AuSaMicS™ Life Science

Technical Data Sheet
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Tryptic Soy Broth (TSB)

Catalogue No. AS-1371 · Dehydrated Culture Medium · CASO Broth | Soybean Casein Digest Broth

Section 1 — Product Identification

Product Name	Tryptic Soy Broth (TSB)
Synonyms	CASO Broth; Casein Soya Broth; Soybean Casein Digest Broth; Tryptone Soya Broth; TSB
Catalogue Number	AS-1371
Product Format	Dehydrated powder
Intended Use	General-purpose non-selective enrichment broth for cultivation of fastidious and non-fastidious microorganisms. Sterility testing, pharmaceutical QC, food safety, and clinical microbiology.
Manufacturer	AuSaMicS Pty Ltd
Address	31 Longview CT, Thomastown, VIC 3074, Australia
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Section 2 — Mode of Action

TSB supports broad-spectrum microbial growth through a dual-peptone nutritional system. Pancreatic digest of casein (tryptone, 15 g/L) provides readily absorbable peptides, amino acids, and nitrogenous compounds. Papaic digest of soybean meal (5 g/L) supplies additional amino acids — particularly cystine and tryptophan — essential for fastidious organisms. Dextrose (2.5 g/L) provides a readily metabolisable carbon source. Dipotassium hydrogen phosphate (2.5 g/L) acts as a pH buffer maintaining the optimal growth range. Sodium chloride (5 g/L) maintains osmotic equilibrium compatible with clinically and industrially relevant microorganisms.

Section 3 — Composition

Ingredient	g / L
Pancreatic Digest of Casein (Tryptone)	15.0
Papaic Digest of Soybean Meal	5.0
Sodium Chloride (NaCl)	5.0
Dipotassium Hydrogen Phosphate (K_2HPO_4)	2.5
Dextrose (D-Glucose)	2.5
Total per litre	**30.0 g**

Final pH at 25°C: 7.3 ± 0.2

Section 4 — Preparation

1. Suspend 30.0 g of dehydrated powder in 1 litre of distilled or deionised water.
2. Mix thoroughly until completely dissolved. Prepared broth should appear light amber and clear.
3. Dispense into final containers (tubes, bottles, flasks) as required.
4. Autoclave at 121°C for 15 minutes.
5. Allow to cool before use or store at 2–8°C (prepared medium).

Section 5 — Quality Control

Organism (ATCC)	Inoculum (CFU)	Incubation	Recovery
Escherichia coli (8739)	*≤100*	*30–35°C / 18–72h*	*Good*
Bacillus subtilis (6633)	*≤100*	*30–35°C / 18–72h*	*Good*
Streptococcus pneumoniae (6305)	*≤100*	*35–37°C / 18–48h*	*Good*
Candida albicans (10231)	*≤100*	*20–25°C / 48–72h*	*Good*
Pseudomonas aeruginosa (9027)	*≤100*	*30–35°C / 18–72h*	*Good*
Staphylococcus aureus (6538)	*≤100*	*30–35°C / 18–72h*	*Good*

Dehydrated Appearance: Light beige, free-flowing, homogeneous powder.
Prepared Appearance: Light amber, clear. pH 7.3 ± 0.2 at 25°C (3.0% solution).

Section 6 — Storage

Dehydrated Powder	15–30°C in tightly sealed container, away from moisture and direct sunlight
Prepared Medium	2–8°C; use within 4 weeks of preparation
Shelf Life	Refer to expiry date on label

Section 7 — Applicable Standards

TSB is referenced in and validated for the following pharmacopoeial and international standard methods:
· European Pharmacopoeia (Ph. Eur.) — 2.6.1 Sterility testing; 2.6.12 Microbial examination of non-sterile products
· United States Pharmacopeia (USP) — <71> Sterility Tests; <61> Microbial Examination of Non-sterile Products
· British Pharmacopoeia (BP) — Sterility and microbial limits testing
· ISO 11133:2014 — Culture media performance testing
· ISO 7218:2007 — General requirements for microbiological examination of food

Section 8 — Literature / References

#	Reference	Relevance
1	Difco & BBL Manual of Microbiological Culture Media. 2nd ed. Becton Dickinson; 2009. Tryptic Soy Broth, Cat. 211820.	Reference standard and composition
2	European Pharmacopoeia 10th Edition. Section 2.6.1 Sterility. Council of Europe; 2019.	Primary pharmacopoeial standard — sterility testing
3	United States Pharmacopeia USP 45–NF 40. <71> Sterility Tests. USP; 2022.	US pharmacopoeial reference
4	ISO 11133:2014. Culture media performance testing. Geneva: ISO; 2014.	QC performance criteria

#	Reference	Relevance
5	Murray PR, et al. Manual of Clinical Microbiology. 9th ed. ASM Press; 2007.	Clinical reference — TSB in diagnostics

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