

BOLD'S BASAL MEDIUM (BBM)
Modified from original

Reference: Stein, J. (ED.) Handbook of Phycological methods. Culture methods and growth measurements. Cambridge University Press. 448 pp.

This medium is highly enriched and is used for many of the green algae.

STOCK	STOCK SOLUTION	ml/Litre
1. KH_2PO_4	8.75 g/500 ml	10 ml
2. $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$	1.25 g/500 ml	10 ml
3. $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$	3.75 g/500 ml	10 ml
4. NaNO_3	12.5 g/500 ml	10 ml
5. K_2HPO_4	3.75 g/500 ml	10 ml
6. NaCl	1.25 g/500 ml	10 ml
7. Na_2EDTA	10 g/L	1 ml
KOH	6.2 g/L	
8. $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$	4.98 g/L	1 ml
H_2SO_4 (conc.)	1 ml/L	
9. Trace Metal Solution	See below*	1 ml
10. H_3BO_3	5.75 g/500 ml	0.7 ml

***Trace Metal Solution:**

Substance	g/Litre
1. H_3BO_3	2.86 g
2. $\text{MnCl}_2 \cdot 4\text{H}_2\text{O}$	1.81 g
3. $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$	0.222 g
4. $\text{Na MoO}_4 \cdot 5\text{H}_2\text{O}$	0.390 g
5. $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$	0.079 g
6. $\text{Co}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$	0.0494 g

Dissolve each of the above substances for the Trace Metal solution separately, prior to adding the next on the list.

Adjust the pH of the medium to 6.8 with NaOH or HCL and autoclave.

OPTIONS: As this is a highly enriched medium it can be diluted to 10% of the above concentrations and used successfully when fast and dense growth is not required. For 10% BBM, use 100 ml of 100% BBM/Litre of distilled water. The addition of 5 ml/L of soil extract is also beneficial to some algae particularly when problems with poor growth or morphology occur.