# CARY-BLAIR TRANSPORT MEDIUM

- For in vitro use only -

Catalogue No. AN280
Catalogue No. TC35

Our Cary-Blair 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 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. Disodium hydrogen phosphate helps maintain a stable pH and prevents pH fluxes that may be detrimental to the organisms present in clinical specimens. Our anaerobic formulation is a pre-reduced medium containing two additional ingredients: resazurin, which is a color indicator used to signal the presence of oxygen (blue-purple) in the medium; and L-cysteine, which is a reducing agent shown to directly stimulate the growth of some anaerobes.

**Formula per Litre of Medium**

| | |
|---|---|
| Sodium Thioglycollate | 1.5 g |
| Disodium Hydrogen Phosphate | 1.1 g |
| Sodium Chloride | 5.0 g |
| Calcium Chloride | 0.09 g |
| Agar | 5.0 g |

pH 8.4 ± 0.2

Additional Ingredients for Anaerobic Formulation

| | |
|---|---|
| Resazurin | 0.04 g |
| L-Cysteine | 0.5 g |

**Recommended Procedure**

1. If the clinical specimen is collected with a swab, insert the swab into the upper third portion of the medium and aseptically, cut or break the protruding portion of the swab and recap the tube tightly.
2. If the clinical sample is solid in nature (i.e. tissue sample), immerse the sample fully in the medium and recap the tube tightly.
3. Label the tube so that the identity of the specimen is not in question.
4. Transport the specimen tube to the laboratory as soon as possible for processing.
5. Once in the laboratory, the specimen should be sub-cultured onto an appropriate medium for recovery of the organism of interest.

## Precautions

Cary-Blair 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.

Cary-Blair Transport Medium is sensitive to extreme heat therefore the medium has not been autoclaved but instead, has undergone a three-day steam sterilization process, therefore the sterility of this product is tested but not absolute.

The color indicator resazurin is present in the anaerobic formulation and if oxygen is present the medium turns a purplish-blue color. A small tinge of blue may be observed at the top of the tube indicating a minute amount of oxygen is present in the tube. This is normal and in no way affects the performance of the medium. If the blue coloration exceeds ¼ inch discard the tube and contact our technical staff.

## 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 Results |
|---|---|
| **TC35 – Aerobic** | |
| *Escherichia coli* ATCC 25922 | Growth on subculture |
| **AN280 – Anaerobic** | |
| *Bacteroides fragilis* ATCC 25285 | Growth on subculture |

## Storage and Shelf Life

Our Cary-Blair 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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2. Cary SG, Blair EB. New transport medium for shipment of clinical specimens. J Bacteriol 1964; 88:96-8.
3. 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.
4. Wren MW, Baldwin AW, Eldon CP, Sanderson PJ. J Med Micro 1977; 10:49-61.
5. MacFaddin JF. Media for isolation-cultivation-maintenance of medical bacteria, vol I. Baltimore, MD: Williams & Wilkins, 1985.
6. Isenberg HD, Ed. Clinical microbiology procedures handbook. Washington, DC: ASM, 1992.
7. Murray RM, Baron EJ, Pfaller MA, Tenover FC, Yolken RH, Eds. Manual of clinical microbiology. 7th ed. Washington, DC: ASM Press, 1999.



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