



Preston Agar Base

M939

Preston Agar Base with added supplement is recommended for selective isolation of thermotolerant *Campylobacter* species.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	10.000
Beef extract	10.000
Sodium chloride	5.000
Agar	12.000
Final pH (at 25°C)	7.5±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 18.5 grams in 470 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add 25 ml sterile, lysed horse blood and reconstituted contents of 1 vial of *Campylobacter* Selective Supplement IV (Preston Selective Supplement) (FD042). Mix well and pour into sterile Petri plates.

Principle And Interpretation

This selective medium was described by Bolton and Robertson (1) for isolation of *Campylobacter* species and is recommended by APHA (2). Isolation of *Campylobacter* species on selective agar medium is made both with or without selective broth enrichment. Direct plating without enrichment is adequate for fresh faecal samples, faecal contents or intestinal specimens as high numbers of the organisms may be anticipated. For the food samples enrichment is required.

Peptic digest of animal tissue and beef extract in the medium provide nitrogen, vitamins and minerals necessary to support bacterial growth. Sodium chloride provides essential ions.

Preston Selective Supplement (FD042) contains antibacterial and antifungal agents. Polymyxin B is active only against gram-negative bacteria and *Proteus* species are sometimes resistant. Trimethoprim usually inhibits *Proteus* species as well as other gram-negative bacteria. Rifampicin is also active against gram-negative organisms. Cycloheximide acts as antifungal agent.

Direct plating without enrichment is adequate for fresh faecal samples, fecal contents or intestinal specimens as high numbers of the organisms may be anticipated. For food samples enrichment is required.

The *Campylobacter* species grow well in microaerobic conditions i.e. in 5% O₂ at 42°C in about 48 hours. Addition of about 4 drops of glycerol to a filter paper kept within the jar/container will hamper confluent and swarming growth of *Campylobacter* (3). On Preston Agar Base thermotolerant *Campylobacter* species tend to produce moist, grey, flat spreading growth, which tends to coalesce. Occasionally some contaminating organisms may grow on this medium but they are usually restricted to the area of primary inoculum. These include *Pseudomonas* species, more resistant coliforms, *Streptococcus* species and yeasts.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.2% Agar gel.

Colour and Clarity of prepared medium

Basal medium :Light yellow coloured clear to slightly opalescent gel. After addition of sterile lysed horse blood : Cherry red coloured opaque gel forms in Petri plates.

Reaction

Please refer disclaimer Overleaf.

Reaction of 2.5% w/v aqueous solution at 25°C. pH : 7.5±0.2

pH

7.30-7.70

Cultural Response

Cultural characteristics observed with added 25ml sterile lysed horse blood and Campylobacter Supplement IV (Preston Selective Supplement),(FD042), after an incubation at 42°C for 48 hours(5% O₂ + 10% CO₂ + 85% N₂).

Cultural Response**Organism****Growth****Cultural Response**

Bacillus cereus ATCC 10876 inhibited

Campylobacter coli ATCC 33559 good-luxuriant

Campylobacter jejuni ATCC 29428 good-luxuriant

Campylobacter lari ATCC 35221 good-luxuriant

Escherichia coli ATCC 25922 inhibited

Proteus mirabilis ATCC 25933 inhibited

Staphylococcus aureus ATCC 25923 inhibited

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

Reference

1. Bolton F.J. and Robertson L., 1982, J. Clin. Pathol., 35:462.
2. Vanderzant C. and Splittstoesser D. (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd ed., APHA, Washington, D.C.
3. Humphrey T. J., 1989, J. Appl. Bacteriol. 66, 119-126

Revision : 2 / 2015

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.