

Slanetz and Bartley Agar (i23112)

Used for isolating and enumerating *enterococci* in water and other materials by membrane filtration technique.

Industry: Water

Principles & Uses

Slanetz and Bartley Medium, originally designed for detecting and counting *Enterococci* using membrane filtration or direct plating, offers high selectivity for these organisms. Its ingredients, such as tryptose and yeast extract, furnish essential nutrients for bacterial growth. Sodium azide hinders the development of gram-negative bacteria, ensuring selectivity, glucose as a carbon source, dipotassium phosphate as a buffer, and agar-agar as the solidifying agent. Triphenyl Tetrazolium Chloride (TTC) is reduced within *Enterococci*, producing red colonies.

The Department of Health recommends it for *Enterococci* enumeration in water. Filtrated water is placed on these plates, incubated, and red or maroon colonies indicate *Enterococci*.

The medium can be enhanced for frozen food investigations by adding Tween 80 (0.5 ml/L) and a Sodium carbonate or bicarbonate solution (20 ml of 10% solution).

Composition (gr/L)

Tryptose 20, Yeast Extract 5, Dextrose 2, Dipotassium Phosphate 4, Sodium Azide 0.4, Agar 10, 2,3,5-Triphenyl Tetrazolium Chloride 0.1.

Final pH at 25°C 7.2 ± 0.2

Preparation from dehydrated Powder

Suspend 41.5 g of the powder in 1 Liter of purified water. Mix thoroughly. Sterilize by heating for 20 minutes in a current of steam (e.g., autoclave without excess pressure). DO NOT AUTOCLAVE. Cool to 45-50°C and dispense into 50 x 9 mm Petri dishes to a depth of 4-5 mm.

Quality Control

Dehydrated Appearance: Light beige, free-flowing, homogeneous.

Prepared Appearance: Reddish, slightly opalescent.

Reaction of 4.15% Solution at 25°C: pH 7.2 ± 0.2

Cultural Response

Inoculate using the membrane filter technique. Incubate in humid atmosphere at 35 ± 0.5°C for 40-48 hours.

Organism (ATCC*)	Recovery	Colony color
<i>Escherichia coli</i> (25922)	Marked to complete inhibition	-
<i>Enterococcus faecalis</i> (19433)	Good	Light pink to red
<i>Enterococcus faecalis</i> (29212)	Good	Light pink to red

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



E. faecalis with red colonies (using the striking method).

Storage

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