YSG Broth

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

Summary
Alicyclobacillus species are Gram-positive aerobic thermophillic, and spore forming acidophilic bacteria. *Alicyclobacillus* are sometimes called Acidophilic Thermophillic 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 was recommended for the pre-enrichment of *Alicyclobacillus* in fruit processing.

Formula*

Ingredients	**g/L**
Yeast Extract	2.0
Glucose	1.0
Soluble Starch	2.0
Final pH (at 25°C)	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.

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 5.00 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: Light yellow coloured, clear solution without any precipitate.
Cultural Response: Cultural characteristics observed after an incubation of 48-72 hours at 45°C.

Organism (ATCC)	Growth
Alicyclobacillus acidocaldarius (27009)	Good
Alicyclobacillus acidoterrestris (49028)	Good
Alicyclobacillus acidoterrestris (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. Ceny G., Hennlish W. and K Rocallia-Furchtsaftwerb ducrh 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
201250050500	Dehydrated Culture Media	500 g