Campylobacter Preston Enrichment Broth Base (i23035)

For the isolation and enrichment of *Campylobacter* species from foods.

Industry: Food

Principles & Uses

Campylobacter Preston Enrichment Broth, recognized as a selective medium for cultivating *Campylobacter* species, serves the enrichment of thermotolerant *Campylobacter* from various sources, as recommended by APHA and ISO 10272. This medium fosters the resuscitation of sublethally damaged *Campylobacter* through a rich basal composition containing peptone, beef extract, and essential ions from sodium chloride. The addition of antibiotics in the form of Preston Selective Supplement includes agents like polymyxin B, rifampicin, trimethoprim, and cycloheximide, contributing to its selective properties against specific bacteria and fungi. For optimal results, a controlled incubation process, involving preliminary incubation at 37°C and subsequent incubation at 42°C, is advised. The inclusion of temperature as a selective factor enhances the medium's specificity. *Campylobacter* species thrive in microaerobic conditions.

Composition (gr/L)

Beef extract 10 g, Peptone 10 g, Sodium Chloride 5 g.

Final pH at 25°C 7.5 ± 0.2

Preparation from dehydrated Powder

Add 12.5 g of the powder to distilled / deionized water and bring volume to 470.0mL. Mix thoroughly. Autoclave for 15 min at 15 psi pressure, 121°C. Cool to 45 – 50°C. Aseptically add 25 ml sterile horse blood and 1 vial of Preston Supplement. Mix thoroughly. Aseptically distribute into sterile tubes or flasks.

Quality Control

Dehydrated Appearance: Cream to yellow homogeneous free flowing powder.

Prepared Appearance: Basal medium: Light yellow colored clear solution.

After addition of sterile lysed horse blood: Cherry red colored opaque solution in tubes.

Reaction of 2.5% Solution at 25°C: pH 7.5 ± 0.2

Cultural Response

cultural characteristics observed with added 25 ml sterile lysed horse blood and campylobacter supplement (Preston Selective Supplement), after an incubation at 42 °C for 48 hours (5% O2 + 10% CO2 + 85% N2).

Organism (ATCC*)	Recovery
Escherichia coli (25922)	Inhibited
Campylobacter coli (33559)	Good
Campylobacter jejuni (29428)	Good
Staphylococcus aureus (25923)	Inhibited

*ATCC is a registered trade mark of the American Type Culture Collection.

Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.