

YSG Agar

Intended Use

YSG Agar is recommended for the detection of *Alicyclobacillus* in fruit juices in accordance with official method of IFU.

Summary

Alicyclobacillus species are Gram-positive aerobic thermophilic, and spore forming acidophilic bacteria. *Alicyclobacillus* are sometimes called Acidophilic Thermophilic Bacteria (ATB). These spore forming organisms are able to survive the relatively mild pasteurization temperatures used for fruit juices and drinks and some are able to grow out and cause spoilage of the beverage. Even very low numbers of *Alicyclobacillus* are able to cause spoilage and produce objectionable flavours and odours specially affecting the quality of fruit juice and in the beverages, damaging the brand. These bacteria are able to grow at pH values as low as 2.5 and also at elevated temperatures as high as 60°C.

Principle

Yeast extract in the medium supplies vitamin and growth factors. Glucose serves as an energy source. Soluble starch neutralizes the medium. The low pH of the medium imparts selectivity to the medium. This medium is recommended for the count of *Alicyclobacillus* in fruit juices.

Formula*

Ingredients	g/L
Yeast Extract	2.0
Glucose	1.0
Soluble Starch	2.0
Agar	15.0
pH adjusted with 1N HCl to	3.7 ± 0.1

*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 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 20.00 g of the powder in 1000 mL distilled water.
2. Mix thoroughly.
3. Boil with frequent agitation and boil for one minute to dissolve the powder completely.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Quality Control

Dehydrated Appearance: Cream to yellow coloured, homogeneous free flowing powder.

Prepared Appearance: Pale yellow coloured, clear to slightly opalescent gel forms in petriplates.

Cultural Response: Cultural characteristics observed after an incubation at 45°C- 46°C for 3-5 days or 65°C- 66°C for 2-3 days.

Organism (ATCC)	Growth
<i>Alicyclobacillus acidocaldarius</i> (27009)	Good
<i>Alicyclobacillus acidoterrestris</i> (49028)	Good
<i>Alicyclobacillus acidoterrestris</i> (43030)	Good

Performance and Evaluation

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

1. Directions
2. Storage
3. Expiry

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. Cený G., Hennlich W. and K Rocallia-Furchtsaftwerb durch Baciilen. Isobioerung and Charakteriseeuing des Verdebserregens-Z hebers Utres Forsch 179: 224-227, 1984.
2. Baungart and Merve S., The Impact of *Alicyclobacillus acidoterstris* on the Quality of Juices and Soft Drinks Fruit processing 7: 251-254 (2000).
3. Cagnasso Stefano Rapid Screening of *Alicyclobacillus acidoterrestris* Spoilage of Fruit Juices by Electronic Nose: A Confirmation Study Journal of Sensors Volume 2010 (2010).
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat. No.	Product Description	Pack Size
201250040500	Dehydrated Culture Media	500 g

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.
