

Technical Information

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

Product Code: DM 1449

Application: - Tryptone Soya Agar with Lecithin and Polysorbate 80 is recommended 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

Principle & Interpretation

Tryptone Soya Agar with Lecithin and Polysorbate 80 is recommended 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.

Methodology

Suspend 45.7 grams of dehydrated powder media in 1000 ml distilled water. Mix thoroughly & 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. Shake well before pour into sterile Petri plates.

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 Range

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
<i>Bacillus subtilis</i> ATCC 6633	50 -100	luxuriant	35 -100	≥70 %	30 -35 °C	18 -24 hrs
<i>Staphylococcus aureus</i> ATCC 25923	50 -100	luxuriant	35 -100	≥70 %	30 -35 °C	18 -24 hrs
<i>Staphylococcus aureus</i> ATCC 6538	50 -100	luxuriant	35 -100	≥70 %	30 -35 °C	18 -24 hrs
<i>Escherichia coli</i> ATCC 25922	50 -100	luxuriant	35 -100	≥70 %	30 -35 °C	18 -24 hrs
<i>Escherichia coli</i> ATCC 8739	50 -100	luxuriant	35 -100	≥70 %	30 -35 °C	18 -24 hrs
<i>Escherichia coli</i> NCTC 9002	50 -100	luxuriant	35 -100	≥70 %	30 -35 °C	18 -24 hrs
<i>Pseudomonas aeruginosa</i> ATCC 27853	50 -100	luxuriant	35 -100	≥70 %	30 -35 °C	18 -24 hrs
<i>Pseudomonas aeruginosa</i> ATCC 9027	50 -100	luxuriant	35 -100	≥70 %	30 -35 °C	18 -24 hrs
<i>Salmonella</i> Abony NCTC 6017	50 -100	luxuriant	35 -100	≥70 %	30 -35 °C	18 -24 hrs
<i>Micrococcus luteus</i> ATCC 9341	50 -100	luxuriant	35 -100	≥70 %	30 -35 °C	18 -24 hrs
<i>Streptococcus pneumoniae</i> ATCC 6305	50 -100	luxuriant	35 -100	≥70 %	30 -35 °C	18 -24 hrs
<i>Salmonella</i> Typhimurium ATCC 14028	50 -100	luxuriant	35 -100	≥70 %	30 -35 °C	18 -24 hrs
<i>Clostridium sporogenes</i> ATCC 19404	50 -100	luxuriant	35 -100	≥70 %	30 -35 °C	18 -24 hrs
<i>Candida albicans</i> ATCC 10231	50 -100	luxuriant	35 -100	≥70 %	20 -25 °C	≤5 d
<i>Candida albicans</i> ATCC 2091	50 -100	luxuriant	35 -100	≥70 %	20 -25 °C	≤5 d
<i>Aspergillus brasiliensis</i> ATCC 16404	50 -100	Good-luxuriant	25 -70	50 -70 %	30 -35 °C	≤5 d
<i>Aspergillus brasiliensis</i> ATCC 16404	50 -100	Luxuriant	35 -100	≥70 %	20 -25 °C	≤5 d



Dehydrated Culture Media
Bases / Media Supplements

<i>Candida albicans</i> ATCC 10231	50 -100	Good-luxuriant	25 -70	50 -70 %	30 -35 °C	<=5 d
<i>Candida albicans</i> ATCC 2091	50 -100	Good-luxuriant	25 -70	50 -70 %	30 -35 °C	<=5 d

Storage and Shelf Life

Dried Media: 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 in order 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).

Further Reading

1. Hall and Hartnett, 1964, Public Hlth. Rep., 79:1021.
2. Richardson (Ed)., 1985, Standard Methods for the Examination of Dairy Products, 15th ed., APHA, Washington, D.C.
3. MacFaddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
4. Brummer, 1976, Appl. Environ. Microbiol., 32:80.
5. Favero (Chairman), 1967, Biological Contamination Control Committee, a state of the art report., Am. Assoc. for contamination control.
6. Murray PR, Baron, Pfaller, and Tenover (Eds.), 2003, In Manual of Clinical Microbiology, 8th ed., ASM, Washington, D.C.
7. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
8. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S. and Tenover, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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