

Product Information Sheet

B1411

BG-11 Medium Solution, 50x

Synonym: Blue-Green (BG) Medium

Properties

Form: Liquid
 Appearance: Light Yellow to Yellow
 Application: Cyanobacteria Media
 Solubility: Miscible with Water
 Typical Working Concentration: 20.00 mL/L
 Storage Temp: 2-6°C
 Storage Temp of Stock Solution: 2-6°C
 Biological Assay: Biologically tested with *Synechocystis* sp. PCC 6803.
 Solution pH is approx. 4.2 +/- 0.5

Other Notes: It is suggested not to autoclave BG-11, 50x concentrate solution as precipitation may result.

Formula (mg/L)

Boric Acid	143	Manganese Chloride·4H ₂ O	90.5
Calcium Chloride Anhydrous	1359	Na ₂ ·Mg·EDTA	50
Citric Acid, Anhydrous	300	Potassium Phosphate dibasic	2000
Cobalt Nitrate·6H ₂ O	2.45	Sodium Carbonate Anhydrous	1000
Cupric Sulfate·5H ₂ O	3.95	Sodium Molybdate·2H ₂ O	19.5
Ferric Ammonium Citrate	300	Sodium Nitrate	75000
Magnesium Sulfate·7H ₂ O	3750	Zinc Sulfate*7H ₂ O	11.1

Application Notes

BG-11 is generally a freshwater growth medium for culturing cyanobacteria such as *Synechocystis* sp. PCC 6803.

HEPES – H326 (Akira *et al.* 1996) or TES (Xu *et al.* 1994) can be added to buffer the pH. After adding the BG-11 concentrated solution, adjust to pH 8.0 with KOH or NaOH and autoclave.

20 mM HEPES (H326) was used during biological testing of this product with *Synechocystis* sp. PCC 6803

References

Akira, K., K. Lee, H. Fukuzawa, K. Ohyama, and T. Ogawa. (1996) *cemA* homologue essential to CO₂ transport in the cyanobacterium *Synechocystis* PCC 6803. *Proceedings of the National Academy of Sciences*. 93:4006-4010.

Rippka, R., J. Deruelles, J. B. Waterbury, M. Herdman, and R. Y. Stanier (1979) Generic assignments, strain histories and properties of pure cultures of cyanobacteria. *Journal of General Microbiology* 111:1-61.

Stanier, R.Y., R. Kunisawa, M. Mandel, and G. Cohen-Bazire. (1971) "Purification and Properties of Unicellular Blue-Green Algae (Order *Chroococcales*)."
Bacteriological Reviews 35(2):171-205.

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Cyanobacterium *Synechocystis* sp. PCC 6803." *Journal of Biological Chemistry* 279(27): 27971-27979.

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