Cary - Blair Medium Base (Transport Medium w/o Charcoal) M202

Intended Use:

Recommended for collection and shipment of clinical specimens.

Composition**

Ingredients	g / L
Disodium hydrogen phosphate	1.100
Sodium thioglycollate	1.500
Sodium chloride	5.000
Agar	5.000
Final pH (at 25°C)	8.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 12.6 grams in 991 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Cool to 45-50°C and aseptically add 9 ml of 1% aqueous calcium chloride solution. Adjust pH to 8.4, if necessary. Distribute in 7 ml amounts in screw capped tubes. Steam for 15 minutes. Cool and tighten the caps.

Principle And Interpretation

Transport Medium is a non-nutritive, chemically defined, semisolid, buffered medium. The sole purpose of this medium is to maintain the viability of organisms during the time from collection to examination of the specimen. Transport Medium should be essentially non-nutritive so that the test organisms do not increase in numbers during transport. Transport media were originally formulated by Stuart et al (1) for carrying gonococcal specimens to the laboratory. Cary and Blair devised a new medium containing fewer nutrients, low oxidation-reduction potential and a high pH (2). Cary-Blair Medium w/o Charcoal is used for collection and transport of clinical specimens. It is also recommended by APHA (3) and various authors for transport of specimens (4,5,6). Since this transport media has a high pH, viability of *Vibrio* cultures can be maintained for a longer duration (7). This medium also facilitates the recovery of *Salmonella* and *Shigella* species (4). Cary-Blair Medium Base is prepared with minimal nutrients to facilitate survival of organisms without multiplication. Sodium thioglycollate provides a low oxidation-reduction potential. Alkaline pH of the medium minimizes bacterial destruction due to the formation of acid. Disodium hydrogen phosphate buffers the medium whereas sodium chloride maintains the osmotic equilibrium.

For 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 and the viability of the organisms will be also maintained during transport, but over the time it will diminish. Therefore direct inoculation of the specimen is advised. Some growth of accompanying contaminants may also occur during longer period of transit. The specimen should be inoculated into a proper medium as soon as possible.

Type of specimen

Clinical samples : faeces, urine, Nasopharyngeal swabs etc

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (8,9).
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. The specimen will be preserved and the viability of the organisms will be also maintained during transport, but over the time it will diminish. Therefore direct inoculation of the specimen is advised.
2. Some growth of accompanying contaminants may also occur during longer period of transit.

3.The specimen should be inoculated into a proper medium as soon as possible.
4.Biochemical characterization is required on colonies of pure culture for complete identification.

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
Cream to yellow homogeneous free flowing powder
Gelling
Semisolid, comparable with 0.5% Agar gel.
Colour and Clarity of prepared medium
Light amber coloured, slightly opalescent solution in tubes
Reaction
Reaction of 1.26% w/v aqueous solution at 25°C. pH : 8.4±0.2
pH
8.20-8.60
Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours, when subcultured on Tryptone Soya Agar (M290).

Organism	Inoculum (CFU)	Recovery
# *Klebsiella aerogenes* ATCC 13048 (00175*)	50-100	good-luxuriant
Escherichia coli ATCC 25922 (00013*)	50-100	good-luxuriant
Klebsiella pneumoniae ATCC 13883 (00097*)	50-100	good-luxuriant
Neisseria meningitidis ATCC 13090	50-100	good-luxuriant
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	good-luxuriant
Shigella flexneri ATCC 12022 (00126*)	50-100	good-luxuriant
Vibrio cholerae ATCC 15748	50-100	good-luxuriant
Vibrio parahaemolyticus ATCC 17802 (00037*)	50-100	good-luxuriant

Key : (*) Corresponding WDCM numbers. (#) Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°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 (8,9).

Reference

1. Stuart, Toshach and Pastula, 1954, Can. J. Public Health, 45:73.
2. Cary and Blair, 1964, J. Bacteriol., 88:96.
3. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

4.Cary, Mathew, Fusillo and Harkins, 1965, Am. J. Clin. Pathol., 43:294
5.Gaines et al, 1965, Am. J. Trop. Med. Hyg., 14:136.
6.Morris and Heck, 1978, J. Clin. Microbiol., 8:616.
7.Murray P. R., Baron E. J., Tenover F. C., Pfaller M. A., Yolken R.H., (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C.
8.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
9.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.

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

10°C–30°C **Storage temperature**

CE Marking

Do not use if package is damaged