Bile Esculin Azide Agar (i23017)

Bile Esculin Azide Agar is used for the rapid, selective detection and enumeration of fecal *enterococci*.

Industry: Water / Food

Principles & Uses

Bile Esculin Agar and its modified version, Bile Esculin Azide Agar, are essential tools in microbiology for identifying and differentiating *enterococci*, group D *streptococci*, and certain *enterobacteriaceae*.

Bile Esculin Azide Agar enhances selectivity by introducing sodium azide as an inhibitor and reducing bile concentration. It promotes the rapid growth of *enterococci* that possess the unique ability to hydrolyze esculin, forming a distinctive dark brown or black colony. This medium is selective against Gram-negative bacteria, making it effective for identifying *enterococci*, which are vital indicators of fecal contamination.

Composition (gr/L)

Peptone from Casein 17, Peptone 3, Yeast Extract 5, Sodium Chloride 5, Esculin 1, Ammonium iron citrate 0.5, Ox bile 10, Sodium Azide 0.15, Agar 15.

Final pH at 25°C 7.1 ± 0.2

Preparation from dehydrated Powder

Suspend 56.65 g of the powder in 1 L of purified water. Autoclave at 121°C for 15 minutes. After cooling to 45-50 °C pour into petri dishes to a depth of 3 mm to 5 mm and allow to solidify.

Quality Control

Dehydrated Appearance: Cream to yellow, free-flowing, homogeneous, may contain some tan specks.

Prepared Appearance: Amber, clear to slightly opalescent.

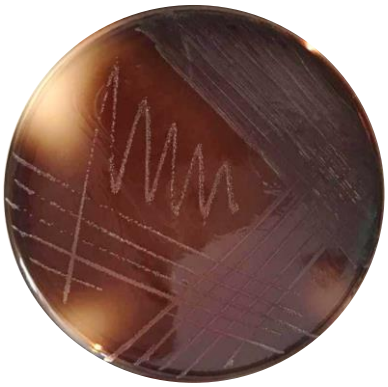
Reaction of 5.66 % Solution at 25°C: pH 7.1 ± 0.2

Cultural Response

Cultural response was observed after 24-48 hours of incubation at 35 ± 2°C.

Organism (ATCC*)	Recovery	Colony color
Enterococcus faecalis (19433)	Good	Black
Enterococcus faecalis (29212)	Good	Black
Escherichia coli (25922)	Partial to complete inhibition	Colorless
Staphylococcus aureus (25923)	Partial to complete inhibition	Colorless

*ATCC is a registered trade mark of the American Type Culture Collection.



E. faecalis exhibits a brownish medium around colonies due to esculin hydrolysis

Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.