SN Medium

Waterbury et al. 1986

Waterbury et al. (1986) proposed three media for culturing marine *Synchococcus sensu lato* (Cyanophyceae), and we present the most popular version, SN medium. If a solid medium (agar) is prepared, see Waterbury et al. (1986) for a method to wash the agar before use to remove contaminants.

First, prepare the stock solutions and autoclave (vitamins may also be filter sterilized). To prepare, autoclave 750 mL of filtered natural seawater in a Teflon-lined bottle and separately autoclave 236 mL of double distilled dH_2O. Aseptically combine the two solutions. Aseptically, add 10 mL of sodium nitrate solution and 1 mL of the other five stock solutions.

Component	Stock Solution	Quantity	Molar Concentration in Final Medium
$NaNO_3$	76.5 g $L^{-1}dH_2O$	10 mL	9.0 x 10^{-3}M
K_2HPO_4 (anhydrous)	15.68 g $L^{-1}dH_2O$	1 mL	9.9 x 10^{-5}M
$Na_2EDTA \bullet 2H_2O$	5.58 g $L^{-1}dH_2O$	1 mL	1.5 x 10^{-5}M
Na_2CO_3	10.70 g $L^{-1}dH_2O$	1 mL	1.0 x 10^{-4}M
cyanocobalomin (vit. B12)	1.0 mg $L^{-1}dH_2O$	1 mL	7.38 x 10^{-10}M
trace metal solution	(see recipe below)	1 mL	---

Cyano Trace Metal Solution
(Waterbury et al. 1986)

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Compound	Primary Stock Solution	Quantity	Molar Concentration in Final Medium
Citric Acid • H_2O	---	6.250 g	3.25 x 10-5 M
Ferric ammonium citrate	---	6.000 g	---
$MnCl_2 • 4H_2O$	---	1.400 g	7.08 x 10^{-6}M
$Na_2MoO_4 • 2H_2O$	---	0.390 g	1.61 x 10^{-6}M
$ZnSO_4 • 7H_2O$	---	0.222 g	7.72 x 10^{-7}M
$Co(NO_3)_2 • 6H_2O$	---	0.025 g	8.59 x 10^{-8}M

Waterbury, J.B., Watson, S.W., Valois, F.W. and Franks, D.G. 1986. Biological and ecological characterization of the marine unicellular cyanobacterium *Synechococcus*. *In* Platt, T. and Li, W.K.I. (eds.) *Photosynthetic Picoplankton*. *Can. Bull. Fish. Aquatic Sci.* 214: 71-?????