

TM 1818 – THERMOPHILIC ACID RESISTANT MEDIUM

INTENDED USE

For growth and detection of thermophilic acid resistant microorganisms.

PRODUCT SUMMARY AND EXPLANATION

Thermophilic Acid Resistant Medium is a medium supporting the growth of thermophilic, acid resistant microorganisms such as *Bacillus stearothermophilus* and other *Bacillus* species like *B.coagulans* (*B. thermoacidurans*). These organisms cause flat-sour spoilage i.e acid production, but no gas in canned foods. *B.coagulans* have been isolated from canned tomato vegetable juice mixes, tomato juice, tomato puree, tomato soup and canned whole tomatoes. The organisms are found to multiply in tomato washing equipments where the volume of cold water is insufficient and the water temperature may reach 27 to 32°C. *B. stearothermophilus* shows growth at 55°C, poor growth at 37°C and no growth at 20°C. Both the organisms can grow at low pH.

COMPOSITION

Ingredients	Gms / Ltr
Yeast extract	4.000
Starch soluble	4.000
Glucose	1.000
Agar	30.000

PRINCIPLE

Yeast extract in the medium provides nutrition to the microorganisms. *Bacillus* species utilize complex starch while glucose acts as immediate precursor required for its biosynthesis. This medium is useful for enumeration of thermophiles in cereals and cereal products, canned foods, dehydrated fruits, vegetables, etc.

INSTRUCTION FOR USE

- Dissolve 39 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Mix well and pour in sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Yellow coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C)	: 3.7±0.1

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
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<i>Bacillus stearothermophilus</i>	7953	50-100	Good-luxuriant	55°C	24-48 Hours
<i>Bacillus coagulans</i>	8038	50-100	Good-luxuriant	55°C	24-48 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.










Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Williams O.B., 1936, Food Res., 1: 217.
2. Collee J.G. et al (Ed.), 1989, Mackie and McCartney, Practical Medical Microbiology; 396.

 GMP Good Manufacturing Practices Certified	 Best Before	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. Lot / Batch Number	 Consults Instructions for Use	 QR Code	

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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