Stuart Transport Medium (Transport Medium, Stuart) M306

Intended use

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

Composition**

Ingredients	Gms / Litre
Sodium glycerophosphate	10.000
Sodium thioglycollate	1.000
Calcium chloride	0.100
Methylene blue	0.002
Agar	3.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 14.1 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 the tubes immediately in an upright position. 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 (6). Stuart et al (7) later on modified the Stuart Medium for the transportation of gonococcal specimens for culturing. Ringertz included thioglycollate in the Stuart Medium and omitted charcoal (5). The medium may be used for the transportation of many fastidious organisms including anaerobes by maintaining the organism's viability without significant multiplication (4). Crooks and Stuart (1) suggested the addition of Polymyxin B sulphate which facilitates the recovery of *Neisseria gonorrhoeae.*

This medium is a chemically defined, semisolid, non-nutrient medium which prevent microbial proliferation. Because off this composition the medium ensures that microorganisms present are able to survive for a sufficiently long period of time. The medium provides an adequate degree off anaerobiosis which can be monitored by means off the redox indicator methylene blue. Prepared sterile medium will undergo a slight degree off oxidation at the upper periphery of the medium, however, in the tube or vial exhibits a distinct blue colour throughout the medium, it should be discarded. Calcium chloride along with sodium glycerophosphate act as good buffering agent and also maintains osmotic equilibrium in the medium.

Type of specimen

Clinical samples - Gonococcal specimens.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (2,3).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic 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. Due to nutritional variations, some strains may show poor growth.

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
White to light blue coloured homogeneous free flowing powder

Gelling
Semisolid, comparable with 0.3% Agar gel.

Colour and Clarity of prepared medium
Colourless to whitish coloured slightly opalescent butt with upper 10% or less portion blue on standing.

Reaction
Reaction of 1.41% 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 5-25°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 (2,3).

Reference

1. Crookes E.M.L. and Stuart R.D., 1959, J. Path. Bact., 78:283.
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. Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
5. Ringertz, 1960, Acta Pathol. Microbiol. Scand., 48:105.
6. Stuart, 1946, Glasgow Med. J. 27:131.
7. Stuart, Toshach and Patsula, 1954, Can. J. Public Health, 45:73.

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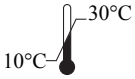
IVD — In vitro diagnostic medical device

CE Marking



Storage temperature

Do not use if package is damaged

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