

Media for freshwater red algae

Bold 3N

NaNO ₃	75	mg
CaCl ₂ · 2H ₂ O	2.5	mg
MgSO ₄ · 7H ₂ O	7.5	mg
K ₂ HPO ₄	7.5	mg
KH ₂ PO ₄ ¹⁾	17.5	mg
NaCl	2.5	mg
Vitamin B ₁₂ ²⁾	0.015	µg
PIV metals	0.6	mL
Soil extract	4	mL
Distilled water	96.4	mL

1) In the NIES-Collection, the amount of KH₂PO₄ is reduced from 17.5 mg to 10.5 mg.

2) In the NIES-Collection, the amount of vitamin B₁₂ is increased from 0.015 µg to 0.02 µg.

P IV metals

Na ₂ EDTA · 2H ₂ O	100	mg
FeCl ₃ · 6H ₂ O	19.6	mg
MnCl ₂ · 4H ₂ O	3.6	mg
ZnCl ₂ ¹⁾	1.04	mg
CoCl ₂ · 6H ₂ O	0.4	mg
Na ₂ MoO ₄ · 2H ₂ O	0.25	mg
Distilled water	100	mL

1) In the NIES-Collection, 1.04 mg ZnCl₂ is replaced by 2.2mg ZnSO₄ · 7H₂O.

Reference

Provasoli, L., Pintner, I. J. 1959 Artificial media for fresh-water algae: problems and suggestions. In *The Ecology of Algae. Spec. Pub. No. 2.*, Eds. by Tryon, C. A., Jr. & Hartmann, R. T., Pymatuning Laboratory of Field Biology, University of Pittsburgh, Pittsburgh, p. 84-96.

Soil extract

To 1000 mL distilled water add 200 mL of soil (soil from undisturbed deciduous woodland is best) and heat by autoclaving for 1 h at 105°C. When cool, heat by autoclaving for 1 h at 105°C again. Pass the supernatant through a GF/C filter and Celite, and then pass the filtrate through a GF/F filter. Adjust to 1000 mL by adding distilled water. Dispense 10 mL of the final filtrate into each test tube and sterilize by autoclaving for 20min at 121°C. Keep in a cool place.

Reference

Provasoli, L., McLaughlin, J. J. A., Droop, M. R. 1957 The development of artificial media for marine algae. *Arch. Mikrobiol.*, **25**, 392-428.