostic Microbiology, 10th Ed., Mosby, Inc., St. Louis,Mo.
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.


## Product Presentation:

| Cat No. | Product description | Pack Size |
|---|---|---|
| 201200150100 | Dehydrated Culture Media | 100 g |
| 201200150500 | Dehydrated Culture Media | 500 g |