# Soyabean Casein Digest Agar (Tryptone Soya Agar)

## Intended Use
Soyabean Casein Digest Agar is a general-purpose medium used for the isolation and cultivation of a wide variety of fastidious and non-fastidious microorganisms.

## Summary
Soyabean Casein Digest Agar is a widely used medium, which supports the growth of wide variety of organisms even that of fastidious ones such as *Neisseria*, *Listeria*, and *Brucella* etc. The medium with addition of blood provides perfectly defined haemolysis zones, while preventing the lysis of erythrocytes due to its sodium chloride content. It has been frequently used in the health industry to produce antigens, toxins etc. It's simple and inhibitor-free composition makes it suitable for the detection of antimicrobial agents in the food and other products. Tryptone Soya Agar is recommended by various pharmacopoeias as sterility testing medium.

## Principle
Gunn *et al.,* used this medium for the growth of fastidious organisms and study of haemolytic reaction after addition of 5% v/v blood. The combination of tryptone and soya peptone makes this media nutritious by providing amino acids and long chain peptides for the growth of microorganisms. Sodium chloride maintains the osmotic balance.

## Formula*

| **Ingredients** | **g/L** |
|---|---|
| Tryptone | 15.0 |
| Soya Peptone | 5.0 |
| Sodium Chloride | 5.0 |
| Agar | 15.0 |
| Final pH (at 25°C) | 7.3 ± 0.2 |

*Adjusted to suit performance parameters.

## Storage and Stability
Store dehydrated medium below 30ºC in tightly closed container and the prepared medium at 2ºC-8ºC. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

## Type of Specimen
Pharmaceutical samples

## Specimen Collection and Handling
Ensure that all samples are properly labelled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

## Directions
1. Suspend 40.00 g of the powder in 1000 mL purified / distilled water & mix thoroughly.
2. Boil with frequent agitation to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. To prepare Blood Agar Plates, add 5-10 % sterile, defibrinated blood to the sterile agar which has been cooled to 45°C-50°C.

## Quality Control

**Dehydrated Appearance:** Light yellow coloured, homogenous, free flowing powder.
**Prepared Appearance:** Light yellow coloured, very slightly opalescent gel forms in petridishes.
**Growth Promotion Test:** Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP/IP and growth is observed after an incubation at 30°C-35°C for ≤ 3 days for bacteria and at 30°C-35°C and 20°C-25°C for ≤ 5 days for fungi.
**Growth Promoting Properties:** The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating ≤ 100 cfu of appropriate microorganism.

| Organism (ATCC) | Growth | Incubation Temperature |
|---|---|---|
| *Escherichia coli* (8739) | Good | 30°C-35°C |
| *Staphylococcus aureus* subsp. *aureus* (6538) | Good | 30°C-35°C |
| *Pseudomonas aeruginosa* (9027) | Good | 30°C-35°C |
| *Bacillus spizizenii* (6633) | Good | 30°C-35°C |
| *Salmonella enterica* subsp. *enterica* serovar *Abony* (NCTC 6017) | Good | 30°C-35°C |
| *Salmonella enterica* subsp. *enterica* serovar *Typhimurium* (14028) | Good | 30°C-35°C |
| *Candida albicans* 3147 (10231) | Good | 30°C-35°C |
| *Candida albicans* 3147 (10231) | Good | 20°C-25°C |
| *Aspergillus brasiliensis* WLRI 034(120) (16404) | Good | 30°C-35°C |
| *Aspergillus brasiliensis* WLRI 034(120) (16404) | Good | 20°C-25°C |

**Note:** For good growth - Growth obtained on test media should not differ by a factor greater than 2 from calculated value for a standardized inoculum.

## Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:
1. Directions
2. Storage
3. Expiry

## Precautions / Limitations

This medium is general purpose medium and may not support the growth of fastidious organisms

## Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

## Reference


1. The United States Pharmacopoeia, 2018, The United States Pharmacopoeial Convention Inc., Rockville, MD.
2. Indian Pharmacopoeia, 2018, Govt. of India, Ministry of Health and Family Welfare, New Delhi, India.
3. Gunn B. A., Ohashi D K., Gaydos C. A., Holt E. S., 1977, J. Clin. Microbiol., 5(6): 650.
4. Forbes B.A., Weissfeld D.F.,1998, Bailey & Scotts Diagnostic Microbiology, 10th Ed., Mosby Inc. St. Louis, Mo.
5. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

## Product Presentation:

| Cat No. | Product description | Pack Size |
|---|---|---|
| 201190210100 | Dehydrated Culture Media | 100 g |
| 201190210500 | Dehydrated Culture Media | 500 g |
| 201190212500 | Dehydrated Culture Media | 2.5 k |
| 201190215000 | Dehydrated Culture Media | 5 k |
| 203190580100 | Bottle Media | 100 mL |
| 203190580250 | Bottle Media | 6 x 250 mL |
| 203190580500 | Bottle Media | 500 mL |
| 203190620012 | Ready Prepared Slant | 12 Slants |
| 205190900100 | Ready Prepared Plate (90 mm) | 100 Plates |
| 205190900400 | Ready Prepared Plate (90 mm) | 400 Plates |
| 205191040200 | Ready Prepared Plate (55 mm) | 200 Plates |
| 205191040800 | Ready Prepared Plate (55 mm) | 800 Plates |