



# CARY BLAIR ENTERIC TRANSPORT MEDIUM

- For in vitro use only -

Catalogue No. F01

Our Cary-Blair Enteric Transport Medium is a non-nutritive medium for the collection and preservation of microbiological specimens.

Cary-Blair Transport Medium is a modification of Stuart's Medium, where the main difference is the improved buffering system due to the replacement of sodium glycerophosphate by inorganic phosphates. This improved formulation prevents overgrowth of *Enterobacteriaceae*, and proved effective in the preservation of *Salmonella* and *Shigella* for long periods. Additionally, the relatively high pH favors the maintenance and recovery of *Vibrio* cultures. Cary and Blair reported the recovery of cholera vibrios for up to 22 days, salmonellae and shigellae after 49 days, and *Yersinia pestis* for up to 75 days.

Our Cary-Blair Enteric Transport Medium is a simple, semi-solid, non-nutritive transport medium. The non-nutritive nature of the medium means negligible growth of the microorganisms present in the sample and an extended shelf life. The sodium chloride and calcium chloride levels help control cell permeability and provide an osmotically balanced environment for the preservation of viable bacterial cells. Sodium phosphate and potassium phosphate are buffering agents which help to maintain a stable pH and prevent pH fluxes that may be detrimental to the organisms present. Phenol red is the pH indicator in the medium that will detect any changes in pH during sample collection and transportation.

## Formula per Litre of Medium

Sodium Thioglycollate .....	1.5 g
Sodium Phosphate .....	1.1 g
Potassium Phosphate .....	0.2 g
Sodium Chloride .....	5.0 g

Calcium Chloride .....	0.09 g
Agar .....	1.6 g
Phenol Red .....	0.003 g

pH 8.4 ± 0.2

## Recommended Procedure

1. Pass the stool into a clean, dry, plastic disposable container or place a large plastic bag or kitchen wrap over the toilet seat to catch the specimen. So not mix urine or water with specimen.
2. Unscrew the lid on the transport vial and use the scoop attached to the lid to transfer a portion of the stool sample into the bottle.
3. For formed or semi-formed specimens, use the scoop to transfer the stool sample into the enteric transport medium until the level of liquid reaches the fill line. Use the scoop to mix the specimen into the medium.
4. Bloody, slimy, or watery stool if present should be selected for sampling. For watery stools add 1 teaspoon of specimen to the medium or up to the fill line.
5. Once the specimen is in the vial tighten cap thoroughly to prevent leakage. Shake vial briefly to ensure that the specimen is completely emulsified.
6. For patients unable to produce a stool specimen, rectal swabs will also be accepted. Two swabs must be inserted into the transport media. Rectal swabs may produce less accurate results.
7. Wash hands after sample collection.
8. Record patient information and transport the specimen vial to the laboratory as soon as possible for processing.

- Once in the laboratory, the specimen should be sub-cultured onto an appropriate medium for recovery of the organism of interest.

**Precautions**

Cary-Blair Enteric Transport Medium is only intended for transport purposes therefore lengthy delays in transport or processing of specimens may result in diminished viability of bacterial cells and allow, to some degree, contaminating flora to replicate in the medium. Therefore quick transport of the specimen is essential for accurate and conclusive laboratory results.

**Quality Control**

After checking for correct pH, colour, depth, and sterility, the following organisms are used to determine the growth performance of the completed medium. A swab containing the organism is inoculated into the medium that is held at room temperature for a 24-hour period before being sub-cultured onto a nutrient medium to determine organism viability.

Organism	Expected Result
<i>Escherichia coli</i> ATCC 25922	Growth, good recovery
<i>Salmonella typhimurium</i> ATCC 14028	Growth, good recovery
<i>Shigella flexneri</i> ATCC 12022	Growth, good recovery

**Storage and Shelf Life**

Our Cary-Blair Enteric Transport Medium should be stored at room temperature in an upright position and protected from light. Under these conditions this medium has a shelf life of 52 weeks from the date of manufacture.

**References**

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- Cary SG, Matthew MS, Fusillo MH, Harkins C. Survival of *Shigella* and *Salmonella* in a new transport medium. *Am J Clin Pathol* 1965; 43:294-6.
- Wren MW, Baldwin AW, Eldon CP, Sanderson PJ. *J Med Micro* 1977; 10:49-61.
- MacFaddin JF. *Media for isolation-cultivation-maintenance of medical bacteria*, vol I. Baltimore, MD: Williams & Wilkins, 1985.
- Isenberg HD, Ed. *Clinical microbiology procedures handbook*. Washington, DC: ASM, 1992.
- Murray RM, Baron EJ, Pfaller MA, Tenover FC, Tenover RH, Eds. *Manual of clinical microbiology*. 7<sup>th</sup> ed. Washington, DC: ASM Press, 1999.

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