



# K Medium

Reference: Adapted from Table 2; Keller, M. D., Selvin, R. C., Claus, W. and Guillard, R. R. L. (1987). Media for the culture of oceanic ultraplankton. J. Phycol. 23, 633-638

STOCK SOLUTIONS	CONCENTRATION: g L <sup>-1</sup> DEIONISED WATER (dH <sub>2</sub> O)	VOLUME FOR CONCENTRATED NUTRIENT STOCK
1. NaNO <sub>3</sub>	150 g	2.5 mL
2. Na <sub>2</sub> glyceroPO <sub>4</sub>	3.24 g	5.0 mL
3. Na <sub>2</sub> SiO <sub>3</sub> .9H <sub>2</sub> O	22.7 g	2.5 mL
4. Vitamins	<i>see recipe below</i>	5.0 mL
5. FeNaEDTA	4.3 g	5.0 mL
6. K – Primary Trace metal mix	<i>see recipe below</i>	5.0 mL
7. Na <sub>2</sub> EDTA.2H <sub>2</sub> O	30.0 g	6.2 mL
8. TRIS	100 g	6.05 mL
9. NH <sub>4</sub> Cl	2.68 g	5.0 mL
10. H <sub>2</sub> SeO <sub>3</sub>	1.29 mg	5.0 mL

Store all stock solutions in the refrigerator.

## Vitamins solution

Add constituents to 100 mL of dH<sub>2</sub>O. Remake solution after 3 months.

CONSTITUENT	CONCENTRATION: mg L <sup>-1</sup> DEIONISED WATER (dH <sub>2</sub> O)	QUANTITY FOR WORKING STOCK
Vitamin B <sub>12</sub>	100 mg	1.0 mL
Biotin	100 mg	1.0 mL
Thiamine HCl	<i>add reagent directly to stock</i>	20.0 mg

## K – Primary Trace metal mix

Add each of the constituents to ~750 mL dH<sub>2</sub>O, mixing thoroughly between additions to dissolve. Make solution up to 1 L.

CONSTITUENT	QUANTITY
CuSO <sub>4</sub> ·5H <sub>2</sub> O	4.9 mg
ZnSO <sub>4</sub> ·7H <sub>2</sub> O	22.0 mg
CoCl <sub>2</sub> ·6H <sub>2</sub> O	11.0 mg
MnCl <sub>2</sub> ·4H <sub>2</sub> O	180.0 mg
Na <sub>2</sub> MoO <sub>4</sub> ·2H <sub>2</sub> O	6.3 mg

### 1. To prepare K concentrated nutrients

- Combine each of the stock solutions (**1 – 10**) in the stated quantities to 52.75 mL of dH<sub>2</sub>O.
- Filter sterilise using a 0.22 µm filter into a sterile 250 mL Schott bottle.

Use 2 mL per 100 mL sterile seawater adding the correct amount of nutrients aseptically.

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