Amies Transport Medium w/ Charcoal

M651

Intended use

Recommended for transportation and preservation of microbiological specimen.

Composition**

Ingredients	g / L
Sodium chloride	3.000
Potassium chloride	0.200
Calcium chloride	0.100
Magnesium chloride	0.100
Potassium dihydrogen phosphate	0.200
Disodium hydrogen phosphate	1.150
Sodium thioglycollate	1.000
Charcoal	10.000
Agar	4.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 19.75 grams in 1000 ml purified/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. Turn the tubes several times while agar is solidifying, to maintain uniform suspension of charcoal particles.

Principle And Interpretation

The pre requisite of a transport medium is that it should be non-nutritive, semi-solid, and reductive and should be able to hamper self-destructive enzymatic reactions within the cells and in addition, must inhibit toxic oxidation reactions. Amies (1) modified Stuart's Transport Medium (2,3,4) by replacing glycerophosphate with an inorganic phosphate buffer and adding charcoal to the medium. This modified medium gave a higher percentage of positive results than the transport medium of Stuart. Amies Transport Medium provides a reduced environment due to the presence of sodium thioglycollate and small amount of agar. Charcoal helps to neutralize materials that are toxic to sensitive pathogens like *Neisseria gonorrhoeae*. Calcium magnesium, potassium and sodium salts help the survival of gonococcal cells and also control permeability of bacterial cells. Phosphates buffer the medium.

For the collection of the specimens, use sterile cotton-tipped swabs or wooden sticks. Push the swab down one third of the medium depth. When the cap is screwed down, the swab is forced to the bottom of the medium. The cap should be firmly screwed. Keep the medium cool during transportation but do not freeze. The specimen will be preserved during transportation and also the viability of the organisms will be maintained. But the viability will diminish over the time. Some growth of contaminants may also occur during longer period of transport. After transportation, the specimen should be inoculated in proper medium as soon as possible. For optimum results, the time lapse between sample collection and inoculum onto culture medium should be reduced to the minimum.

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

Type of specimen

Clinical samples - pathological samples

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6).

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. Charcoal should be properly suspended in the medium by proper mixing.
2. During media preparation, avoid overheating of the medium in open flasks or bottles as thioglycollate present in the medium is volatile.
3. Charcoal may tend to settle in old prepared medium, hence it should be steamed and mixed well to resuspend the charcoal particles.
4. The medium should be kept cool but do not freeze.
5. It may not be suitable for the transport of fastidious organisms.

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

Grey to black homogeneous free flowing powder

Gelling

Semisolid, comparable with 0.4% Agar gel.

Colour and Clarity of prepared medium

Black coloured opaque gel forms in tubes as butts

Reaction

Reaction of 2% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

Cultural characteristics observed when subcultured on Soyabean Casein Digest Agar (M290) after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Recovery
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant
Klebsiella pneumoniae ATCC 13883 (00097*)	50-100	luxuriant
Neisseria meningitidis ATCC 13090	50-100	luxuriant
Pseudomonas aeruginosa ATCC 27853 (00025*)	50-100	luxuriant
Salmonella Typhi ATCC 6539	50-100	luxuriant
Shigella flexneri ATCC 12022 (00126*)	50-100	luxuriant
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	50-100	luxuriant
Vibrio cholerae ATCC 15748	50-100	luxuriant

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°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 (5,6).

Reference

1.Amies C.R., 1967, Can. J. Public Health, 58:296

2.Stuart R.D., 1946, J. Path. Bact., 58:343.

3.Stuart R.D., 1959, Pub. Hlth. Rep., 74:431.

4.Stuart R.D., Toshach S.R. and Patsula T.M., 1954, Can. J. Pub. Hlth., 45:75.

5.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

6.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.

Revision : 06/2024

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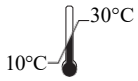
IVD ***In vitro* diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE **CE Marking**

Do not use if package is damaged

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