

## TECHNICAL DATA SHEET

### Stuart Transport Medium (Transport Medium, Stuart)

#### Principle

Stuart Transport media is formulated by Stuart while studying Gonococci (1946). Stuart et al (1954) later on modified the Stuart Medium for the transportation of gonococcal specimens for culturing. Ringertz fortified with thioglycollate in the Stuart Medium instead of charcoal (1960). The medium may be used for the transportation of many fastidious organisms including anaerobes by maintaining the organism's viability without significant multiplication. Crooks and Stuart (1959) 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. The composition of the medium ensures that microorganisms present are able to survive for a sufficiently long period of time. The medium is composed of sodium glycerophosphate, sodium thioglycollate, calcium chloride, methylene blue and agar. Sodium glycerophosphate along with calcium chloride acts as good buffering agent and also maintains osmotic equilibrium in the medium. Sodium thioglycollate provide anaerobic conditions. 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 color throughout the medium, it should be discarded.

**Use:** For preservation & transport of *Neisseria* species & other fastidious organisms.

#### Contents\*

Ingredients	Gram/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 for optimum performance and parameters

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**Directions:** Dissolve 14.1 grams in 1000 ml distilled water (chloride free). Boil to dissolve the medium completely. Distribute into tubes with screw caps. Sterilize by autoclaving at 15 lbs pressure at 121°C for 15 minutes and tighten the caps after sterilization. Cool the tubes and in and upright position.

**Specimens' types analyzed**  
Pathological and clinical samples etc.

## Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

## Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

## Quality Control

Appearance	white colored homogeneous powder with blue tinge
Reaction of 1.41 %	7.4 ±0.2 at 25 °C
pH	7.20 - 7.60
Color and clarity of ready medium	Colorless to whitish colored slightly opalescent butt with upper portion blue on standing.
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

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**Different Microbial Response: Cultural characteristics observed after an incubation at 35±2°C for 72 hours when sub cultured from Stuart Transport Medium. Inoculum 50-100 CFU.**

Organism	ATCC	Growth	Sub culturing medium
<i>Neisseria gonorrhoeae</i>	49247	Good	Chocolate agar in anaerobic condition
<i>Haemophilus influenza</i>	16424	Good	Chocolate agar in anaerobic condition
<i>Streptococcus pneumoniae</i>	6303	Good	Tryptone soya agar with 5% blood

**Storage and Shelf Life:** The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.

**Note:** Sterilize media immediately after reconstitution.

**Disposal:** To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

## Reference

1. Atlas, R. M. (2005). Handbook of media for environmental microbiology. CRC press.
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3. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2<sup>nd</sup> 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, 11<sup>th</sup> Edition. Vol. 1
5. Ringertz, (1960), Acta Pathol. Microbiol. Scand., 48:105.
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