

## Bromocresol Purple Azide Broth (i23312)

For confirming the presence of *enterococci*, particularly in the bacteriological analysis of water acc. to Hajna and Perry (1943).

Industry: Water and wastewater

## Principles & Uses

Bromo Cresol Purple Azide Broth is medium used for confirming the presence of fecal *streptococci* in water and wastewater. *Enterococci*, a subset of fecal *streptococci*, are essential indicators of water quality, particularly in recreational waters to assess fecal contamination. The medium contains dextrose as a fermentable carbon source, and when *enterococci* ferment it, the medium's color shifts from purple to yellow due to acid production. Peptone and yeast extract provide necessary nutrients for bacterial growth, while sodium chloride maintains osmotic balance. Sodium azide selectively inhibits the bacterial flora that might have grown during preliminary testing, excluding *enterococci*. Additionally, glycerol (5 ml if desired) can be added to enhance *enterococcal* dextrose fermentation, improving the medium's efficiency. Bromo Cresol Purple Azide Broth is an important tool for testing and enumerating fecal *streptococci* in water samples using the Most Probable Number (MPN) technique, recommended by APHA. It plays a crucial role in assessing water quality and contamination.

## Composition (gr/L)

Peptone from Casein 10, Yeast Extract 10, Glucose 5, Sodium Chloride 5, Di-potassium Hydrogen Phosphate 2.7, Potassium Dihydrogen Phosphate 2.7, Sodium Azide 0.5, Bromocresol Purple 0.022.

Final pH at 25°C 7.0 ± 0.2

## Preparation from dehydrated Powder

Suspend 36 g of the powder in 1 L of purified water. Mix thoroughly. Add 5 ml glycerol if desired. Autoclave under mild condition at 115°C for 15 minutes.

## Quality Control

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

Prepared Appearance: Purpled colored, clear solution without any precipitate.

Reaction of 3.6 % Solution at 25°C: pH 7.0 ± 0.2

## Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism (ATCC*)	Recovery	Acid
<i>Escherichia coli</i> (25922)	Inhibited	-
<i>Enterococcus faecalis</i> (29212)	Good	Yellow
<i>Staphylococcus aureus</i> (25923)	Inhibited	-
<i>Streptococcus pyogenes</i> (19615)	None/poor	No color change

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



Purple-colored prepared medium (left). The medium turns to yellow due to *E. faecalis* growth (right)

## Storage

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