

## f/2 Medium

### Stocks

	per 200 ml
(1) NaNO <sub>3</sub>	15 g
(2) NaH <sub>2</sub> PO <sub>4</sub> .2H <sub>2</sub> O	1.13 g
(3) Trace elements (x10 concentration)	<b>per 200 ml</b>
NA <sub>2</sub> EDTA	8.32 g
FeCl <sub>3</sub> .6H <sub>2</sub> O	6.30 g
CuSO <sub>4</sub> .5H <sub>2</sub> O	0.02 g
ZnSO <sub>4</sub> .7H <sub>2</sub> O	0.044 g
CoCl <sub>2</sub> .6H <sub>2</sub> O	0.02 g
MnCl <sub>2</sub> .4H <sub>2</sub> O	0.36 g
Na <sub>2</sub> MoO <sub>4</sub> .2H <sub>2</sub> O	0.012 g
(4) Vitamin mix: First make primary stocks of Cyanocobalamin and Biotin.	<b>per 100 ml</b>
Cyanocobalamin (Vitamin B <sub>12</sub> )	0.1 g
Biotin	0.1 g
Dispense any excess primary stocks into 1 ml aliquots and freeze.	
For final vitamin mix stock solution:	<b>per 200 ml</b>
Thiamine HCl (Vitamin B <sub>1</sub> )	0.02 g
Cyanocobalamin (Vitamin B <sub>12</sub> )	1 ml
Biotin	1 ml

### Medium

	per litre
Stock solution 1	1.0 ml
Stock solution 2	1.0 ml
Stock solution 3 (Trace elements)	0.1 ml
Stock solution 4 (Vitamin mix)	1.0 ml

Make up to 1 litre with filtered natural seawater. Adjust pH to **8.0** with 1M NaOH or 1 M HCl prior to autoclaving. For agar add 15g per litre Bacteriological Agar. Autoclave at 15 psi for 15 minutes.

### Reference

Guillard RRL & Ryther JH (1962) Studies of marine planktonic diatoms. I. *Cyclotella nana* Hustedt and *Detonula confervaceae* (Cleve) Gran. Can. J. Microbiol. **8**: 229-239.

### f/10 Medium

For f/10 medium for calcifying *Emiliana*, simply dilute all stock solutions by 1/5th

### f/2Q 'Quad'

This medium will provide nutrients for long lasting, dense cultures and can be used in liquid and agar forms.

Use 4.0 ml of stock solution 1 (NaNO<sub>3</sub>) and 4.0 ml of stock solution 2 (NaH<sub>2</sub>PO<sub>4</sub>.2H<sub>2</sub>O)

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