

Tryptic (Trypticase) Soy Agar (TSA)

Catalog : HB0177-3

Tryptic (Trypticase) Soy Agar (TSA) is also known as Soyabean Casein Digest Agar in USP. It's a general nutrient medium used for the cultivation of various microorganisms. It can be used for the isolation and cultivation of nonfastidious and fastidious microorganisms. It is not the medium of choice for anaerobes.

Approximate Formula:

Ingredients	gm/liter
Pancreatic Digest of Casein	15.0
Papaic Digest of Soybean Meal	5.0
Sodium Chloride	5.0
Agar	15.0
Final pH7.3±0.2 at 25°C	

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 40.0g of the medium in one liter of distilled water or deionized water. Mix well and heat with frequent agitation to completely dissolve the powder. Sterilize in an autoclave at 121°C (15 lbs) for 15 minutes.

Principle and Interpretation:

Tryptic (Trypticase) Soy Agar (TSA) is used for the isolation and cultivation of nonfastidious and fastidious microorganisms. The combination of pancreatic digest of casein and papaic digest of soybean Meal in TSA renders the medium highly nutritious by supplying organic nitrogen, particularly amino acids and longer-chained peptides. The sodium chloride maintains osmotic equilibrium. Agar is the solidifying agent.

Appearance:

Dehydrated medium is a free-flowing yellowish powder. The prepared medium is a kind of yellowish transparent gel.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

Tryptic (Trypticase) Soy Agar (TSA) must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 35±1°C for 24 hours.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Recovery	Remarks
<i>Escherichia coli</i>	ATCC 25922	20-200	Luxuriant	≥70%	Colorless large colonies
<i>Staphylococcus aureus</i>	ATCC 6538	20-200	Luxuriant	≥70%	Yellow colonies
<i>Enterococcus faecalis</i>	ATCC 29212	20-200	Luxuriant	≥70%	White small colonies
<i>Bacillus subtilis</i>	ATCC 6633	20-200	Luxuriant	≥70%	White irregular colonies
<i>Pseudomonas aeruginosa</i>	ATCC 9027	20-200	Luxuriant	≥70%	Green pigment
<i>Candida albicans</i>	ATCC 10231	20-200	Luxuriant	≥70%	White colonies (25°C, 48-72h)
<i>Aspergillus niger</i>	ATCC 16404	20-200	Luxuriant	≥70%	Black spore (25°C, 48-72h)

References:

1. United States Pharmacopeial Convention, Inc. 2008. The United States pharmacopeia 31/The nationalformulary 26, Supp. 1, 8-1-08, online. United States Pharmacopeial Convention, Inc., Rockville, Md.
2. European Directorate for the Quality of Medicines and Healthcare. 2008. The European pharmacopoeia, 6th ed., Supp. 1, 4-1-2008, online. European Directorate for the Quality of Medicines and Healthcare, Council of Europe, 226 Avenue de Colmar BP907-, F-67029 Strasbourg Cedex 1, France.