



Modified BG-11 (Blue - Green Medium)

Medium adapted for Cyanobacterial Cultures

Reference: Culture Collection of Algae and Protozoa Catalogue of Strains (1988).

This medium has been modified slightly to utilise existing stocks used in ANACC and to remove added ammonium from the original recipe.

STOCK SOLUTIONS	CONCENTRATION: g L ⁻¹ DEIONISED WATER (dH ₂ O)	VOLUME FOR CONCENTRATED NUTRIENT STOCK/MEDIUM
1. NaNO ₃	150.0 g	10 mL
2. K ₂ HPO ₄	5.0 g	8.0 mL
3. MgSO ₄ ·7H ₂ O	49.4 g	1.5 mL
4. CaCl ₂ ·2H ₂ O	29.4 g	1.2 mL
5. Ferric citrate	<i>see recipe below</i>	0.67 mL
6. EDTA	10 g	0.1 mL
7. Na ₂ CO ₃	20 g	1.0 mL
8. BG-11 trace metals	<i>see recipe below</i>	1.0 mL

Store all stock solutions in the refrigerator.

Fe citrate solution

Add both constituents to 1 L of dH₂O and autoclave to dissolve. Store solution in the dark.

CONSTITUENT	QUANTITY
Ferric citrate	9.0 g
Citric acid	9.0 g

BG-11 trace metals solution

Add each of the constituents separately to ~800 mL of dH₂O and fully dissolve between additions. Make solution up to 1 L.

CONSTITUENT	QUANTITY
H ₃ BO ₃	2.86 g
MnCl ₂ ·4H ₂ O	1.81 g
ZnSO ₄ ·7H ₂ O	0.222 g
Na ₂ MoO ₄ ·2H ₂ O	0.39 g
CuSO ₄ ·5H ₂ O	0.079 g
Co(NO ₃) ₂ ·6H ₂ O	0.0494 g

To prepare modified BG-11 Medium (1 L)

- Add each stock solution (1 – 8) in the stated volume to the 976 mL dH₂O.
- Adjust the pH to ~ 7.4 with 1 M NaOH or HCl.
- Autoclave at 121°C (15 psi for 20 mins).
- Alternatively, aseptically add each stock solution (1 – 8) in the stated volume to the 976 mL of sterilized dH₂O.

To prepare modified BG-11 Medium (1 L) Seawater

- Autoclave seawater (0.22 µm filtered) in 1-L Teflon bottles at 121°C (15 psi for 20 mins).
- Aseptically add each stock solution (1 – 8) in the stated volume to the 976 mL of sterilized dH₂O.

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