Thiol Medium

M852

Intended Use:

Used for cultivation of organisms from body fluids and other materials containing Penicillin, Streptomycin and Sulphonamides.

Composition**

Ingredients	g / L
Proteose peptone	10.000
Yeast extract	5.000
Dextrose (Glucose)	1.000
Sodium chloride	5.000
Thiol compound	8.000
p-Amino benzoic acid (PABA)	0.050
Agar	1.000
Final pH (at 25°C)	7.1±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 30.05 grams in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Dispense in tubes or flasks to a depth of 6 cm for neutralization of Penicillin or in shallow layers for neutralization of Streptomycin. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Use within 4 days of preparation.

Principle And Interpretation

Thiol Medium is used for culturing microorganisms from body fluids and also other materials containing antibiotics like penicillin, streptomycin or sulphonamides. The efficacy of Thiol Medium to retain viability of *Vibrio* was initially described by Huddleson (1). The ability of Thiol Medium to neutralize antibacterials was demonstrated by Christensen (2). This media can also be used for the cultivation and maintenance of *Haemophilus*,*Vibrio* and Meningococci (1).

Proteose peptone and yeast extract provide nitrogenous compounds, vitamin B complex and other essential growth nutrients. Dextrose is the energy source. The small quantity of agar keeps the oxido-reductive potential quite congenial for the growth of aerobic, microaerophilic and anaerobic microorganisms. p-Amino benzoic acid serves as a preservative.

Type of specimen

Clinical samples - Body Fluids

Specimen Collection and Handling:

10 ml of Thiol Medium has capacity to nullify 100 units of penicillin and 1000 units of streptomycin supporting good growth of Staphylococci and other test organisms. Even dilute inocula of the test organisms can initiate and result in good growth within 24 hours. For testing, medium is prepared and tested with and without concentrations of 5, 100 and 1000 units of penicillin and 100, 1000 and 10,000 micrograms of streptomycin per 10 ml of tube. It is further inoculated with test organisms and incubated at 18 - 48 hours at 35-37°C After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic use. For professional use only. 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 clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Use the medium within 4 days of preparation.

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**

Viscous, comparable with 0.1% Agar gel.

Colour and Clarity of prepared medium

Light yellow coloured clear to slightly opalescent solution.

Reaction

Reaction of 3.0% w/v aqueous solution at 25°C. pH : 7.1±0.2

pH

6.90-7.30

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours. Growth observed after addition of antibiotic concentrations upto 100 units of Penicillin or 1,000 micrograms of Streptomycin.

Organism	Inoculum (CFU)	Growth
Neisseria meningitidis ATCC 13090	50-100	poor-fair
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	50-100	good-luxuriant
Streptococcus pneumoniae ATCC 6303	50-100	good-luxuriant
Streptococcus pyogenes ATCC 19615	50-100	good-luxuriant

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°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 (3,4).

Reference

1. Huddleson I. F., 1948, J. Bacteriol., 56:508.

2. Christensen D. H., 1947, Presented at the Michigan Branch, Society of American Bacteriologists, Detroit, Mich, December 12, 1947.

3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

4. 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.

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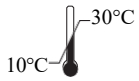
IVD ***In vitro*** **diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
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CE Marking

Do not use if package is damaged

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