**Bile Esculin Azide Agar**

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| **Product No.** | **Product Category** | **Specification** |
| HCM114 | Dehydrated Culture Medium | 500g/bottle |

**Intended Use**

For the selective separation and enumeration of *enterococci* in food and water.

**Principle and Interpretation**

Tryptone and peptone are the sources of nitrogen and essential growth factors. Yeast extract acts as well nitrogenous compounds and additionally the vitamin B12 complex. Sodium azide acts largely inhibits the growth of gram-negative bacteria while sparing *enterococci*, *staphylococci* and *streptococci.* Ox bile inhibits most gram positives but not *enterococci*. *Enterococci* hydrolyse esculin to esculetin and dextrose, which reacts with ferric citrate producing a brownish black precipitate around the colonies. Tolerance to bile and the ability to hydrolyze esculin is the traditional and reliable test for the identification of *enterococci*. (4). Sodium chloride maintains the osmotic balance of the medium and Agar is the solidifying agent.

**Formulation**

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| **Ingredients** | **/liter** |
| Tryptone | 17.0g |
| Ox bile | 10.0g |
| Yeast extract | 5.0g |
| Sodium chloride | 5.0g |
| Peptone | 3.0g |
| aesculin  | 1.0g |
| Ferric ammonium citrate | 0.5g |
| Sodium azide | 0.15g |
| Agar  | 15.0g |
| pH 7.1±0.1 at 25°C |

**Preparation**

Weigh 56.6g of dry powder of this product, add 1 L of distilled water or deionized water, stir, heat and boil until completely dissolved, and sterilize at 121℃ for 15 min.

**Quality Control**

Cultural characteristics observed after incubation at 35-37°C for 20-24hours.

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| **Quality control strains** | **Growth** | **Colony color** |
| *Enterococcus faecalis ATCC29212* | PR≥0.7 | Brown-black halo |
| *Escherichia coli ATCC25922* |  inhibited | Absence of brown-black halo |

**Sorage and Shelf Life**

Keep container tightly closed, store in a cool, dry place, away from bright light. Storage period of 3 years.

**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**

ISO 7899-2:2000 Water quality -- Detection and enumeration of intestinal enterococci --Part2:Membrane filtration method