
CARY BLAIR TRANSPORT MEDIUM

INTENDED USE

Remel Cary Blair Transport Medium is a semisolid medium recommended for use in the transportation and preservation of clinical specimens, primarily stool and rectal swabs.

SUMMARY AND EXPLANATION

Many pathogenic enteric gram-negative bacilli rapidly lose viability in patient stool specimens unless they are cultured promptly after collection or transported in an appropriate medium.¹ In 1954, Stuart et al. devised the first widely used transport medium.² In 1964, Cary and Blair developed a new formulation for the transport of fecal specimens.³ This medium possessed a low nutrient content, a low oxidation-reduction potential, and a high pH. Cary et al. found this medium to be successful in recovering *Salmonella* and *Shigella*.⁴ Additional studies have demonstrated the effectiveness of this formulation in maintaining the viability of *Vibrio parahaemolyticus* and *Yersinia* species.^{5,6}

PRINCIPLE

This medium has a low nutrient content to prevent replication of organisms while maintaining viability. Sodium thioglycollate is added to impede oxidation. Disodium phosphate is incorporated in the medium as a buffering agent to prevent overgrowth of enteric pathogens with *Escherichia coli* and *Enterobacter*. The alkaline pH minimizes the destruction of bacteria due to acid formation.

REAGENTS (CLASSICAL FORMULA)*

Sodium Chloride.....	5.0 g	Calcium Chloride	0.1 g
Sodium Thioglycollate	1.5 g	Agar	5.0 g
Disodium Phosphate	1.1 g	Demineralized Water.....	1000.0 ml

pH 8.4 ± 0.2 @ 25°C

*Adjusted as required to meet performance standards.

PROCEDURE

1. If a stool specimen is received, place approximately one gram of fecal material into Cary Blair Transport Medium. If specimen is received on a swab, place the swab in Cary Blair Transport Medium and cut off the protruding portion of the swab.
2. Secure the cap tightly and label the specimen.
3. Transport the specimen to the laboratory with minimal delay at room temperature unless recovery of *Shigella* is required, in which case the specimen should be maintained at 2-8°C during shipment.
4. Mix the specimen thoroughly prior to inoculation of appropriate media.

QUALITY CONTROL

All lot numbers of Cary Blair Transport Medium have been tested using the following quality control organisms and have been found to be acceptable. Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, patient results should not be reported.

CONTROL

Salmonella enterica serovar Typhimurium ATCC® 14028
Shigella flexneri ATCC® 12022

INCUBATION

Aerobic, 48 h @ 20-25°C
Aerobic, 48 h @ 20-25°C

RESULTS

Growth recovered on subculture
Growth recovered on subculture

LIMITATIONS

1. Studies have shown a higher recovery rate for *Shigella* when specimens are maintained at 2-8°C or frozen during storage, especially when held longer than 3 days.⁷
2. Specimens collected after initiation of antibiotic therapy may be contraindicated for successful recovery of enteric pathogens.¹

BIBLIOGRAPHY

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Refer to the front of Remel *Technical Manual of Microbiological Media* for **General Information** regarding precautions, product storage and deterioration, specimen collection, storage and transportation, materials required, quality control, and limitations.

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12076 Santa Fe Drive, Lenexa, KS 66215, USA

General Information: (800) 255-6730 Technical Service: (800) 447-3641 Order Entry: (800) 447-3635

Local/International Phone: (913) 888-0939 International Fax: (913) 895-4128

Website: www.remel.com Email: remel@remel.com