Tryptic soy agar

REF.	Pack size
645 01 100	100 gm
645 01 500	500 gm

Intended Use

Tryptic Soy Agar is used for the cultivation of a wide variety of microorganisms such as Salmonella Typhi isolated from faeces.

Background

TSA, a general purpose medium, is commonly referred to as Soybean- Casein Digest Agar USP 23. TSA is a nutritious base, and a variety of supplements can be added to enhance this medium. The addition of 5% sterile, defibrinated sheep, horse, or rabbit blood provides an excellent non-selective medium, used to determine hemolytic reactions of bacteria. TSA supplemented with lecithin and Tween 80 is widely used in environmental monitoring. TSA is used in the differentiation of Haemophilus species (the X and V factors are omitted from this medium), and widely used for blood cultures.
TSA is commonly used as a maintenance medium for culture collections, and testing bacterial contaminants in cosmetics.

Principle

Enzymatic Digest of Casein and Enzymatic Digest of Soybean Meal provide the nitrogen, vitamins and carbon in TSA. Sodium Chloride maintains osmotic balance in the medium. Agar is the solidifying agent.

Components	gm/Liter
Sodium chloride	5.0
Enzymatic digest of Casein	15.0
Enzymatic digest of Soybean	5.0
Agar	15.0

Final pH (at 25°C) 7.3 ± 0.2

Preparation, Storage and Stability

Store the dehydrated medium at 10-30°C and use before the expiry date on the label.Store the prepared medium at 2-8°C. After the desired amount has been taken out, replace the cap tightlyto protect from hydration.

Procedure

1.Suspend 40 g of the powder in 1 L distilled water and mix well.

2.Heat with frequent agitation and boil for one minute to dissolve the powder completely.

3.Sterilize by autoclaving at 121°C for 15 minutes.

Quality Control

Appearance

1-Dehydrated Appearance : Beige coloured, homogeneous, free flowing powder.

2- Prepared Appearance : slight hazy and yellow beige in color.

3- Cultural Response : after 18-24 hours at 30-35°C or 35± 2°C for clinical specimens

Organisms (ATCC)	Growth
Aspergillis niger	Good
Salmonella Typhi	Good
Candida albicans	Good
Pseudomonas aeruginosa	Good
Streptococcus pyogenes	Good

Interpretation of the results

1. Count the number of colonies on the dipstick. Multiply by dilution factor to convert the count to CFU per ml of the sample.
2. Contaminant bacteria usually appear in low numbers, which vary in colony morphology

Precautions

1-Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

Bibliography

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