

K/2(-Tris-Si) (Keller *et al.*, 1987) – modified by I. Probert

To 994 ml of seawater (optional: Heat seawater to 80°C for 2 hours and leave to cool – this should kill most organisms but should not chemically modify the medium too much) add:

Quantity	Compound	Stock solution (sterile)	Final conc. in K medium
0.5ml	NaNO ₃	48.9542g/litre H ₂ O	288μM
0.5ml	NH ₄ Cl *	0.535g/litre H ₂ O	5μM
0.5ml	KH ₂ PO ₄	4.8992g/litre H ₂ O	18μM
0.5ml	FeEDTA solution	(see recipe below)	(see below)
0.5ml	Trace metal solution	(see recipe below)	(see below)
1.0ml	f/2 vitamin solution	(see recipe below)	(see below)

* optional

FeEDTA solution

To 950ml distilled H₂O add:

Quantity	Compound	Stock solution	Final conc. in K medium
4.3g	(Na)FeEDTA	-	5.85μM

Make up to 1 litre with milliQ H₂O, sterilize (filter 0.22μm) and store in fridge.

Trace metal solution

To 950ml distilled H₂O add:

Quantity	Compound	Stock solution	Final conc. in K medium
37.22g	Na ₂ EDTA.2H ₂ O	-	50μM
1.0ml	Na ₂ MoO ₄ .2H ₂ O	7.2585g/litre H ₂ O	0.015μM
1.0ml	ZnSO ₄ .7H ₂ O	23.0g/litre H ₂ O	0.004μM
1.0ml	CoSO ₄ .7H ₂ O	14.055g/litre H ₂ O	0.025μM
1.0ml	MnCl ₂ .4H ₂ O	178.11g/litre H ₂ O	0.45μM
1.0ml	H ₂ SeO ₃	1.29g/litre H ₂ O	0.005μM
1.0ml	NiCl ₂ .6H ₂ O	1.49 g/litre H ₂ O	0.00314μM

Make up to 1 litre with milliQ H₂O, sterilize (filter 0.22μm) and store in fridge.

f/2 Vitamin solution

To 950ml distilled H₂O add:

Quantity	Compound	Stock solution	Final conc. in K medium
1.0ml	Vit. B ₁₂ (cyanocobalamin)	0.5g/litre H ₂ O	0.37nM
1.0ml	Biotin	5.0mg/litre H ₂ O	2.0nM
100.0mg	Thiamine HCl	-	0.3 μ M

Make up to 1 litre with milliQ H₂O, filter sterilize into plastic vials and store in freezer.

After addition of supplements, adjust pH of medium to 8.2 (with 0.2M solution of NaOH)

For K-ET, add 10-30 ml marine soil extract (ET)

Sterilization of medium : Filter sterilize through 0.22 μ m filters (e.g. Millipore Steritop units) into sterile (autoclaved) polycarbonate bottles.