

BG11 Broth

Medium used for the cultivation of algae and protozoa.

• CONTENTS (Liter)

Sodium Nitrate	1.5 g
Dipotassium Phosphate	0.0314 g
Magnesium Sulfate	0.036 g
Calcium Chloride Dihydrate	0.0367 g
Sodium Carbonate	0.02 g
Disodium Magnesium EDTA	0.001 g
Citric Acid	0.0056 g
Ferric Ammonium Citrate	0.006 g
Boric Acid	0.00286 g
Manganese Chloride	0.00181 g
Zinc Sulfate	0.000222 g
Sodium Molybdate	0.00039 g
Copper Sulfate	0.000079 g
Cobalt Nitrate	0.000049 g
Final pH = 7.1 ± 0.2 at 25°C	

• PROCEDURE

Suspend 1.64 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. It is recommended to adjust pH with 1 M NaOH or HCl if it does not achieve 7.1. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45 - 50°C in water bath. Mix well. Pour into tubes.

For marine species make as solution of 10 g/L sodium chloride and 1 g/L Vitamin B12. Add 20 mL of this solution (sterile filtered) to 1 L of distilled or deionized water.

• INTERPRETATION

BG11 Broth is a medium used for the cultivation of algae and protozoa. Sodium nitrate serves as the source of nitrogen. Dipotassium phosphate is the buffering agent. Magnesium sulfate is a source of ions to stimulate growth. Calcium chloride dihydrate provides growth factors. Sodium carbonate, disodium magnesium EDTA, ferric ammonium citrate, boric acid, manganese chloride, zinc sulfate, sodium molybdate, copper sulfate and cobalt nitrate provide the essential electrolytes and minerals. Citric acid acts as metabolic intermediate.

• TECHNIC

Inoculate the specimen using a sterile needle to the medium. Shake gently for spreading microorganism. Incubate at 20 - 25°C for 1 week under 2000 - 3000 light intensity. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous

Color: off-white

Prepared medium

Appearance: slightly opalescent

Color: colorless

Incubation conditions: 20 - 25°C / 1 week under 2000 - 3000 light intensity

Microorganism	ATCC	Inoculum CFU	Growth
<i>Synechocystis species</i>	27184	heavy	good
<i>Chlorella vulgaris</i>	30821	heavy	good

• STORE

The powder is very hygroscopic. Store the powder at 2 - 8°C, 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. M.M. Allen, R.Y. Steiner, J. Gen. Microbiol. 51, 203 (1968)
2. P.R. Chitnis, et al., J. Biol. Chem. 266, 20146 (1991)
3. C. Lehel, et al, J. Biol. Chem. 268, 1799 (1993)
4. R.Y. Stanier, R. Kunisawa, M. Mandel, & Cohen-Bazire, G. Bacteriol. Rev. 35: 171-205 (1971)
5. Allen, M.M, Steiner,R.Y .J.Gen.Microbiol. 51 ,203 (1968).
6. R.Y. Stanier,R. Kunisawa,M. Mandel, & Cohen-Bazire,G. Bacteriol.Rev. 35: 171-205 (1971).
7. ATCC Catalogue of Bacteria & Bacteriophages 18th edition, 1992.

• PACKAGE

Cat. No : MB-B0872 BG11 Broth	500 G
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