

BAT Agar

Medium used for the isolation and identification of *Alicyclobacillus* spp. in fruit juices.

• CONTENTS (Liter)

Yeast Extract	2.0 g
Glucose	5.0 g
Calcium Chloride	0.25 g
Magnesium Sulfate	0.5 g
Ammonium Sulfate	0.2 g
Monopotassium Phosphate	3.0 g
Zinc Sulfate	0.00018 g
Copper Sulfate	0.00016 g
Manganese Sulfate	0.00015 g
Cobalt Chloride	0.00018 g
Boric Acid	0.00010 g
Sodium Molybdate	0.00030 g
Agar	18.0 g
Final pH = 4.0 ± 0.2 at 25°C	

• PROCEDURE

Suspend 28.95 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45 - 50°C in water bath. The medium is made with a pH of 5.3 ± 0.2 in order to maintain the gel strength during sterilization. Adjust the pH at 4.0 ± 0.2 by adding 3.3 mL of sterile 1 N H₂SO₄ after the autoclavation. Mix well. Pour into petri dishes.

• INTERPRETATION

BAT Agar is a medium used for the isolation and identification of *Alicyclobacillus* spp. in fruit juices. Yeast extract supplies B-complex vitamins which is required for the bacterial growth. Glucose is the fermentable carbohydrate. Calcium chloride, magnesium sulfate, ammonium sulfate, zinc sulfate, copper sulfate, manganese sulfate, cobalt chloride, boric acid and sodium molybdate are the trace minerals. Monopotassium phosphate is the buffering agent. Agar is the solidifying agent. The low pH value and the high incubation temperature inhibit the growth of contaminating flora in growth.

• TECHNIC

Inoculate the specimen using a sterile loop to the medium. Incubate at 60°C for 48 - 72 hours. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous

Color: light beige

Prepared medium

Appearance: slightly opalescent

Color: light amber

Incubation conditions: 60°C / 48 - 72 hours

Microorganism	ATCC	Growth
<i>Alicyclobacillus acidocaldarius</i>	27009	good
<i>Escherichia coli</i>	25922	inhibited
<i>Staphylococcus aureus</i>	25923	inhibited

• STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label. Store prepared medium at 2 - 8°C.

• REFERENCES

1. BAUMGART, J. and MENJE, S. The Impact of Alicyclobacillus acidoterrestris on the Quality of Juices and Soft Drinks. Fruit Processing 7; 251-254. (2000)
2. IFU Working Group Microbiology. First Standard IFU-Method on the Detection of Alicyclobacillus in Fruit Juices. April, 2003.
3. IFU STANDARDS (2004) Method No. 12 on the Detection of Taint Producing Alicyclobacillus in Fruit Juices. Revision March, 2007.

• PACKAGE

Cat. No : MB-B2122 BAT Agar	500 G
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