Technical Data

Soyabean Casein Digest Medium w/ yeast extract and LTHTh M1983

Intended Use:

Recommended in disinfectant testing where neutralization of the chemical is important for determining its bactericidal activity.

Composition**

Ingredients	Gms / Litre
Casitose ▲	15.000
Soya peptone	5.000
Yeast extract	6.000
Sodium chloride	5.000
Sodium pyruvate	2.000
Soya lecithin	0.700
Polysorbate 80 (Tween 80)	5.000
Sodium thiosulphate, 5H2O	0.050
L-Histidine	1.000
Agar	20.500
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

▲ - Equivalent to Casein peptone

Directions

Suspend 60.23 grams (the equivalent weight of dehydrated medium per litre) in 1000 ml purified / 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

Soyabean Casein Digest Agar w/ yeast extract and LTHTh is used for the detection and enumeration of microorganisms for products of sanitary importance, water miscible cosmetics, products containing antimicrobials or preservatives (1)

Casitose, soya peptone and yeast extract provides nitrogenous compounds and other essential growth factors. Sodium pyruvate protects injured cells and helps recovery. It also stimulates the growth of *Staphylococcus species.* Lecithin, polysorbate 80 (Tween 80) and thiosulphate act as neutralizing agents that neutralizes the activity of antimicrobial agents. Lecithin and polysorbate 80 neutralizes quaternary ammonium compounds and parahydroxy benzoates. Sodium thiosulphate neutralizes mercurial, halogens, aldehydes etc. Histidine acts as a reducing agent.

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 (4).

Type of specimen

Environmental samples

Specimen Collection and Handling

For Environmental samples follow appropriate techniques for handling specimens as per established guidelines (1).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

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

2. Further biochemical and serological tests must be carried out for further identification.

3. Some organism may show poor growth due to nutritional variation.

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

Colour and Clarity of Prepared Medium

Light to medium amber coloured, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 6.02% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH

7.10-7.50

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Growth	Growth w/ disinfectant
Escherichia coli ATCC 25922 (00013*)	luxuriant	fair-good, (depends on concentration of quarternary ammonium compounds)
Pseudomonas aeruginosa ATCC 27853 (00025*)	luxuriant	fair-good, (depends on concentration of quarternary ammonium compounds)
Staphylococcus aureus subsp. *aureus ATCC 25923* (00034*)	luxuriant	fair-good, (depends on concentration of quarternary ammonium compounds)

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°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. 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 (2,3).

Reference

1. Hall and Hartnett, 1964, Public Hlth. Rep., 79:1021.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
4. Murray PR, Baron, Pfaller, and Yolken (Eds.), 2003, In Manual of Clinical Microbiology, 8th ed., ASM, Washington, D.C.

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Disclaimer :

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