Azide Dextrose Broth (i23010)

Azide Dextrose Broth is used as a preliminary test for *enterococci* and also for their selective enrichment.
Industry: Food / Water

Principles & Uses

Azide Dextrose Broth is a recommended medium for detecting and quantifying *enterococci* and *streptococci* in various substances, such as water, sewage, and food. These microorganisms, especially *enterococci*, serve as vital indicators of fecal contamination, particularly in cases where less resistant *coliform* bacteria like *E. coli* may have perished over time. The distinguishing factor of this medium is the presence of sodium azide, which plays a pivotal role in inhibiting the growth of accompanying Gram-negative bacteria while fostering the growth of *enterococci*.

This medium is nutrient-rich, because of components like beef extract, casein peptone, and glucose which provide essential elements for growth. Sodium azide, a selective inhibitor for Gram-negative bacteria, was first utilized in studies on the isolation of *Streptococcus agalactiae*, demonstrating its capacity to isolate *enterococci* from water.

Composition (gr/L)

Peptone from Casein 15, Meat Extract 4.5, Glucose 7.5, Sodium Chloride 7.5, Sodium Azide 0.2.
Final pH at 25°C 7.2 ± 0.2

Preparation from dehydrated Powder

Suspend 34.7 g of powder in 1 Liter of purified water. Dispense into suitable vessels. Autoclave at 121°C for 15 minutes. DO NOT OVERHEAT.

Quality Control

Dehydrated Appearance: Beige, free-flowing, homogeneous.
Prepared Appearance: Light amber, clear to very slightly opalescent.
Reaction of 3.47% Solution at 25°C: pH 7.2 ± 0.2

Cultural Response

Cultural response was observed after 18-24 hours of incubation at 35 ± 2˚C.

Organism (ATCC*)	Recovery
Enterococcus faecalis (19433)	Good
Enterococcus faecalis (11700)	Good
Escherichia coli (25922)	None/ poor

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

E. faecalis growing in Azide dextrose broth causes the medium to become turbid.

Storage

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