



Azide Dextrose Broth Modified

M1813

Azide Dextrose Broth is used for the detection of Enterococci in water.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	20.000
Dextrose	5.000
Sodium chloride	5.000
Di-potassium hydrogen phosphate	2.700
Potassium dihydrogen phosphate	2.700
Sodium azide	0.200
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 35.6 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Azide Dextrose Broth, modified is used for the detection of enterococci in water and sewage (1). Enterococci are more resistant to chlorine in water, hence are better indicators of sewage pollution than *Escherichia coli*. Azide Dextrose Broth was initially formulated by Rothe, Mallmann and Seligmann (2,3) for quantitative determination of enterococci in water, foods, sewage and other materials suspected of contamination with sewage.

This medium is highly nutritious due to the presence of peptic digest of animal tissue and dextrose. Dextrose serves as source of carbon. Sodium chloride maintains osmotic equilibrium. Sodium azide inhibits growth of Gram-negative organisms allowing enterococci to grow (2,4,5), and the concentration selected provides optimum protection for the enterococci while largely suppressing the Gram-negative flora. The phosphate buffer system controls pH.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Yellow coloured clear solution without any precipitate.

Reaction

Reaction of 3.56% w/v aqueous solution at 25°C. pH : 6.8±0.2

Cultural Response

M1813: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours

Organism	Inoculum (CFU)	Growth
Cultural Response <i>Escherichia coli</i> ATCC 25922	>=10 ³	inhibited
<i>Enterococcus faecalis</i> ATCC 50-100 29212		good-luxuriant

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Greenberg A. E. et al (ed). (1998) Standard Methods for the Examination of Water and Wastewater, 20th ed. APHA, Washington, D.C.
2. Mallmann W. L. and Seligmann E. B. (1950) Am. J. Public Health 40. 286.
3. Rothe, 1948, illinoise State Health Department
4. Edwards S.J.,1933, J.comp.Path.Therap., 46:2111
5. Hartman G., 1937, Milchw. Forch,

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