



Dehydrated Culture Media  
Bases / Media Supplements

## Technical Information

### Acid Broth

**Product Code: DM 2208**

**Application:-** Acid Broth is recommended for the detection of acid tolerant microorganisms from canned foods

### Composition\*\*

Ingredients	Gms / Litre
Invert sugar	10.000
Peptic digest of animal tissue	10.000
Yeast extract	7.500
Final pH ( at 25°C)	4.0±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Principle & Interpretation

Acid Broth is a very good medium for the detection of minimal contamination in canned acid food and meets the specification of APHA for the selective cultivation of acid tolerant microorganisms from canned foods <sup>(1)</sup>. Bacteria such as *Bacillus coagulans*, *Lactobacillus*, *Leuconostoc* and yeasts etc. are responsible for causing spoilage in acid product concentrates namely fruit pastes, tomato paste etc. Some *Pediococci* and *Streptococci*, which are aciduric and responsible for canned food spoilage, can also be cultivated in the Acid Broth.

Acid Broth contains an invert sugar, (a mixture of 50% glucose and 50% fructose) can be obtained by the hydrolysis of sucrose. It is included in the medium to prevent loss of water from the medium and also acid tolerant bacteria can utilize it. Peptic digest of animal tissue and yeast extract provide the nitrogenous nutrients including amino acids to the microorganisms.

Approximately 100 grams of product to be tested is inoculated aseptically into 300 ml of sterile medium in a 500 ml screw-cap flask. The broth is intended primarily as a mass culture medium for detecting minimal contaminants in aseptically packed acid products. Further, minimum of three flasks per sample should be inoculated. Extra aseptic sample are retained from each container which are incubate with the flasks. For the microscopic comparisons, additional sample the kept at refrigeration temperature can also be used if the test has to be repeated. The samples are examined visually for fermentation or biological surface growth daily, up to 5 days when incubated at 30°C Extra-retained samples are incubated for 10 days. All the samples are examined microscopically, for evidence of bacterial or yeast contamination at the end of incubation period pH is the most important factor which not only determines the degree of thermal processing of canned foods but also an important parameter of this medium for isolating acid tolerant bacteria from canned foods <sup>(1)</sup>.

### Methodology

Suspend 27.5 gramsof powder media in 1000 ml distilled water. Shake well & heat if necessary to dissolve the medium completely. Distribute into tubes or flasks. Sterilize by autoclaving at 15 lbs pressure (12 1°C) for 15 minutes.





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## Quality Control

### Physical Appearance

Light yellow to beige homogeneous free flowing powder

### Colour and Clarity of prepared medium

Light amber coloured clear solution, without any precipitate.

### Reaction

Reaction of 2.75% w/v aqueous solution at 25°C. pH : 4.0±0.2

**pH Range:-** 3.80-4.20

### Cultural Response/Characteristics

DM 2208: Cultural characteristics observed after an incubation at 30°C for upto 5 days.

Organism	Inoculum (CFU)	Growth
<i>Bacillus coagulans</i> 8038	50-100	good - luxuriant
<i>Lactobacillus acidophilus</i> ATCC 4356	50-100	good - luxuriant
<i>Leuconostoc mesenteroides</i> ATCC 12291	50-100	good - luxuriant

## Storage and Shelf Life

**Dried media:** Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

**Prepared Media:** 2-8<sup>o</sup> in sealable plastic bags for 2-5 days.

## Further Reading

1. Vanderzant C. and Splittstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd Ed., APHA, Washington, D.C.

## Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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