**Eosin Methylene Blue Agar (EMB Agar)**

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| **Product No.** | **Product Category** | **Specification** |
| HCM044 | Dehydrated Culture Medium | 500g/bottle |

**Intended Use**

for isolation, identification and enumeration of lactose fermenting and lactose non-fermenting enteric bacteria.

**Principle and Interpretation**

Eosin-Y and methylene blue makes the medium slightly selective and inhibit certain gram-positive bacteria. These dyes differentiate between lactose fermenters and non-fermenters. Eosin Y and methylene blue forms a complex at acidic pH, which acts as inhibiting agent. Essential nutrients and growth factors are provided by peptone. Dipotassium hydrogen phosphate acts as good buffering agent..

**Formulation**

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| **Ingredients** | **/liter** |
| Peptone | 10.0g |
| Lactose | 10.0g |
| Dipotassium hydrogen phosphate | 2.0g |
| Agar | 15.0g |
| Eosin Y | 0.4g |
| Methylene | 0.065g |
| pH7.3±0.2 at 25°C | |

**Preparation**

Suspend 37.5 g in 1 L of distilled or deionized water. Heat with frequent agitation and boil to completely dissolve the powder. Distribute into flasks. Autoclave at 121℃ for 15 minutes. Cool to 45-50℃ and pour into sterile petri dishes.

**Quality Control**

Cultural characteristics observed after incubation at 35-37°C for 24 hours

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| **Quality control strains** | **Growth** | **Characteristics** |
| *Escherichia coli* ATCC25922 | Good, PR≥0.5 | black colonies with metallic sheen |
| *Salmonella typhimurium* ATCC14028 | - | colorless or light amber |
| *Staphylococcus aureus* ATCC6538 | inhibition | G≤1 |

**Storage and Shelf Life**

2-30℃，Keep container tightly closed, avoid direct sunlight.

Use before expiry date on the label.

**Precautions**

1. When weighing the dehydrated medium, please wear masks to avoid causing respiratory system discomfort

2. Keep container tightly closed after using to prevent clumping.

**Waste Disposal**

Microbiological contamination was disposed by autoclaving at 121°C for 30 minutes.

**Revision**

On June 14, 2024

**References**

APHA (2018): Part 9260: Detection of pathogenic bacteria. Standard Methods for the Examination of Water. 23rd ed. American Public Health Association, American Water Works Association, Water Environment Federation, Washington, D.C.

EN ISO International Standardisation Organisation. Cosmetics — Microbiology — Detection of *Escherichia coli*. EN ISO 21150:2015.

FDA-BAM (2020): Chapter No. 4: Enumeration of Escherichia coli and the Coliform Bacteria.Food and Drug Administration - Bacteriological Analytical Manual.