

Azide Dextrose Agar (i23629)

A selective medium for the quantification of *enterococci* in water, food and other materials.

Industry: Water / Food

Principles & Uses

Azide Dextrose Agar serves as a vital medium for detecting and enumerating *enterococci/streptococci* in various materials, including water and sewage. *Enterococci*, known for their resilience to chlorine in water, make them superior indicators of sewage pollution compared to *Escherichia coli*. The medium's formulation, recommended by APHA, incorporates Sodium azide as a selective inhibitor, hindering the growth of accompanying Gram-negative bacteria while allowing *enterococci* to flourish.

The presence of *enterococci* in the analyzed sample indicates potential fecal contamination, especially in cases where this contamination occurred some time ago, and less resistant *coliform* bacteria like *Escherichia coli* may have already perished. Azide Dextrose Agar is designed to be highly nutritious, containing Meat extract, peptone from casein, glucose, and Sodium chloride to provide essential nutrients, energy sources, and maintain osmotic balance. Agar solidifies the medium.

Composition (gr/L)

Peptone from Casein 15 g, Meat Extract 4.5 g, Glucose 7.5 g, Sodium Chloride 7.5 g, Sodium Azide 0.2 g, Agar 15 g.

Final pH at 25°C 7.0 ± 0.2

Preparation from dehydrated Powder

Suspend 49.7 g of the powder in 1 L of purified water. Autoclave at 121°C for 15 minutes.

Quality Control

Dehydrated Appearance: Beige, free-flowing, homogeneous.

Prepared Appearance: Light amber, clear to very slightly opalescent.

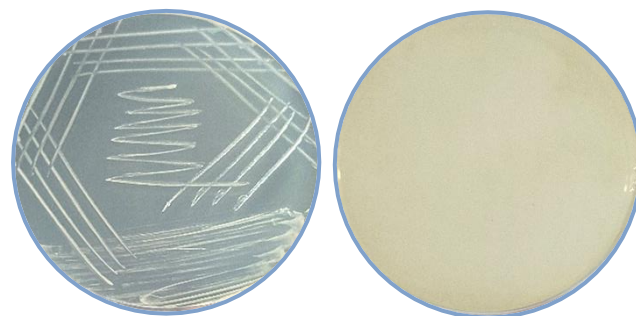
Reaction of 4.97% Solution at 25°C: pH 7.0 ± 0.2

Cultural Response

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

Organism (ATCC*)	Recovery
<i>Enterococcus faecalis</i> (19433)	Good
<i>Enterococcus faecalis</i> (11700)	Good
<i>Escherichia coli</i> (25922)	None/ poor
<i>Staphylococcus aureus</i> (25923)	None/ poor
<i>Pseudomonas aeruginosa</i> (27853)	None/ poor

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



Enterococcus faecalis (left). Prepared Culture Media (right).

Storage

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