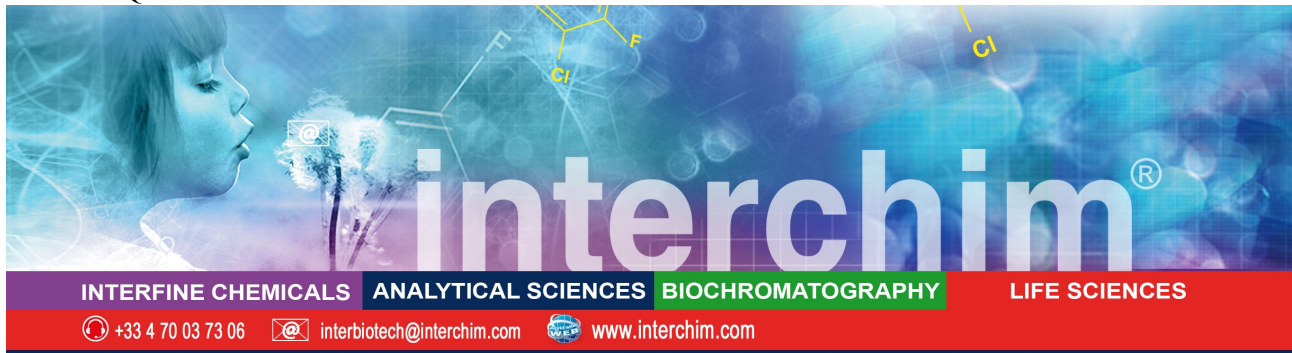


FT-A2WUQ0



## Rothe Broth

For the quantitative determination of fecal enterococci

### Product Description

**Name :** Rothe Broth (Glucose Broth with azide)

**Catalog Number :** A2WUQ0, 500 g

**Formula in g/L :**

Peptone Mixture	15.00	Beef Extract	4.50
Glucose	7.50	Sodium Azide	0.20
Sodium Chloride	7.50		
Final pH 7.2 ± 0.2 at 25°C			

**Storage :** +4°C - Once opened keep powdered medium closed to avoid hydration.

### Directions for use

#### PREPARATION

Suspend 34.7 grams of the medium in one liter of distilled water (69.4 grams if double concentration is desired). Mix well and dissolve by heating with frequent agitation until boiling point. DO NOT OVERHEAT. Dispense into appropriate containers and sterilize in autoclave at 121°C for 15 minutes. The prepared medium should be stored at 2-8°C. The color is yellowish brown.

The dehydrated medium should be homogeneous, free-flowing and beige in color. If there are any physical changes, discard the medium.

*Caution: This medium is toxic if swallowed, inhaled or comes into contact with skin. Wear gloves and eye/face protection.*

#### USES

ROTHE BROTH (Glucose Broth with Azide) is a selective medium recommended by Malmann and Seligmann for the quantification of enterococci in water, food and other materials suspect of being contaminated by waste waters. Enterococci are the best indicators of fecal contamination in water as Escherichia coli is very resistant to chloride.

The presence of enterococci is an indicator for fecal contamination, especially when it occurred a long time ago and the less resistant coliform bacteria, including Escherichia coli, may already be dead when the analysis is carried out.

Peptone mixture and Casein peptone provide nitrogen, vitamins, minerals and amino acids essential for growth. Glucose is the fermentable carbohydrate providing carbon and energy. Sodium chloride supplies essential electrolytes for

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transport and osmotic balance. The use of Sodium azide to selectively inhibit Gram-negative bacteria first appeared in the studies of EDWARDS (1938) on the isolation of *Streptococcus agalactiae*, it was later showed that Sodium azide can also be used for the isolation of enterococci from water.

Rothe Broth is ideal for the enumeration of enterococci by the serial dilution method. Inoculate 10 ml of the sample in 10 ml tubes of double-strength Rothe Broth (or 1 ml of the sample in 10 ml of a single - strength medium). Use 5 tubes for each dilution (according to Mallmann and Seligmann).

Incubate all tubes at  $35 \pm 2^\circ\text{C}$  for 24 – 48 hours. Confirmation of fecal enterococci is obtained by the subsequent inoculation of positive tubes into EVA Broth (A2WQV0).

## MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of  $35 \pm 2^\circ\text{C}$  and observed after 24 - 48 hours.

Microorganisms	Growth
<i>Escherichia coli</i> ATCC 25922	Inhibited
<i>Staphylococcus aureus</i> ATCC 25923	Inhibited
<i>Enterococcus faecalis</i> ATCC 19433	Good
<i>Enterococcus faecalis</i> ATCC 29212	Good

## References

- Mallmann W.L. Seligmann E.B. AJPH, 1950. 40 286-289 Standard Methods for the Examination of Water and Wastewater. Eleventh Edition APHA Inc. New-York 1960  
Edwards S.J. (1933) J. Comp. Path Therap., 46.211.

## Ordering information

Catalog size quantities and prices may be found at <http://www.interchim.com>.  
Please inquire for higher quantities (availability, shipment conditions).

For any information, please ask : Uptima / Interchim; Hotline : +33(0)4 70 03 73 06  
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