PRODUCT SPECIFICATION SHEET

Transport Swabs with Cary - Blair Medium (Pack of 50) (TM003)

Intended Use
Transport swab with Cary - Blair Medium is recommended for recovery of aerobic, anaerobic and fastidious bacteria from faecal specimens.

Product Summary and Explanation
Transport Medium is a non-nutritive, chemically defined, semisolid, phosphate buffered medium that provides a reduced environment. The sole purpose of this medium is to maintain the viability of organisms during the time from collection to examination of the specimen without significant increase in growth. 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. In 1964, Cary and Blair modified a Stuart's transport medium, by substituting inorganic phosphates for glycerophosphate, containing fewer nutrients, low oxidation-reduction potential and raising the pH to 8.4.[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 in fecal samples.[4]

Principles of the Procedure
Cary-Blair Medium is prepared with minimal nutrients to facilitate survival of organisms without multiplication. It contains sodium thioglycollate which provides a low oxidation-reduction potential. Disodium phosphate buffers the medium whereas sodium chloride maintains the osmotic equilibrium. Alkaline pH of the medium minimizes bacterial destruction due to the formation of acid.

Formula / Liter

Ingredients	Gms / Liter
Disodium phosphate	1.10
Sodium thioglycollate	1.50
Sodium chloride	5.00
Agar	5.00
Calcium chloride	0.10
Final pH: 8.4 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions
For In-Vitro Diagnostic Use Only.

Quality Control Specifications

Prepared Medium	Whitish coloured slightly opalescent gel forms in tubes as butts
Reaction of 1.67% Solution	pH : 8.4 ± 0.2 at 25°C
Media Per tube	3ml

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Sterility test
Passes release criteria

Expected Cultural Response: Cultural characteristics observed when subcultured on Soyabean Casein Digest Agar (DM247) after an incubation at 35-37°C for 18-24 hours.

Sr. No.	Organisms	Results to be achieved	
		Inoculum (CFU)	Growth
1.	*Enterobacter aerogenes ATCC 13048*	50-100	good- luxuriant
2.	*Escherichia coli ATCC 25922*	50-100	good- luxuriant
3.	*Klebsiella pneumonia ATCC 13883*	50-100	good- luxuriant
4.	*Neisseria meningitidis ATCC 13090*	50-100	good- luxuriant
5.	*Salmonella Typhimurium ATCC 14028*	50-100	good- luxuriant
6.	*Shigella flexneri ATCC 12022*	50-100	good- luxuriant
7.	*Vibrio cholerae ATCC 15748*	50-100	good- luxuriant
8.	*Vibrio parahaemolyticus ATCC 17802*	50-100	good- luxuriant

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure
1. Refer to appropriate references for specific procedures.
2. Obtain specimen with sterile swab sterile cotton-tipped swabs or wooden sticks. Insert specimen swab(s) into the upper third of the medium in the transport container. Cut with sterile scissors or break-off the protruding portion of the swab stick.
3. Tightly screw the lid on the bottle or vial or plug the tube with cotton, due to which the swab is forced to the bottom of the medium.
4. Label the bottle or vial and send to the laboratory with minimum delay. Specimens may be refrigerated until ready for shipment. DO NOT FREEZE.
5. Submit to laboratory within 24 hours for culture and analysis.

Results
1. Refer to appropriate references and standard procedures for interpretation of results.
2. Survival of bacteria in a transport medium depends on many factors including the type and concentration of bacteria in the specimen, the formulation of the transport medium, the temperature and duration of transport and inoculation to appropriate culture media within 24 hours.
3. Optimal growth and typical morphology can only be expected following direct inoculation and appropriate cultivation.

Storage
Store at 2-8°C. The product retains potency until the expiration date shown on the label when stored properly under ideal storage conditions.

Expiration
Refer to the expiration date stamped on the label.

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Limitations of the Procedure

1. Specimens taken from transport media will not exhibit the optimal or comparative growth as expected from direct inoculation and cultivation. These media do, however, provide an adequate degree of preservation for those specimens which cannot be forwarded immediately to the laboratory for prompt evaluation.
2. Viability of cells will diminish over time and some degree of multiplication or growth of contaminants can occur during prolonged periods of transit. This is particularly true of fecal specimens that contain substantial numbers of coliform organisms.
3. The condition of the specimen received by the laboratory for culture is a significant variable in recovery and final identification of the suspect pathogen. An unsatisfactory specimen (overgrown by contaminants, containing nonviable organisms, or having the number of pathogens greatly diminished) can lead to erroneous or inconclusive results.

Packaging

Product Name: Transport swab with Cary - Blair Medium
Product Code: TM003
Available Pack sizes: 50 TB

References

1. Stuart, Toshach and Pastula, 1954, Can. J. Public Health, 45:73.
2. Cary and Blair, 1964, J. Bacteriol., 88:96.
3. Vanderzant C. and Splittstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd Ed., APHA,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.

Further Information

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TM003PSS,QAD/FR/024,Rev.00/01.01.2018

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