Biomed Global

Rev: 0

Trypticase Soy Broth with 15% Glycerol | Ready-to-use Media

Effective Date: 22/12/2025

REF TB05T3011

a product by Biomed MDX

IVD

Intended Use:

Trypticase Soy Broth with 15% Glycerol (TSB 15% Glycerol) is for the long-term preservation and deep-freezing storage of bacterial cultures.

Principle of the Procedure:

The principle of using Trypticase Soy Broth (TSB) with 15% Glycerol for long-term preservation is to provide a nutrient-dense, stabilized environment that maintains the structural and metabolic integrity of bacterial cells during the transition to sub-zero temperatures. While TSB with 15% Glycerol provides the essential nitrogen, vitamins, and minerals via its dual-peptone system (casein and soy) to ensure cells are in a high-vitality state prior to freezing, the procedure relies on the medium's compatibility with cryoprotective agents (typically glycerol at 15-20%). These agents, when combined with TSB with 15% Glycerol, lower the freezing point and prevent the formation of lethal intracellular ice crystals that would otherwise rupture cell membranes. The dipotassium phosphate buffer in the TSB with 15% Glycerol formulation maintains a stable pH, preventing acidic or alkaline shifts during the cooling process, while sodium chloride ensures osmotic stability, preventing cell lysis during the critical thawing phase.

Product Summary:

Trypticase Soy Broth (TSB) with 15% Glycerol, when utilised for long-term preservation and deep-freezing, serves as a high-performance cryogenic base medium for the maintenance of bacterial cultures. Its formulation is rich in pancreatic digest of casein and papaic digest of soybean meal to ensure that fastidious and non-fastidious microorganisms alike have access to a complex array of amino acids and peptides required for recovery after long-term storage. Designed for storage at temperatures ranging from -20°C to -80°C (or in liquid nitrogen). By providing a chemically stable environment that resists degradation, TSB with 15% Glycerol ensures that preserved isolates retain their original phenotypic and genotypic characteristics over extended periods. This makes it an indispensable tool for clinical laboratories, research facilities, and industrial quality control departments that require reliable strain preservation and consistent post-thaw recovery.

Formulation* (PER LITER):

Pancreatic Digest of Casein	17.0g
Papaic Digest of Soybean	3.0g
Dextrose	2.5g
Sodium Chloride	5.0g
Dipotassium Phosphate	2.5g
Glycerol	150mL

pH 7.3 +/- 0.2

*Adjust and/or supplemental as required to meet performance criteria

Procedure

Materials Provided

5mL Trypticase Soy Broth with 15% Glycerol.

Materials Required But Not Provided

Ancillary culture media, reagents, and laboratory equipment as required.

Test Procedure

1. Inoculate and streak the specimen as soon as possible after it is received in the laboratory with an aseptic technique.
2. Incubate at 35 ± 2 °C for 18 - 48 hours (CO_2 for capnophilic organisms) and yeast 35 ± 2 °C for 5 days.
3. Observe the result according to user requirements.
4. Dispose of all used reagents and contaminated materials as infectious waste. Laboratories must handle and dispose of all waste safely according to regulations.

Results

Examine for colonies exhibiting typical microscopic and colonial morphology. Appropriate biochemical or immunological tests may be required for final identification

Quality Control

Inoculate representative samples with the following strains. Incubate the inoculated tubes at 35 ± 2 °C for 18 - 48 hours (CO_2 for capnophilic organisms) and yeast 35 ± 2 °C for 5 days.

Strains	ATCC®	Growth Results
Streptococcus pneumoniae	6305	Turbid growth
Staphylococcus aureus	25923	Turbid growth
Candida albicans	10231	Turbid growth
Negative Control	-	No growth

Transportation:

Temperature fluctuations may occur during transportation. However, these fluctuations do not affect the performance, quality, or safety of the media.

Storage and Shelf Life:

Upon receipt, store tubes at 2 to 8°C in their original sleeve wrapping until just before use. Avoid freezing and overheating.

The tubes may be inoculated up to the expiration date (see package label) and incubated for the recommended incubation times.

Warning and Precautions:

For in vitro diagnostic use. For Professional Use Only. Do Not Reuse.

Do not use tubes if they show evidence of microbial contamination, discoloration, drying, cracking, or other signs of deterioration.

Limitations of the Procedure

This medium is for laboratory use only and is not intended for the diagnosis of disease or other conditions. Identifications are presumptive and colonies should be identified using appropriate methods

Reference

1. Nursofiah, S., Hartoyo, Y., Amalia, N., Febrianti, T., Febriyana, D., Saraswati, R. D., ... & Multihartina, P. (2021, November). Long-term storage of bacterial isolates by using Trypticase Soy Broth with 15% glycerol in the deep freezer (-70 to-80 C). In *IOP Conference Series: Earth and Environmental Science* (Vol. 913, No. 1, p. 012070). IOP Publishing.

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Packaging Symbol

Symbol	Definition
	Catalogue number
	In Vitro Diagnostic Medical Device
	Batch code
	Date of manufacture
	Temperature limit
	Use-by date
	Keep away from sunlight
	Do not re-use
	Fragile, handle with care
	Consult instructions for use or consult electronic instructions for use
	Do not use if packaging damaged and consult instructions for use
	Manufacturer

Further Information:

For further information please contact your Biomed MDX representative.

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