

Acid Broth (i23711)

Used for the detection of acid-tolerant microorganisms in canned foods.

Industry: Food

Principles & Uses

The medium comprises peptic digest of animal tissue for general growth, yeast extract for B-complex vitamins stimulating bacterial growth, saccharose (invert sugar) as a carbohydrate source. Acid Broth, designed according to APHA, is effective for selectively cultivating acid-tolerant microorganisms from canned foods. It facilitates the recovery of minimal contamination in acid food products, specifically targeting spoilage-causing bacteria like *Bacillus coagulans*, *Lactobacillus*, *Leuconostoc*, *Pediococci*, and *Streptococci*. In the testing process, approximately 100 grams of the product is inoculated into sterile medium, incubated for 5 days at 30°C, and examined for visual signs of fermentation or biological growth. Microscopic analysis at the end of the incubation period reveals evidence of bacterial or yeast contamination. The pH of the medium plays a crucial role in determining the thermal processing of canned foods and is a key parameter for isolating acid-tolerant bacteria.

Composition (gr/L)

Invert sugar 10 g, Peptic digest of animal tissue 10 g, Yeast extract 7.5 g.

Final pH at 25°C 4.0 ± 0.2

Preparation from dehydrated Powder

Suspend 27.5 grams of the powder in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Adjust pH to 4.0 ± 0.2 at 25°C. Autoclave at 121°C for 15 minutes.

Quality Control

Dehydrated Appearance: Cream to yellow, free-flowing, homogeneous.

Prepared Appearance: Light yellow, clear.

Reaction of 2.75% Solution at 25°C: pH 4.0 ± 0.2

Cultural Response

Inoculate and incubate at 30 ± 2°C for up to 5 days.

Organism (ATCC*)	Recovery
<i>Lactobacillus acidophilus</i> (4356)	Good
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*ATCC is a registered trade mark of the American Type Culture Collection.

Storage

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