



## Thermoacidurans Broth

M1911

For detection of Thermophilic/Mesophilic aerobic and anaerobic aciduric spore formers and sterility testing for acid food.

### Composition\*\*

Ingredients	Gms / Litre
Proteose peptone	5.000
Yeast extract	5.000
Dextrose	5.000
Dipotassium hydrogen phosphate	4.000
Final pH ( at 25°C)	5.0±0.2

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

### Directions

Suspend 19 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. Mix well and dispense as desired.

### Principle And Interpretation

*B.coagulans* is a soil microorganism that can also be found in canned tomato products and dairy products. Conditions favorable to multiplication of the organism can result in spoilage of the food product (1).! *B. coagulans* is also referred to as *B.thermoacidurans* (2). *B. coagulans* is described as a facultative thermophile, that can grow at 20 to 55°C, and can also grow at pH levels between 5.0 to 7.0.

Proteose peptone and yeast extract provide nitrogenous compounds, vitamin B complex and other essential growth nutrients. Dipotassium phosphate buffers the medium. Dextrose acts as an energy source.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Colour and Clarity of prepared medium

Yellow coloured clear to slightly opalescent solution

#### Reaction

Reaction of 1.9% w/v aqueous solution at 25°C. pH : 5.0±0.2

#### pH

4.80-5.20

#### Cultural Response

Cultural characteristics observed after an incubation at 55°C for 18-48 hours.

#### Cultural Response

Organism	Inoculum (CFU)	Growth
<b>Cultural Response</b> <i>Bacillus thermoacidurans</i> ATCC 8038	50-100	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. Downes and Ito (ed.). 2001. Compendium of methods for the microbiological examination of foods,4th ed. American Public Health Association, Washington, D.C 2. Becker M. E., Pederson C. S., 1950, J. Bacteriol., 459:717

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