

**Tryptic Soy Broth**
**84675.0500**
**Also known as**

Soyabean Casein Digest Medium/ Tryptone Soya Broth

**Intended use**

A general purpose medium used for cultivation of a wide variety of microorganisms and sterility testing of moulds and lower bacteria as per various pharmacopoeia.

**Formula \*\* - Composition in g/L**

Ingredients	g/L
Pancreatic digest of casein	17.000
Papaic digest of soyabean meal	3.000
Sodium chloride	5.000
Dextrose	2.500
Dibasic potassium phosphate	2.500
Final pH ( at 25°C)	7.3±0.2

\*\*Formula adjusted, standardised to suit performance parameters

**Instructions for preparation**

Suspend 30 grams in 1000 ml purified/ distilled water. Heat if necessary to dissolve the medium completely. Sterilise by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and dispense as desired.

**Principle of the method and general information**

Tryptic Soy Broth is recommended by various pharmacopeias as a sterility testing and as a microbial limit testing medium (1, 2, 3). This medium is a highly nutritious medium used for cultivation of a wide variety of organisms(4).The combination of pancreatic digest of casein and papaic digest of soyabean meal makes the medium nutritious by providing amino acids and long chain peptides for the growth of microorganisms. Dextrose and dibasic potassium phosphate serve as the carbohydrate source and the buffer, respectively in the medium. Sodium chloride maintains the osmotic balance of the medium.

**Instruction for use**

1. Sterile prepared medium can be dispensed in tubes or bottles for use.
2. Dispense 15 ml of media in tubes of 20 x 150 mm size or as desired.
3. This medium is recommended for Sterility testing . Follow protocol for media inoculation as referenced in Pharmacopoeia; USP/EP/BP/JP.
4. Clinical specimens, as swab specimens or liquid specimens, Sampled swabs for environmental monitoring , Dilutions of food samples can be directly inoculated in tubes.
5. For cultivation of anaerobic organisms , medium should be inoculated with sample or its dilutions near to bottom of the tube and incubated under anaerobic conditions.

**Limitations**

Some strains may fail to grow or may show poor growth on this medium.

**Quality Control**
**Appearance**

Cream to yellow homogeneous free flowing powder

**Colour and Clarity of prepared medium**

Light yellow coloured clear solution without any precipitate.

**Reaction**

pH of 3.0% w/v aqueous solution at 25°C .

**pH**

7.10-7.50

**Cultural Response**

Cultural characteristics observed after an incubation at 30-35°C for 18-24 hours for growth promotion and at 20-25°C for ≤ 3days for Bacterial and ≤ 5days for Fungal.

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**Stability test**

Light yellow coloured clear solution without any precipitation or sedimentation at room temperature for 7 days

**Cultural Response**

Organism	Inoculum (CFU)	Growth	Incubation temperature	Incubation period
Growth promoting				
<i>Staphylococcus aureus</i> ATCC 6538	50 -100	good	30 -35 °C	18 -24 hrs
<i>Staphylococcus aureus</i> ATCC 25923	50 -100	good	30 -35 °C	18 -24 hrs
<i>Escherichia coli</i> ATCC 8739	50 -100	good	30 -35 °C	18 -24 hrs
<i>Escherichia coli</i> ATCC 25922	50 -100	good	30 -35 °C	18 -24 hrs
<i>Escherichia coli</i> NCTC 9002	50 -100	good	30 -35 °C	18 -24 hrs
<i>Pseudomonas aeruginosa</i> ATCC 9027	50 -100	good	30 -35 °C	18 -24 hrs
<i>Pseudomonas aeruginosa</i> ATCC 27853	50 -100	good	30 -35 °C	18 -24 hrs
<i>Bacillus subtilis</i> ATCC 6633	50 -100	good	30 -35 °C	18 -24 hrs
<i>Micrococcus luteus</i> ATCC 9341	50 -100	good	30 -35 °C	18 -24 hrs
<i>Salmonella</i> Typhimurium ATCC 14028	50 -100	good	30 -35 °C	18 -24 hrs
<i>Salmonella</i> Abony NCTC 6017	50 -100	good	30 -35 °C	18 -24 hrs
<i>Streptococcus pneumoniae</i> ATCC 6305	50 -100	good	30 -35 °C	18 -24 hrs
<b>Sterility Testing- Growth promotion+Validation</b>				
<i>Staphylococcus aureus</i> ATCC 6538	50 -100	good	20 -25 °C	<=3 d
<i>Staphylococcus aureus</i> ATCC 25923	50 -100	good	20 -25 °C	<=3 d
<i>Escherichia coli</i> ATCC 8739	50 -100	good	20 -25 °C	<=3 d
<i>Escherichia coli</i> ATCC 25922	50 -100	good	20 -25 °C	<=3 d
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<i>Salmonella</i> Typhimurium ATCC 14028	50 -100	good	20 -25 °C	<=3 d
<i>Salmonella</i> Abony NCTC 6017	50 -100	good	20 -25 °C	<=3 d
<i>Streptococcus pneumoniae</i> ATCC 6305	50 -100	good	20 -25 °C	<=3 d
<i>Candida albicans</i> ATCC 10231	50 -100	good	20 -25 °C	<=5 d
<i>Candida albicans</i> ATCC 2091	50 -100	good	20 -25 °C	<=5 d
<i>Aspergillus brasiliensis</i> ATCC 16404	50 -100	good	20 -25 °C	<=5 d

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### Reference

1. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams & Wilkins, Baltimore, M.d.
2. The United States Pharmacopeia, 2008, USP31/NF26, The United States Pharmacopeial Convention, Rockville, MD.
3. Indian Pharmacopeia, 2007, Govt. of India, Ministry of Health and Family Welfare, New Delhi, India.
4. Forbes B. A., Sahm D. F. and Weissfeld A. S., 1998, Bailey & Scotts Diagnostic Microbiology, 10th Ed., Mosby, Inc. St. Louis, Mo.

### Storage conditions

Store below 30°C in a tightly closed container and the prepared medium at 2 - 8°C. Use before expiry period on the label.

### Ordering information

84675.0500	Tryptic Soy Broth	Bottle of 500g
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