



Transport Medium, Amies without Charcoal

M684

Transport Medium, Amies without Charcoal is used for transport and preservation of microbiological specimen.

Composition**

Ingredients	Gms / Litre
Sodium chloride	3.000
Potassium chloride	0.200
Calcium chloride	0.100
Magnesium chloride	0.100
Monopotassium phosphate	0.200
Disodium phosphate	1.150
Sodium thioglycollate	1.000
Agar	4.000
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 9.75 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense in screw cap bottles or tubes in 6 ml or desired quantity. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool in an upright position.

Principle And Interpretation

Transport Medium is necessarily and should be a non-nutrient, semisolid, reductive medium which hampers the self destructive enzymatic reactions within the cells and also inhibits toxic oxidation effects. Transport Medium was primarily developed by Moffett et al (1) and Stuart et al (2) for carrying gonococcal specimens. However Cary and Blair (3) observed the problem of overgrowth of contaminating organisms while carrying faecal specimens containing Shigellae. It was seen that the contaminants derive their energy from the glycerophosphate and therefore a buffer having inorganic salts was a better replacement for glycerophosphate.

Amies (4) modified Stuart's Transport Medium (2,5,6) by replacing glycerophosphate with an inorganic phosphate buffer, provides a reduced environment due to the presence of sodium thioglycollate and small amount of agar. Amies Medium is devoid of methylene blue. Calcium, magnesium, potassium and sodium salts help the survival of gonococcal cells by restricting their permeability Phosphates buffer the medium.

For the collection of the specimen, use sterile cotton tipped swabs on wooden sticks. Push the swabs down to one third of the medium depth and cut the stick, so that when the cap is screwed down, the swab is forced to the bottom of the medium. Tighten the cap firmly on the bottle. The specimen will be preserved during transportation and also the viability of the organisms will be maintained but it will diminish over the time. Some growth of contaminants also may occur during longer period of transport. After the transportation, the specimen should be inoculated in proper medium as soon as possible.

The cultures on transport swabs must not be kept at room temperature for more than 24 hours.

Quality Control

Appearance

Off-white to yellow homogeneous free flowing powder

Gelling

Semisolid, comparable with 0.4% Agar gel.

Colour and Clarity of prepared medium

Colourless clear to slightly opalescent gel forms in tubes as butts.

Reaction

Reaction of 1.0% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH

7.10-7.50

Cultural Response

M684: Cultural characteristics observed when subcultured on Tryptone Soya Agar (M290), after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Recovery on Tryptone Soya Agar (M290)
<i>Neisseria meningitidis</i> ATCC 50-100 13090		luxuriant
<i>Staphylococcus aureus</i> ATCC 25923	50-100	luxuriant
<i>Staphylococcus epidermidis</i> ATCC 12228	50-100	luxuriant
<i>Streptococcus pyogenes</i> ATCC 19615	50-100	luxuriant

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Moffett, Young and Stuart, 1948, Brit. Med. J., 2:241.
2. Stuart R. D., Toshach S. R. and Patsula T. M., 1954, Can. J. Pub. Hlth., 45:75.
3. Cary and Blair, 1964, J. Bacteriol., 88:96.
4. Amies C. R., 1967, Can. J. Public Health, 58:296
5. Stuart R. D., 1946, J. Path. Bact., 58:343.
6. Stuart R. D., 1959, Pub. Hlth. Rep., 74: 431.

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