



Mehlmans Maintenance Medium

M917

Mehlmans Maintenance Medium Base is recommended for maintenance of *Campylobacter* species.

Composition**

Ingredients	Gms / Litre
Proteose peptone	15.000
Yeast extract	7.500
Casein enzymic hydrolysate	5.000
Dipotassium phosphate	5.000
Soluble starch	1.000
Ammonium sulphate	1.500
Neutral red	0.020
Agar	3.000
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 38.02 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense in 8 ml amounts in screw-capped tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add 0.2 ml filter sterilized 2.5% sodium sulphite solution to each tube. Mix gently.

Principle And Interpretation

Campylobacter is a genus of gram-negative bacteria carried in the intestinal tract of animals and therefore contaminate foods of animal origin. Infection with *Campylobacter* species is one of the most common causes of human bacterial gastroenteritis.

Organisms in the genus *Campylobacter* were originally classified in the genus *Vibrio*. Most strains now associated with acute gastroenteritis in humans and having the ability to grow at 42°C were originally described as related *Vibrios* (1). Mehlmans Maintenance Medium formulated by Mehlman (2) is recommended by APHA (3) for the maintenance of *Campylobacter* species.

The medium contains nitrogenous nutrients such as proteose peptone, yeast extract and casein enzymic hydrolysate. The medium contains starch, which helps to neutralize any toxic metabolites formed. Energy sources such as dextrose are absent. Neutral red is the pH indicator. Dipotassium phosphate helps in maintaining buffering action of the medium. Mehlmans Maintenance Medium can also be used for storage of stock cultures for upto one month without serial passage at room temperature after cells are grown at 42°C for 24 hours. Transfer weekly or when most of the medium turns yellow.

Quality Control

Appearance

Light yellow to beige homogeneous free flowing powder

Gelling

Semisolid, comparable with 0.3% Agar gel.

Colour and Clarity of prepared medium

Orange red coloured clear to slightly opalescent solution in tubes

Reaction

Reaction of 3.8% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH

7.10-7.50

Cultural Response

M917: Cultural characteristics observed after an incubation at 35-37°C for upto 1 week .

Organism

Growth

Campylobacter coli ATCC good-luxuriant
33559

Campylobacter jejuni ATCC good-luxuriant
29428

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. King E. O., 1957, J. Infect. Dis., 101: 119. Mehlman I. J. and Romero A., 1982, Appl. Environ. Microbiol., 43: 615-618.
2. Speck M. L., (Eds.), 1984, Compendium of Methods for the Microbiological Examination of Foods, 2nd Ed., APHA, Washington, D.C.

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