

ESAW Media for Marine Phytoplankton

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Abstract

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Before start

Be sure to mix and autoclave **solution I** and **solution II** separately before combining and adding trace metal solutions and vitamin solutions. Store media in 4°C.

Protocol

Step 1.

SOLUTION I

- NaCl 20.76 g
- Na₂SO₄ 3.48 g
- KCL 0.59 g
- NaHCO₃ 0.17 g
- KBr 0.085 g
- H₃BO 0.26 g
- NaF 1 mL (2.7 g/L stock)

****Bring to 500 mL MilliQ water

Step 2.

Solution II

- $\text{MgCl}_2 \cdot 6\text{H}_2\text{O}$ 9.4 g
- $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$ 1.32 g
- $\text{SrCl}_2 \cdot 6\text{H}_2\text{O}$ 0.021 g
- Tris-HCL (pH 7.8) 5 mL (1.0 M stock)
- Fe-EDTA 0.56 mL (4.36 g/L Na_2EDTA , 3.15 g/L Fe Cl_3 stock)
- K_2HPO_4 1 mL (10g/L stock)
- NaNO_3 1 mL (550 mM stock)
- Selenite 1 mL (10 μM stock)

**** Bring to 500 mL MilliQ water.

Step 3.

Autoclave **Solution I** and **Solution II** separately.

Step 4.

After cooling, combine **solutions I & II** and add:

- Trace Metals Solution 1 mL
- Vitamin Solution 0.1 mL

📌 NOTES

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Trace Metals (TM) Solution

CuSO₄ (10 mg/L)

ZnSO₄ (22 mg/L)

CoCl₂ (10 mg/L)

MnCl₂·4H₂O (180 mg/mL)

Na₂MoO₄·2H₂O (6 mg/L)

***** Make stock solution, filter sterilize with 0.2 µm filter and store in dark at 4°C

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Vitamin Solution

Thiamine (100 mg/mL)

Vitamin B₁₂ (2 mg/mL)

Biotin (1 mg/mL)

**** Make stock solution, filter sterilize with 0.2 µm filter and store in dark at 4°C

Step 5.