# Soyabean Casein Digest Agar w/ Lecithin and Polysorbate 80 (Tryptone Soya Agar w/ Lecithin and Polysorbate 80/Tween 80)

**M449**

## Intended use

Tryptone Soya Agar with Lecithin and Polysorbate 80 is used for determining efficiency of sanitization of containers, equipment surfaces, water miscible cosmetics etc.

## Composition**

| Ingredients | Gms / Litre |
|---|---|
| Tryptone | 15.000 |
| Soya Peptone | 5.000 |
| Sodium chloride | 5.000 |
| Lecithin | 0.700 |
| Polysorbate 80 (Tween 80) | 5.000 |
| Agar | 15.000 |
| Final pH ( at 25°C) | 7.3±0.2 |

**Formula adjusted, standardized to suit performance parameters

## Directions

Suspend 45.7 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

## Principle And Interpretation

Tryptone Soya Agar with Lecithin and Polysorbate 80 is used in RODAC (Replicate Organism Detection and Counting) plates (1) for the detection and enumeration of microorganisms present on surfaces of sanitary importances (2, 3).

Tryptone and Soya peptone provide nitrogenous compounds and other nutrients essential for microbial replication. Lecithin and polysorbate 80 (Tween 80) are neutralizers reported to inactivate residual disinfectants from where the sample is collected (4). Lecithin neutralizes quaternary ammonium compounds and polysorbate 80 neutralizes phenolic disinfectants, hexachlorophene, formalin and with lecithin ethanol (5).

Collection of samples from areas before and after the treatment with disinfectant evaluates cleaning procedures in environmental sanitation. The presence and number of microorganisms is determined by the appearance of colonies on the agar surface (6). After counting the colonies, carry out biochemical testing for identification.

## Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

## Quality Control

**Appearance**
Cream to yellow homogeneous free flowing powder

**Gelling**
Firm, comparable with 1.5% Agar gel

**Colour and Clarity of prepared medium**
Light yellow to medium amber coloured clear to slightly opalescent gel forms in Petri plates

**Reaction**
Reaction of 4.57% w/v aqueous solution at 25°C. pH : 7.3±0.2

**pH**
7.10-7.50

**Cultural Response**
Growth Promotion was observed after an incubation at 30-35°C for 18-24 hours for bacteria and for fungus <=5 days.

**Recovery rate**
Recovery rate is considered 100% for bacterial growth on Blood Agar and fungal growth on Sabouraud Dextrose Agar.

**Growth promoting properties**
Growth of microorganism comparable to that previously obtained with previously tested and approved lot of medium occurs at the specified temperature for not more than the shortest period of time specified inoculating <=100 cfu (at 30-35°C for 18 hours).

**Sterility Test**

**Cultural Response**

| Organism | Inoculum (CFU) | Growth | Observed Lot value (CFU) | Recovery | Incubation temperature | Incubation period |
|---|---|---|---|---|---|---|
| **Growth promoting** | | | | | | |
| *Bacillus subtilis ATCC 6633* | 50 -100 | luxuriant | 35 -100 | >=70 % | 30 -35 °C | 18 -24 hrs |
| *Staphylococcus aureus ATCC 25923* | 50 -100 | luxuriant | 35 -100 | >=70 % | 30 -35 °C | 18 -24 hrs |
| *Staphylococcus aureus ATCC 6538* | 50 -100 | luxuriant | 35 -100 | >=70 % | 30 -35 °C | 18 -24 hrs |
| *Escherichia coli ATCC 25922* | 50 -100 | luxuriant | 35 -100 | >=70 % | 30 -35 °C | 18 -24 hrs |
| *Escherichia coli ATCC 8739* | 50 -100 | luxuriant | 35 -100 | >=70 % | 30 -35 °C | 18 -24 hrs |
| *Escherichia coli NCTC 9002* | 50 -100 | luxuriant | 35 -100 | >=70 % | 30 -35 °C | 18 -24 hrs |
| *Pseudomonas aeruginosa ATCC 27853* | 50 -100 | luxuriant | 35 -100 | >=70 % | 30 -35 °C | 18 -24 hrs |
| *Pseudomonas aeruginosa ATCC 9027* | 50 -100 | luxuriant | 35 -100 | >=70 % | 30 -35 °C | 18 -24 hrs |
| *Salmonella Abony NCTC 6017* | 50 -100 | luxuriant | 35 -100 | >=70 % | 30 -35 °C | 18 -24 hrs |
| *Micrococcus luteus ATCC 9341* | 50 -100 | luxuriant | 35 -100 | >=70 % | 30 -35 °C | 18 -24 hrs |
| *Streptococcus pneumoniae ATCC 6305* | 50 -100 | luxuriant | 35 -100 | >=70 % | 30 -35 °C | 18 -24 hrs |
| *Salmonella Typhimurium ATCC 14028* | 50 -100 | luxuriant | 35 -100 | >=70 % | 30 -35 °C | 18 -24 hrs |
| *Clostridium sporogenes ATCC 19404* | 50 -100 | luxuriant | 35 -100 | >=70 % | 30 -35 °C | 18 -24 hrs |
| *Candida albicans ATCC 10231* | 50 -100 | luxuriant | 35 -100 | >=70 % | 20 -25 °C | <=5 d |
| *Candida albicans ATCC 2091* | 50 -100 | luxuriant | 35 -100 | >=70 % | 20 -25 °C | <=5 d |
| *Aspergillus brasiliensis ATCC 16404* | 50 -100 | Good-luxuriant | 25 -70 | 50 -70 % | 30 -35 °C | <=5 d |
| *Aspergillus brasiliensis ATCC 16404* | 50 -100 | Luxuriant | 35 -100 | >=70 % | 20 -25 °C | <=5 d |
| *Candida albicans ATCC 10231* | 50 -100 | Good-luxuriant | 25 -70 | 50 -70 % | 30 -35 °C | <=5 d |
| *Candida albicans ATCC 2091* | 50 -100 | Good-luxuriant | 25 -70 | 50 -70 % | 30 -35 °C | <=5 d |

## Storage and Shelf Life
Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Use before expiry date on the label.
Product performance is best if used within stated expiry period.

## Disposal
User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (7,8).

## Reference

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Revision : 03 / 2017