

Media for freshwater, terrestrial, hot spring and salt water algae

URO + Soil

Prepare as for 100 mL URO medium with 89.9 mL instead of 99.9 mL distilled water and with 10 mL Soil Extract and then adjust to pH 7.5.

URO

NH ₄ NO ₃	0.5 mg
β-Na ₂ glycerophosphate · 5H ₂ O	0.4 mg
MgSO ₄ · 7H ₂ O	1 mg
CaCl ₂ · 2H ₂ O	1 mg
KCl	0.1 mg
Thiamine HCl	1 µg
Vitamin B ₁₂	0.01 µg
Biotin	0.01 µg
Fe-EDTA	0.05 mg
PIV metals	0.1 mL
Distilled water	99.9 mL
pH 7.5 ¹⁾	

1) pH is adjusted to 7.5 with 0.1 mol/L HCl.

Reference

Kimura, B., Ishida, Y. 1985 Photophagotrophy in *Uroglena americana*, Chrysophyceae. *Jpn. J. Limnol.*, **46**, 315-318.

Nakahara, H., Sako, Y. 1987 2. Life history of freshwater phytoplankton [2. Tansui syokubutsu purankuton no seikatsushi]. In *Freshwater red tide [Tansui Akashio]*, Ed. by Kadota, H., Kōseisya-Kōseikaku, Tokyo, p. 21-77 (in Japanese without English title).

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.

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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 20 min 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.