

Product Information Sheet

B1511 BG-11 Medium

Synonym: Blue-Green (BG) Medium

Properties

Form: Powder
 Appearance: Cream
 Application: Cyanobacteria Growth Medium
 Solubility: Soluble in Water
 Typical Working Concentration: 1.68 g/L
 Storage Temp: 2-6°C
 Storage Temp of Stock Solution: 2-6°C
 Biological Assay: Cell culture tested with *Synechocystis* sp. PCC 6803.

Formula (mg/L)

Boric Acid	2.86	Manganese Chloride·4H ₂ O	1.81
Calcium Chloride Anhydrous	27.18	Na ₂ ·Mg·EDTA	1
Citric Acid, Anhydrous	6	Potassium Phosphate dibasic	40
Cobalt Nitrate·6H ₂ O	0.049	Sodium Carbonate Anhydrous	20
Cupric Sulfate·5H ₂ O	0.079	Sodium Molybdate·2H ₂ O	0.39
Ferric Ammonium Citrate	6	Sodium Nitrate	1500
Magnesium Sulfate·7H ₂ O	75	Zinc Sulfate*7H ₂ O	0.222

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 dissolving the powder medium, 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.
- Xu, H., D. Vavilin, C. Funk, and W. Vermaas. "Multiple Deletions of Small-Cab-like Proteins in the

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

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