

Tryptic soy Broth

REF.	Pack size
648 01 100	100 gm
648 01 500	500 gm

Intended Use

Tryptic Soy broth is used for the cultivation of a wide variety of microorganisms such as Salmonella Typhi isolated from faeces.

Background

Tryptic Soy Broth (TSB), commonly referred to as Soybean-Casein Digest Medium, is a nutritious medium that is used for the enrichment and cultivation of aerobic microorganisms that are not excessively fastidious. This medium was originally developed for use without blood in determining the effectiveness of sulfonamides against pneumococci and other organisms. TSB is recommended for testing bacterial contaminants in cosmetics and complies with established standards.

Principle

Enzymatic Digest of Casein and Enzymatic Digest of Soybean Meal are nitrogen sources in TSB. Dextrose is the carbon energy source that facilitates organism growth. Sodium Chloride maintains osmotic balance. Dipotassium Phosphate is a buffering agent.

Components	gm/Liter
Sodium chloride	5.0
Enzymatic digest of Casein	17.0
Enzymatic digest of Soybean	3.0
Dextrose	2.5
Dipotassium Phosphate	2.5

Final pH (at 25°C) 7.3 ± 0.2

Preparation, Storage and Stability

Store the dehydrated medium at 10-30°C and use before the expiry date on the label. Store the prepared medium at 2-8°C. After the desired amount has been taken out, replace the cap tightly to protect from hydration.

Procedure

1. Suspend 30 g of the powder in 1 L distilled water and mix well.
2. Heat with frequent agitation and boil for one minute to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C for 15 minutes.

Quality Control Appearance

- 1-Dehydrated Appearance : Beige coloured, homogeneous, free flowing powder.
- 2-Prepared Appearance : Brilliant to clear, yellow to amber with no to light precipitate.
- 3-Cultural Response : after 18-24 hours at 30-35°C or 35± 2°C for clinical specimens

Organisms (ATCC)	Growth
<i>Aspergillus niger</i>	Good
<i>Salmonella Typhi</i>	Good
<i>Candida albicans</i>	Good
<i>Pseudomonas aeruginosa</i>	Good
<i>Streptococcus pyogenes</i>	Good

Interpretation of the results

1-Growth in broth media is indicated by the presence of turbidity, specks, or flocculation in the medium while an uninoculated control remains clear and without turbidity after incubation.

Precautions

1-Tryptic Soy Broth is not the appropriate medium for the cultivation of fastidious microorganisms (e.g., Haemophilus or Neisseria spp.) and for the detection and recovery of strict anaerobes.

Bibliography

1. United States Pharmacopeial Convention. 2007. The United States pharmacopeia, 31st ed., Amended Chapters 61, 62, 111. The United States Pharmacopeial Convention, Rockville, MD.
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3. Japanese Pharmacopoeia. 2007. Society of Japanese Pharmacopoeia. Amended Chapters 35.1, 35.2, 7. The Minister of Health, Labor, and Welfare