

TM 2434 - YSG AGAR

INTENDED USE

For the detection of *Alicyclobacillus* in fruit juices in accordance with Official method of IFU.

PRODUCT SUMMARY AND EXPLANATION

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.

COMPOSITION

| Ingredients | Gms / Ltr |
|----------------|-----------|
| Yeast extract | 2.000 |
| Glucose | 1.000 |
| Soluble starch | 2.000 |
| Agar | 15.000 |

PRINCIPLE

YSG broth is recommended for the enrichment of *Alicyclobacillus*. 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.

INSTRUCTION FOR USE

- Dissolve 20 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.
- Cool to 45-50°C and adjust the pH to 3.7±0.1 with 1N HCl

QUALITY CONTROL SPECIFICATIONS

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

INTERPRETATION

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

| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Recovery |
|---------------|------|-------------------|--------|----------|
|---------------|------|-------------------|--------|----------|

| | | | | |
|---|-------|--------|-----------|-------|
| <i>Alicyclobacillus acidocaldarius</i> | 27009 | 50-100 | Luxuriant | >=70% |
| <i>Alicyclobacillus acidoterrestris</i> | 49028 | 50-100 | Luxuriant | >=70% |
| <i>Alicyclobacillus acidocaldarius</i> | 43030 | 50-100 | Luxuriant | >=70% |

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. Ceny 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).

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|  GMP Good Manufacturing Practices Certified |  Best Before |  QTY. Quantity |  REF Cataloge 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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