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

Intended Use
Cary-Blair Medium Base (Transport Medium w/o Charcoal) is a transport medium without charcoal used for collection, shipment and preservation of clinical specimens.

Summary
A transport medium is a non-nutritive, chemically defined, semi-solid, buffered medium. The sole purpose of this medium is to provide a controlled environment and to maintain the viability of organisms during the time from collection until the examination of the specimen. Transport medium should essentially be non-nutritive so that the test organisms do not rise in numbers during transport. Transport media were originally formulated by Stuart et al., 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. Cary-Blair Medium without charcoal is used for collection and transport of clinical specimens. It is also recommended by APHA for transport of specimens. Since this transport media has a high pH, viability of *Vibrio* cultures particularly can be maintained for a longer duration. This medium is recommended for good recovery of *Salmonella* and *Shigella* species. This medium is currently recommended for transport of throat, vaginal and wound samples.

Principle
Cary-Blair Medium Base is formulated with minimal nutrients to facilitate survival of organisms without proliferation. Sodium thioglycollate serves to maintain a low oxidation-reduction potential. Alkaline pH of the medium lessens the bacterial disruption due to the formation of acid. Disodium phosphate salt maintains the buffering of the medium whereas sodium chloride retains the osmotic equilibrium.

Formula*

Ingredients	**g/L**
Disodium phosphate	1.1
Sodium thioglycollate	1.5
Sodium chloride	5.0
Agar	5.0
Final pH (at 25°C)	8.4 ± 0.2

*Adjusted to suit performance parameters

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2ºC-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of specimen
Clinical samples: pathological samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 12.60 g of powder in 991 mL purified / distilled water.
2. Heat to boiling to dissolve the powder completely.
3. Cool to 50°C and aseptically add 9 mL of 1% aqueous calcium chloride solution.
4. Adjust pH to 8.4 if necessary.
5. Distribute in 7 mL amounts in screw-capped tubes. Steam for 15 minutes.

6. Cool and tighten the caps.

Quality Control

Dehydrated Appearance: Yellowish white coloured, homogenous, free flowing powder.
Prepared Appearance: Milky white to off white coloured, clear to very slightly opalescent gel forms in butt.
Cultural Response: Cultural characteristics observed after incubation at 35°C-37°C for 18-24 hours, when subcultured on Soyabean Casein Digest Agar.

Organism (ATCC)	**Growth**
Klebsiella aerogenes (13048)	Good
Escherichia coli (25922)	Good
Klebsiella pneumoniae subsp. *pneumoniae* (10031)	Good
Vibrio cholerae. (14748)	Good
Vibrio parahaemolyticus (MTCC 451)	Good
Salmonella enterica subsp. *enterica* serovar *Typhimurium* (14028)	Good
Shigella flexineri serotype 2b (12022)	Good

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Precautions/Limitations

1. The medium should not be incubated to check sterility, prior to use. This should be carried out on separate quality control samples.
2. The medium can maintain the viability of fastidious organisms for transport purposes but it should not be used as a storage or enrichment medium.
3. The results obtained from the medium are dependent on the quality of the specimen material. Commensal anaerobic organisms may overgrow in the medium and cause misleading results.
4. The specimen will be preserved and the viability of the organisms will be also maintained during transport, but over the time it will diminish.
5. Therefore, direct inoculation of the specimen is advised.
6. Some growth of accompanying contaminants may also occur during longer period of transit.
7. The specimen should be inoculated into a proper medium as soon as possible.

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. APHA (American Public Health Association)
2. Cary and Blair, 1964, J. Bacteriol., 88:96.
3. Cary, Mathew, Fusillo and Harkins, 1965, Am. J. Clin. Pathol., 43:294.
4. Gaines et al, 1965, Am. J. Trop. Med. Hyg., 14:136.
5. Morris and Heck, 1978, J. Clin. Microbiol., 8:616.
6. Murray P. R., et al., (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C.
7. Stuart, Toshach and Pastula, 1954, Can. J. Public Health, 45:73.
8. Vanderzant C. and Splittstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd Ed., APHA, Washington, D.C.
9. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201030030100	Dehydrated Culture Media	100 g