

Tryptic Soy Broth (TSB)

Tryptic Soy Broth (TSB), commonly referred to as soybean casein digest, is a general purpose medium rather than a selective or differential/indicator medium. TSB is used in the cultivation of a wide variety of microorganisms. Blood and other special nutrients may be added to TSB to make an enriched medium (e.g., blood agar) that will encourage the growth of more fastidious microorganisms.

Mediatech offers several TSB powders, including non-animal TSB which is produced in an animal-free environment and contains no animal components. In addition, Mediatech offers gamma-irradiated TBS powders that provide additional sterility assurance levels.

TSB has applications in a variety of industries including clinical, food, and cosmetics. Clinically, TSB may be used to isolate bacterial growth in blood, cerebrospinal fluid, and wound/pus specimens. Another application is as a freeze medium for storage of nonfastidious bacteria, fungi, and yeast when supplemented with 10% glycerol.

TSB is formulated to contain tryptone (pancreatic digest of casein), peptone (soybean digest), glucose (dextrose), sodium chloride, and dibasic potassium phosphate. The casein and soybean digests serve as nitrogen sources, the glucose functions as the carbon energy source, the sodium chloride maintains osmotic balance and the phosphate acts as a buffering agent.

Mediatech TSB growth medium complies with current USP requirements.

Formulation:

- 17 g/L Tryptone (pancreatic digest of casein)
- 3 g/L Peptone (soybean digest)
- 2.5 g/L Glucose
- 5 g/L NaCl
- 2.5 g/L K₂HPO₄

Storage and Stability:

Liquid:
15-30°C, away from direct light, Shelf life of 12 months

Powder:
15-30°C, protected from moisture Shelf life of 3 years

Shipping:

Ambient (15-30°C)

Product Specifications: Powder

Dehydrated Appearance	Light beige, free-flowing, homogeneous
Solubility	Soluble in distilled, deionized water
Solution Appearance	Light amber, clear
pH (3% Solution)	7.1-7.5 @ 25°C
Loss on Drying	≤ 4%

Product Specifications: Liquid

pH	7.1-7.5 @25°C
Growth Promotion (USP)	Visual evidence of growth

Preparation of liquid from powder:

1. Suspend 30 g of dehydrated media in 1 L of deionized water.
2. Autoclave at 121°C for 15 minutes.
3. Allow liquid to cool to 45-50°C prior to use.

Tryptic Soy Broth	Category Number	Size
Liquid	46-060-CI	1 x 100 mL
Non-Animal, Powder	61-411-RR	1 x 1 kg
Non-Animal, Powder	61-411-RO	1 x 500g
Non-Animal, Gamma Irradiated, Powder	61-414-RT	1 x 5kg