Alicyclobacillus Agar

Intended Use
Alicyclobacillus Agar is used for isolation and cultivation of *Alicyclobacillus* species in fruit juices.

Summary
Alicyclobacillus species are Gram-positive, aerobic, thermophilic, and spore forming acidophilic bacteria. These are at times also called as Acidophilic Thermophilic Bacteria (ATB). These spore forming organisms are able to survive the relatively mild pasteurization temperatures which are used for fruit juices and drinks, and some are able to outgrow and cause spoilage of the beverage. Very low numbers of Alicyclobacillus are able to cause spoilage and produce distasteful flavors and odors, specially affecting the quality of fruit juice and in the beverages.

Principle
Alicyclobacillus Agar has a pH of 4.0 ± 0.2 which inhibits most of the microbial flora. *Alicyclobacillus* species are able to grow at pH values as low as 2.5 and also at elevated temperatures as high as 60ºC. Rest of the microbial flora is inhibited at 60ºC, which is the optimum growth temperature for *Alicyclobacillus* species. Alicyclobacillus Agar is a modification of the medium recommended for the cultivation of *Alicyclobacillus acidoterrestris* as suggested by Atlas.

Formula*

Ingredients	**g/L**
Yeast Extract	2.0
Dextrose	5.0
Calcium Chloride	0.25066
Magnesium Sulphate	0.5
Ammonium Sulphate	0.2
Potassium Dihydrogen Phosphate	3.0
Zinc Sulphate	0.00018
Copper Sulphate	0.00016
Manganese Sulphate	0.00015
Cobalt Chloride	0.00018
Boric Acid	0.00010
Sodium Molybdate	0.00030
Agar	18.0
Final pH (at 25°C)	4.0 ± 0.2

*Adjusted to suit performance parameters

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of specimen
Food and dairy samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 28.95 g of the powder in 1000 mL purified / distilled water.
2. Heat if necessary, to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. Mix well and pour into sterile petridishes.

Note: Adjust the pH of the medium to 4.0 ± 0.2 (after sterilization) using 1N H_2SO_4 or 1N NaOH.

Quality Control

Dehydrated Appearance: Cream to yellow coloured, homogenous, free flowing powder.
Prepared Appearance: Light amber to off white coloured, clear to slightly opalescent gel forms in petridishes.
Cultural Response: Cultural characteristics observed after incubation at 60°C for 48-72 hours.
Note: Adjusted the pH of the medium to 4.0 ± 0.2 (after sterilization) using 1N H_2SO_4 or 1N NaOH.

Organism (ATCC)	Growth
Alicyclobacillus acidocaldarius (27009)	Good
Escherichia coli (25922)	Inhibited
Staphylococcus aureus subsp. *aureus* (25923)	Inhibited
Saccharomyces cerevisiae NRRL Y-567 (9763)	Inhibited
Candida albicans 3147 (10231)	Inhibited

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Interpretation of Result

Growth in the medium is indicated by the presence of turbidity compared to an uninoculated control.

Precautions

In vitro diagnostic Use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens.

Warranty

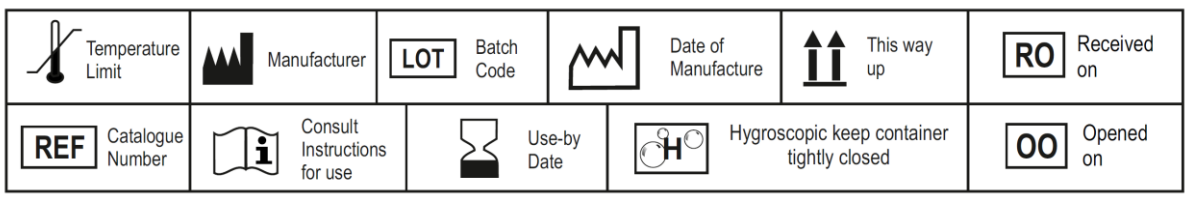
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Ceny G., Hennlish W., K Rocallia-Furchtsaftwerb ducrh Baciilen, 1984, Isobioerung & Charakteriseeuing des Verdebserregens-Z hebers Utres Forsch. 179: 224-227.
2. Baungart & Merve S., 2000, The Impact of Alicyclobacillus acidoterstris on the Quality of Juices and Soft Drinks Fruit processing. 7: 251-254.
3. Atlas R. M., 2004, Handbook of Microbiological Media, 3rd Ed., CRC Press
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201010070500	Dehydrated Culture Media	500 g
201010072500	Dehydrated Culture Media	2.5 k



Revision: 0725/VER-03

Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.