

Tryptic Soy Agar (i23188)

Used for the isolation and cultivation of non-fastidious and fastidious microorganisms. It is not the medium of choice for anaerobes.

Industry: Final product Quality Control / Food / Water / Clinical / Cosmetics

Principles & Uses

Tryptone Soya Agar (TSA) -also known as Trypticase Soy agar, Soybean-Casein Digest Agar- serves as a versatile medium with rich nutrient content widely employed in sterility testing and the validation of sterility checking procedures, as per various pharmacopoeias. It's particularly relevant for microbial limit testing and antimicrobial preservative effectiveness evaluations. The blend of casein and soya peptone provides amino acids and peptides essential for microorganism growth. Sodium chloride regulates osmotic balance, and agar functions as the solidifying agent.

This medium not only facilitates total aerobic count determination but also accommodates fungal colony counting when required. It has multifaceted applications, including its role as a blood agar base, making it a valuable tool for studying hemolysis reactions. Additionally, TSA can be adapted for microbial content tests and tailored for specific microorganism isolation needs. It's a reference medium for assessing selective media inhibition and is instrumental in the cultivation and isolation of a wide range of microorganisms, including fastidious ones like *pneumococci*, *streptococci*, and *Neisseria*. Various pharmacopoeias and ISO norms recommend TSA for microbiological examinations, making it a cornerstone in laboratory settings.

Composition (gr/L)

Pancreatic digest of Casein 15, Papaic digest of Soybean Meal 5, Sodium Chloride 5, Agar 15.

Final pH at 25°C 7.3 ± 0.2

Preparation from dehydrated Powder

Suspend 40 g of the powder in one Liter of purified water. Autoclave at 121°C for 15 minutes. DO NOT OVERHEAT.

Quality Control

Dehydrated Appearance: Light beige, free-flowing, homogeneous.

Prepared Appearance: Light amber, slightly opalescent.

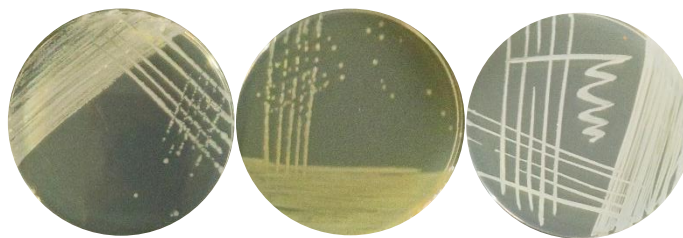
Reaction of 4.0% Solution at 25°C: pH 7.3 ± 0.2

Cultural Response

Cultural response was observed after 18-48 hours of incubation at 35 ± 2°C.

Organism (ATCC*)	Recovery
<i>Escherichia coli</i> (25922)	Good
<i>Candida albicans</i> (10231)	Growth
<i>Staphylococcus aureus</i> (25923)	Good
<i>Bacillus subtilis</i> (6633)	Growth
<i>Streptococcus pyogenes</i> (19615)	Good

*ATCC is a registered trade mark of the American Type Culture Collection.



B. subtilis (left). *E. coli* (middle). *S. aureus* (right). background has been darkened for better visibility of colonies.

Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.