



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Mehlmans Maintenance Medium

Product Code: DM 1917

Application: - 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
Starch, soluble	1.000
Ammonium sulphate	1.500
Neutral red	0.020
Agar	3.000
Final pH (25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Campylobacter is a genus of gram-negative bacteria carried in the intestinal tract of animals and therefore contaminates foods of animal origin. Infection with Campylobacter species is one of the most common causes of human bacterial gastroenteritis. Most strains of campylobacter are 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⁾ and recommended by APHA⁽³⁾ is used for the maintenance of Campylobacter species.

The medium contains nitrogenous nutrients such as proteose peptone, yeast extract and casein enzymic hydrolysate. The starch in medium 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.

Methodology

Suspend 38.02 grams of powder media in 1000 ml distilled water. Shake well and heat 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.

Quality Control

Physical Appearance

Light yellow to beige homogeneous free flowing powder

Gelling

Firm, comparable with 0.3% Agar gel

Colour and Clarity of prepared medium

Orange red coloured clear to slightly opalescent solution in tubes





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Reaction

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

pH range 7.10-7.50

Cultural Response/ characteristics

DM 1917: Cultural characteristics observed after an incubation at 35-37°C for 1 week.

Organism

Campylobacter coli ATCC 33559

Campylobacter jejuni ATCC 29428

Growth

good-luxuriant

good-luxuriant

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

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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