

Technical Information

Transport Charcoal Medium

Product Code: DM 1315

Application: Transport Charcoal Medium is recommended for transportation of clinical specimens.

Composition**

Ingredients	Gms / Litre
Sodium thioglycollate	0.900
Sodium glycerophosphate	10.000
Charcoal	10.000
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

Principle & Interpretation

Muffett, Young and Stuart ⁽¹⁾ described a medium and method for transporting gonococcal specimens from the time of collection of specimen till it reaches the laboratory. Stuart, Toshach and Potsula ⁽²⁾ explained the rationale of their transport method and presented the formulation in which they observed that coliform organisms were occasionally presented in gonococcal specimens and that they were able to propagate in the transport medium and overgrow the gonococci.

Transport Medium with Charcoal is a modified medium based on the transport medium originally developed by Moffett et al ⁽¹⁾ and Stuart et al ⁽²⁾. The medium is devised for the transportation of clinical specimens containing moulds, yeasts and bacteria especially gonococci. Transport media is generally formulated to provide enrichment to maintain viability of the organisms.

As compared to the fresh specimen or direct inoculation, transport medium will not show optimal growth. The specimen will be undoubtedly preserved during transportation and also the viability of the organisms will be maintained but it will diminish over time. Some growth of contaminants also may occur during longer period of transport. After transportation, the specimen should be inoculated in proper medium as soon as possible.

Transport Charcoal Medium is devoid of inorganic phosphate buffer but contains glycerophosphate and methylene blue in addition to thioglycollate. Small amount of agar together with sodium thioglycollate creates a reduced atmosphere in the medium. Charcoal neutralizes the toxic metabolic products. Like the Amies Transport Medium ⁽³⁾, this medium is also semisolid and reductive thereby inhibiting the contaminants and avoiding the toxic oxidative effects.

Methodology

Suspend 24 grams of powder media in 1000 ml distilled water. Shake well & heat to dissolve the medium completely. Dispense in screw capped tubes with constant stirring to maintain charcoal particles in suspension. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Shake gently to distribute charcoal particles evenly, just before the medium gels. Cool the tubed medium in an upright position.

Quality Control

Physical Appearance

Grey to black homogeneous free flowing powder

Gelling

Semisolid, comparable with 0.3% Agar gel.

Colour and Clarity of prepared medium

Black coloured opaque gel forms in tubes as butts

Reaction

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

pH range 7.20-7.60

Cultural Response/Characteristics

DM 1315: Cultural characteristics observed after an incubation at 25- 30°C for 5 days upon subculturing on Tryptone Soya Agar (DM1290).

Organism	Inoculum (CFU)	Growth
<i>Klebsiella pneumoniae</i> ATCC 13883	50-100	luxuriant
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	luxuriant
<i>Salmonella Typhi</i> ATCC 6539	50-100	luxuriant
<i>Shigella flexneri</i> ATCC 12022	50-100	luxuriant
<i>Staphylococcus aureus</i> ATCC 25923	50-100	luxuriant
<i>Vibrio cholerae</i> ATCC 15748	50-100	luxuriant
<i>Neisseria gonorrhoea</i> ATCC 43069	50-100	good
<i>Neisseria meningitidis</i> ATCC 13090	50-100	good

Storage and Shelf Life

Dried media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8⁰ in sealable plastic bags for 2-5 days.

Further Reading

1. Moffett M., Young J. and Stuart R. D., 1948, Brit. Med. J., 2:241.
2. Stuart R. D., Toshach S. R. and Patsula T. M., 1954, Can. J. Public Health, 45:73.
3. Amies C. S., 1967, Can. J. Public Health, 58:296.

Disclaimer:

- User must ensure suitability of the product(s) in their application prior to use.
- The product conforms solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.
- Do not use the products if it fails to meet specifications for identity and performance parameters.