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Von Stosch (VS) enriched seawater medium solution

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Protocol status: Working

We use this protocol and it's working

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Abstract

This protocol outlines the steps required to prepare von Stosch (VS) enriched seawater medium modified according to Guiry & Cunningham (1984).








CITATION

M. D. Guiry & E. M. Cunningham (1984). Photoperiodic and temperature responses in the reproduction of north-eastern Atlantic *Gigartina acicularis* (Rhodophyta: Gigartinales). *Phycologia*.

LINK

<https://doi.org/10.2216/i0031-8884-23-3-357.1>

Protocol materials


-  Thiamine HCl **P212121** Step 1.7
-  Potassium iodide Step 1.9
-  MilliQ water In [3 steps](#)
-  Manganese(II) chloride tetrahydrate **Merck MilliporeSigma (Sigma-Aldrich) Catalog #M3634** Step 1.5
-  Sodium Glycerophosphate **Catalog # S8041-100GM** Step 1.3
-  Iron(II) sulfate heptahydrate **Merck MilliporeSigma (Sigma-Aldrich) Catalog #215422** Step 1.4
-  Biotin **P212121** Step 1.6
-  Vitamin B12 **Fisher Scientific Catalog #68-19-9** Step 1
-  Titriplex® III solution **Merck MilliporeSigma (Sigma-Aldrich) Catalog #1099920001** Step 1.2

Before start

It is important to follow the order of chemicals added as shown in the protocol.

Vitamin B12 stock solution



1  5 mg  Vitamin B12 **Sigma Aldrich Catalog #68-19-9** in  500 mL



 MilliQ water **Sigma Aldrich**



Note



The vitamin B12 stock solution has to be prepared separately to the primary solution and should be stored in the fridge.

Primary solution

1.1 In  4 L  MilliQ water **Sigma Aldrich** dissolve:



1.2  1.86 g  Titriplex® III solution **Sigma Aldrich Catalog #1099920001** (Na₂-EDTA 2 H₂O)






1.3  21.26 g  Sodium Glycerophosphate **Sigma Aldrich Catalog # S8041-100GM**



1.4  0.139 g  Iron(II) sulfate heptahydrate **Sigma Aldrich Catalog #215422**

1.5  0.98 g  Manganese(II) chloride tetrahydrate **Sigma Aldrich Catalog #M3634**

1.6  0.05 g  Biotin **Sigma Aldrich**


1.7  0.1 g  Thiamine HCl **Sigma Aldrich**

1.8  20 mL Vitamin B12 stock solution ( 5 mg in  500 mL  MilliQ water **Sigma Aldrich**  [go to step #1](#))

1.9  10 mg  Potassium iodide **Sigma Aldrich**

1.10 Pasteurise for  02:00:00 at  99 °C

Storage

2 Store VS solution in Duran bottles in a cold and dark setting at  10 °C .

Equipment

Duran® laboratory bottles, with caps	NAME
Glass bottle	TYPE
Duran	BRAND
Z305197-10EA	SKU
500 ml	SPECIFICATIONS

Application

3 Culturing medium is created by adding  200 mL VS to  10 L sterile seawater

Note

Add VS solution to seawater only after it has cooled down.

Citations

M. D. Guiry & E. M. Cunningham. Photoperiodic and temperature responses in the reproduction of north-eastern Atlantic *Gigartina acicularis* (Rhodophyta: Gigartinales)

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