Product Specification

CulturaLab
Culturing Excellence in Microbiology

Faecal Coliform (m-FC) Agar

Cat No: **111011**

Intended Use

Faecal Coliform (m-FC) Agar is a selective and differential medium used for the detection and enumeration of faecal coliform bacteria, particularly *Escherichia coli*, in water, wastewater, and environmental samples. It is commonly employed in public health and water quality testing to assess fecal contamination. The medium contains selective agents that suppress the growth of non-coliform organisms, while nutrient components support the growth of target bacteria. When incubated at elevated temperatures (typically 44.5 °C), only thermotolerant coliforms—indicative of fecal origin—are able to grow. These bacteria typically produce distinctive blue colonies, allowing for easy identification and enumeration. The use of m-FC Agar is aligned with international standards for microbiological water analysis.

Principle

Peptone, pancreatic digest of casein, and yeast extract supply essential nutrients such as amino acids, peptides, vitamins, and minerals to support robust bacterial growth. Lactose serves as the primary fermentable carbohydrate; faecal coliforms that ferment lactose produce acid, which leads to a color change in the indicator. Bile salts act as selective agents, inhibiting the growth of non-enteric and Gram-positive bacteria, thereby enriching for enteric coliforms. Sodium chloride helps maintain osmotic balance in the medium, ensuring a stable environment for bacterial metabolism. Aniline blue functions as a pH indicator, allowing for the visual differentiation of lactose-fermenting colonies, which appear blue due to acid production. Bacteriological agar serves as the solidifying agent.

Storage

Recommended storage conditions: 2 to 8 ℃. Store in cool dry place
Recommended shipping conditions: 2 to 8℃.

Production Standard

The formulation is prepared according to the recommendations of the current European, United States, and China Pharmacopoeia.

Precautions

1. The product may secrete water when exposed to temperature changes between low and room temperature, which is normal. Allow it to reach room temperature before use and, if possible, pre-dry it in a sterile drying oven.
2. Handle the plates with sterile gloves to prevent contamination during use.
3. Store the plates in a cool, dry place away from direct sunlight to maintain their integrity.
4. Avoid opening the plates until they are ready to be used in the sampling area to prevent airborne contamination.
5. Ensure the plates are used within their expiration date to guarantee accurate results.
6. Dispose of used plates according to biohazard waste protocols to prevent contamination and ensure safety.

Quality Control

The following were incubated at 44.5°C for 24-48 hours. The results are as follows:

Test Strains	Growth Results	Colony Characteristics
Escherichia coli ATCC 25922	Good growth	Blue colonies
Shigella flexneri ATCC 12022	Inhibited growth	Pinkish colonies
Salmonella typhimurium ATCC 14028	Good growth	Pinkish colonies
Enterococcus faecalis ATCC 19433	Complete inhibition	N/A

Product Content

Product Content	Cat No.	Size
Faecal Coliform (m-FC) Agar	111011	10 plates/bag; 200 plates/case

Composition

Peptone	5.0 g
Tryptose	10.0 g
Lactose	12.5 g
Bile salts	1.5 g
Sodium chloride	5.0 g
Yeast extract	3.0 g
Aniline blue	0.1 g
Bacteriological agar	15.0 g
Water	1000ml
Final pH (at 25°C)	7.4 ± 0.2

Shelf Life

Shelf life: 3 months from date of manufacture

Packaging

90mm x 10 plates per bag; 200 plates/case

Disposal

Please adhere to the respective regulations for the disposal of used culture medium (e.g., autoclave for 30 minutes at 121 °C)

Specially manufactured for:

Foster Medical Pte Ltd
76 Pioneer Road, #03-05 Mapletree Pioneer Logistics Hub, Singapore 639577

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