



Product :

AZIDE DEXTROSE BROTH according to ROTHE

Specification

Medium for the detection and enumeration of enterococci in water.

Formula * in g/L

Meat peptone.....	10.0
Casein peptone.....	10.0
Dextrose.....	5.0
Sodium chloride.....	5.0
Dipotassium hydrogen phosphate.....	2.7
Potassium dihydrogen phosphate.....	2.7
Sodium azide.....	0.2

Final pH 7,0 ±0,2 at 25 °C

* Adjusted and /or supplemented as required to meet performance criteria

Directions

Dissolve 35,6 g in 1 L of distilled water. Heat if necessary to dissolve. Divide into 10 mL volumes and pour into tubes. Sterilize in the autoclave at 121°C for 15 minutes. For double strength medium, dissolve 71,2 g/L.

Description

Azide Dextrose Broth according to Rothe has been widely used since 1948 for the detection of faecal streptococci. It usually provides a higher rate of positive results than similar media. Its efficacy is due to the Sodium Azide, which is both selective for enterococci and inhibitive to the accompanying flora through interference of the electron transport chain. This medium is also used for the primary enrichment of food samples, particularly frozen vegetables.

Technique

Water Samples

Add 10 mL of water to be examined to each of three tubes containing 10 mL of double strength medium. Add 1 mL of sample to an additional three tubes containing 10 mL, of single strength medium. Then add 0.1 mL of water to each of three tubes containing 10 mL of single strength medium. Incubate at 37°C and examine after 24 and 48 hours. All tubes which are turbid due to growth will be considered as presumptively positive and will have to be confirmed using EVA Broth. All tubes which are positive on this second testing should be considered for testing using the Most Probable Number (MPN) count method.

When considering other type of samples, dilute them in 1/4 Ringer's solution or peptone water and then inoculate the tubes as previously described.

In highly contaminated samples, dilutions should be carried out prior to inoculation.



Reference : 02-027

Scharlau Microbiology - Technical data sheet

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Quality control

Incubation temperature: 36°C ± 2,0

Incubation time: 44 ± 4h

Inoculum: Practical range 100 ± 20 CFU. min. 50 CFU (productivity) / 10⁴-10⁶ CFU (selectivity) according to ISO 11133:2014/Amd 1:2018.

Microorganism

Staphylococcus aureus ATCC® 25923

Escherichia coli ATCC® 25922

Enterococcus faecalis ATCC® 29212

Enterococcus faecalis ATCC® 19433

Growth

Inhibited

Inhibited

Good to very good

Good to very good

Remarks

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Left: Uninoculated tube (Control)
Center: *Enterococcus faecalis* ATCC 29212
Right: *Escherichia coli* ATCC 25922

References

- CLESCERI, L., A.E. GREENBERG & E.A. EATON (1998) Standard Methods for the Examination of Water and Wastewater. APHA-AWWA- WEF. 20th ed. Washington.
- DOWNES, F.C. & K. ITO (2001) Compendium of Methods for the Microbiological Examination of Foods. 4th ed. APHA. Washington.
- GUINEA, SANCHO & PARÉS (1979) Análisis Microbiológico de Aguas: Aspectos Aplicados. Ed. Omega. Barcelona.
- ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- ROTHE (1948) Illinois State Health Department.

Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 °C to 30 °C).