BAT Agar

Medium for the detection of Alicyclobacillus spp. in fruit juices and other beverages

Granulated Culture Media – Safer from Merck.

MERCK

BAT Agar

Medium for the detection of Alicyclobacillus spp.

Art. Nr. 1.07994.0500
(500 g)

Alicyclobacilli are aerobe, gram-positive spore forming bacteria, whose optimum of growth is at low pH-value and increased temperatures. Alicyclobacilli are spoilage organisms especially effecting the quality of fruit juices. (CERNY et al. 1984, BAUMGART und MENJE 2000)

The medium complies with First Standard IFU-Method on the Detection of Alicyclobacillus in Fruit Juices (2003).

Mode of action

The BAT agar supports the growth of Alicyclobacilli.
The low pH-value in combination with the high incubation temperature inhibit the contaminating flora in growth.

Typical composition (g/litre)

Yeast extract 2.0; D(+) glucose 5.0; Calcium chloride 0.25; Magnesium sulfate 0.5; Ammonium sulfate 0.2; Potassium-dihydrogenphosphate 3.0; Agar-Agar 18.0;
Trace Minerals Solution: (already included in the medium)
Calium chloride 0.00066; Zinc sulfate 0.00018; Copper sulfate 0.00016; Manganese sulfate 0.00015; Cobalt chloride 0.00018; Boric acid 0.00010; Sodium molybdate 0.00030

Quality control

Teststrains	Growth
Alicyclobacillus acidocaldarius DSMZ 446	good
Alicyclobacillus acidoterrestris DSMZ 2498	good
Alicyclobacillus cycloheptanicus DSMZ 4006	good
Alicyclobacillus hesperidium DSMZ 12766	good
Staphylococcus aureus ATCC 25923	none
Escherichia coli ATCC 25922	none

Preparation

Dissolve 29.0 g in 1 litre of demin. water and heat to boiling until completely dissolved.
Note: The medium has a spontaneous pH of 5.3 ±0.2 in order to maintain the gel strength during autoclavation. Adjustment of the pH to 4.0 ±0.2 is made after the autoclavation. Autoclave (15 min. at 121 °C)

Cool to 45-50 °C. Adjust the pH to 4.0 ±0.2 by adding 1.7 ml 1 NH_2SO_4. Mix well and pour into petri dishes.

pH: 4.0 ±0.2 at 25 °C

The prepared medium is clear and yellowish. The prepared plates can be stored for up to 2 weeks at +2-8 °C. Keep protected from light and drying.

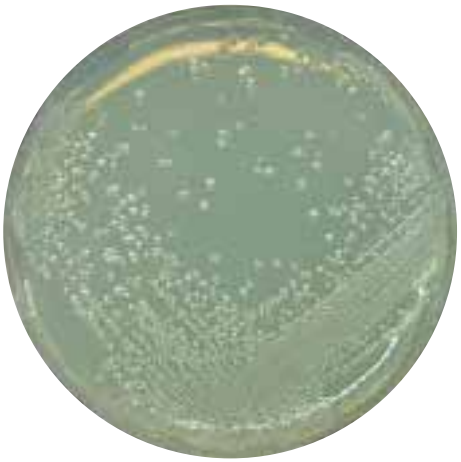
Application and interpretation

- Inoculate the medium by spreading 0.1 ml on the surface.
- Membranefilter technique can be used with samples being filterable.
- Incubation for 3-5 days at 45 ±1.0 °C.
- Count all colonies growing on the BAT agar as suspicious Alicyclobacilli.
- Confirm the suspicious colonies by further testing.

Further information about the advantages of Merck´s Granulated Culture Media you will find in the following promotion materials:

- *Granulated Culture Media (W.28611.2)*
- *TSE -"low risk" products (W.28612.0)*

GRANULATED CULTURE MEDIA FOR YOUR HEALTH AND SAFETY



Alicyclobacillus acidoterrestris DSMZ 2498

Literature

BAUMGART, J. and MENJE, S.: The Impact of Alicyclobacillus acidoterrestris on the Quality of Juices and Soft Drinks. • Fruit Processing 7; 251 - 254 (2000)

CERNY, G., HENNLICH, W. und PORALLA, K.: Fruchtsaft-verderb durch Bacillen: Isolierung und Charakterisierung des Verderbserregers. • Zeitschrift für Lebensmittel- Untersuchung und -Forschung 179; 224 - 227 (1984)

IFU Working Group Microbiology: First Standard IFU-Method on the Detection of Alicyclobacillus in Fruit Juices. • (April 2003)

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