

M-endo agar

Cat No: **111012**

Intended Use

M-Endo Agar is a selective and differential culture medium primarily used for the detection and enumeration of coliform bacteria, particularly *Escherichia coli* and other lactose-fermenting organisms, in water, dairy products, and other food samples. It is commonly applied in membrane filtration methods for microbiological water quality testing, following standard protocols such as those outlined by the U.S. EPA and Standard Methods for the Examination of Water and Wastewater. The medium supports the growth of coliforms while inhibiting non-coliform organisms through the inclusion of selective agents. Lactose-fermenting bacteria produce acid, which reacts with fuchsin-sulfite indicators in the medium, resulting in characteristic metallic sheen colonies (typically seen with *E. coli*) or red colonies for other coliforms. This allows for rapid visual differentiation and enumeration of coliforms, making m-Endo Agar a key tool in water safety and public health monitoring.

Principle

Peptone, yeast extract, and beef extract serve as rich sources of nitrogen, amino acids, vitamins, and growth factors, promoting the growth of coliforms and other bacteria. Lactose is the primary fermentable carbohydrate in the medium. Coliforms ferment lactose, producing acid that plays a key role in the differential reaction of the medium. Dipotassium hydrogen phosphate functions as a buffering agent, helping maintain a stable pH during bacterial metabolism. Sodium sulfite (anhydrous) and basic fuchsin together act as a redox indicator system. When coliforms ferment lactose and produce acid, sodium sulfite decolorizes basic fuchsin, resulting in the formation of characteristic red colonies, often with a metallic sheen in the case of *E. coli*. Basic fuchsin also contributes mild selective properties, inhibiting many Gram-positive organisms. Bacteriological agar solidifies the medium, providing a firm surface for colony development.

Storage

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

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 30-35°C for 18-24 hours. The results are as follows:

Test Strains	Growth Results	Colony Characteristics
<i>Staphylococcus aureus</i> ATCC 6538	Inhibition	N/A
<i>Escherichia coli</i> ATCC 25922	Good growth	Purplish-red colonies with a metallic sheen
<i>Salmonella Typhimurium</i> ATCC 14028	Good growth	Orange-red colonies

Product Content

Product Content	Cat No.	Size
M-endo agar	111012	10 plates/bag; 200 plates/case

Composition

Peptone from meat	3.7 g
Yeast extract	1.2 g
Casein hydrolysate	7.5 g
Tryptose	3.7 g
Lactose	9.4 g
Dipotassium hydrogen phosphate	3.3 g
Potassium hydrogen phosphate	1.0 g
Sodium chloride	3.7 g
Sodium deoxycholate	0.1 g
Sodium lauryl sulphate	0.05 g
Sodium sulphite	1.6 g
Fuchsin basic	1.2 g
Bacteriological agar	15.0 g
Water	1000mL
Final pH (at 25°C)	7.2 ± 0.2

Shelf Life

Shelf life: 3 months from date of manufacture

Packaging

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

Each plate filled with 20mL ± 2mL

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:

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