

Marine Agar

Medium used for the cultivation and enumeration of heterotrophic marine bacteria.

• CONTENTS (Liter)

Peptone	5.0 g
Yeast Extract	1.0 g
Ferric Citrate	0.1 g
Sodium Chloride	19.45 g
Magnesium Chloride	8.8 g
Magnesium Sulfate	3.24 g
Calcium Chloride	1.8 g
Potassium Chloride	0.55 g
Sodium Bicarbonate	0.16 g
Potassium Bromide	0.08 g
Strontium Chloride	0.034 g
Boric Acid	0.022 g
Sodium Silicate	0.004 g
Sodium Fluoride	0.0024 g
Ammonium Nitrate	0.0016 g
Disodium Phosphate	0.008 g
Agar	15.0 g

Final pH = 6.6 ± 0.2 at 25°C

• PROCEDURE

Suspend 55.25 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. Mix well. Pour into petri dishes.

• INTERPRETATION

Marine Agar is a medium used for the cultivation and enumeration of heterotrophic marine bacteria. Peptone is a source of carbon, nitrogen and essential nutrients. Yeast extract provides vitamin B complex nutrients and other growth factors. Ferric citrate, magnesium chloride, magnesium sulfate, calcium chloride, potassium chloride, sodium bicarbonate, potassium bromide, strontium chloride, boric acid, sodium silicate, sodium fluoride, ammonium nitrate provide the essential electrolytes and minerals. Sodium chloride maintains the osmotic balance. Disodium phosphate is the buffering agent. Agar is the solidifying agent.

• TECHNIC

Inoculate the specimen using a sterile loop to the medium. Incubate at 20 - 25°C for 40 - 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: opalescent with slight precipitates

Color: light amber

Incubation conditions: 20 - 25°C / 40 - 72 hours

Microorganism	ATCC	Inoculate CFU	Growth
<i>Vibrio vulnificus</i>	27562	50-100	good
<i>Vibrio parahaemolyticus</i>	17802	50-100	good

• 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. ZoBell. 1941. J. Mar. Res.
2. Lyman and Fleming. 1940. J, Mar. Res.
3. Buck and Cleverdon. 1960. Limnol. Oceanogr.
4. Sizemore and Stevenson. 1970. Appl. Microbiol.
5. Weiner. Segall and Colwell. 1985. Appl. Environ. Microbiol.

• PACKAGE

Cat. No : MB-M1505 Marine Agar	500 G
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