Stuart Transport Medium w/o Methylene Blue with Charcoal M1735

Intended Use

For the preservation and transportation of *Neisseria* species and other fastidious organisms from the clinic to laboratory.

Composition**

Ingredients	g / L
Sodium thioglycollate	0.900
Sodium glycerophosphate	10.000
Calcium chloride	0.100
Charcoal	10.000
Agar	3.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 24 grams in 1000 ml double purified/distilled water. Heat to boiling to dissolve the medium completely. Dispense into tubes with screw caps to give a depth of approximately 7 cm. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes and after sterilization, tighten the caps. Cool in an upright position. Turn the tubes several times while agar is solidifying, to maintain uniform suspension of charcoal particles. Care should be taken that the water is free from chlorine.

Principle And Interpretation

Stuart Transport media were originally designed by Stuart while studying *Gonococci* (1). Stuart et al (2) later on modified the Stuart Medium for the transportation of gonococcal specimens for culturing. Ringertz included thioglycollate in the Stuart Medium and omitted charcoal (3). This medium may be used for the transportation of many fastidious organisms including the anaerobes by maintaining organism's viability without significant multiplication (4). Crooks and Stuart (5) suggested the addition of Polymyxin B sulphate which facilitates the recovery of *Neisseria gonorrhoeae.*

The medium is chemically defined, semisolid, non-nutrient. It prevents microbial proliferation. Composition of the medium ensures that microorganisms present are able to survive for a sufficiently long period of time. The medium provides adequate degree of anaerobiosis. Prepared sterile medium undergoes a slight degree of oxidation at the upper periphery of the medium. Calcium chloride alongwith sodium glycerophosphate act as good buffering agent and also maintains osmotic equilibrium in the medium. Charcoal helps to neutralize materials, which are toxic to sensitive pathogens like *Neisseria gonorrhoeae*. Calcium and magnesium, potassium, sodium salts help the survival of gonococcal cells and also control permeability of bacterial cells.

Type of specimen

Clinical samples - Isolated Microorganisms

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (6,7).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic Use only. 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. All specimens should be transported to the laboratory without delay and at maintained temperature until processed.

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

Black coloured homogeneous free flowing powder

Gelling

Semisolid, comparable with 0.3% Agar gel.

Colour and Clarity of prepared medium

Black coloured slightly opalescent butt with upper 10% or less portion blue on standing.

Reaction

Reaction of 2.4% w/v aqueous solutions at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

Cultural characteristics observed after an incubation at 35 - 37°C for 72 hours when subcultured from Stuart Transport Medium.

Organism	Growth	Subculture Medium
Haemophilus influenzae ATCC 49247	good	Chocolate Agar (incubated in CO_2 atmosphere)
Neisseria gonorrhoeae ATCC 19424	good	Chocolate Agar (incubated in CO_2 atmosphere)
Streptococcus pneumoniae ATCC 6303	good	Tryptone Soya Agar with 5% sheep blood

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 5-30°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 (6,7).

Reference

1. Stuart, 1946, Glasgow Med. J. 27:131.
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3. Ringertz, 1960, Acta Pathol. Microbiol. Scand., 48:105.
4. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
5. Crookes E.M.L. and Stuart R.D., 1959, J. Path. Bact., 78:283.
6. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
7. 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**

10°C 30°C **Storage temperature**

EC REP

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CE Marking

Do not use if package is damaged

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