Fraquil Media Version 2

Dr. Steven Wilhelm

Abstract

Please contact Dr. Steven Wilhelm (wilhelm@utk.edu) for additional information regarding this protocol.

Adapted from the original publication Morel, F. M. M., J. C. Westall, J. G. Reuter & J. P. Chaplick, 1975. Description of the algal growth media 'Aquil' and 'Fraquil'. Water Quality Laboratory, Ralph Parsons Laboratory for Water Resources and Hydrodynamics, Massachusetts Institute of Technology, Technical Report 16, 33 pp.

Citation: Dr. Steven Wilhelm Fraquil Media. **protocols.io**
dx.doi.org/10.17504/protocols.io.h9ib94e
Published: 01 Jun 2017

Protocol

Individual Salt Stock Solutions

Step 1.

Add 18.4 g $CaCl_2$*H_2O to 500 mL Milli-Q H_2O in a clean polyethylene bottle

REAGENTS
Calcium Chloride by Contributed by users

Step 2.

Add 18.5 g $MgSO_4$*$7H_2O$ to 500 mL Milli-Q H_2O in a clean polyethylene bottle

REAGENTS
Magnesium sulfate heptahydrate by Contributed by users

Step 3.

Add 6.3 g $NaHCO_3$ to 500 mL Milli-Q H_2O in a clean polyethylene bottle

REAGENTS
Sodium bicarbonate View by P212121

Step 4.

Add 0.87 g K_2HPO_4 to 500 mL Milli-Q H_2O in a clean polyethylene bottle

REAGENTS

Potassium phosphate (dibasic) View by P212121

Step 5.

Add 4.25 g $NaNO_3$ to 500 mL Milli-Q H_2O in a clean polyethylene bottle

REAGENTS

Sodium nitrate View by P212121

Trace Metals Mix (1 uM Fe final stock)

Step 6.

Add 443 mL Milli-Q H_2O to a clean polyethylene container

Step 7.

Add 500 µL $CuSO_4*5H_2O$

REAGENTS

Copper Sulfate View by P212121

Step 8.

Add 500 µL $(NH_4)_6Mo_7O_{24}*4H_2O$

REAGENTS

Ammonium molybdate (VI) tetrahydrate 12054-85-2 by Fisher Scientific

Step 9.

Add 500 µL $CoCl_2*6H_2O$

REAGENTS

Cobalt (II) chloride hexahydrate 7791-13-1 by Fisher Scientific

Step 10.

Add 500 µL $MnCl_2*4H_2O$

REAGENTS

Manganese chloride 7773-01-5 by Fisher Scientific

Step 11.

Add 500 µL $ZnSO_4*7H_2O$

REAGENTS

Zinc sulfate by Contributed by users

Step 12.

Add 5 mL Na_2EDTA (0.5 M)

REAGENTS
EDTA Disodium Salt PubChem CID: 8759 by Contributed by users

Step 13.

Add 50 mL $FeCl_3*7H_2O$

REAGENTS
Iron(III) chloride hexahydrate 44944 by Sigma Aldrich

F/2 Vitamin Solution

Step 14.

Add 1 L Milli-Q H_2O to a clean bottle

Step 15.

Add 1 mL vitamin B_{12} (1.0 g/L dH_2O)

Step 16.

Add 10 mL Biotin (0.1 g/L dH_2O)

REAGENTS
Biotin View by P212121

Step 17.

Add 200 mg Thiamine HCl

REAGENTS
Thiamine HCl View by P212121

Media additions

Step 18.

Add 993 mL Milli-Q H_2O to a clean polycarbonate bottle

Step 19.

Add 1 mL $CaCl_2$

Step 20.

Add 1 mL $MgSO_4$

Step 21.

Add 1 mL $NaHCO_3$

Step 22.

Add 1 mL K_2HPO_4

Step 23.

Add 1 mL $NaNO_3$

Step 24.

Add 1 mL Trace metal mix

Step 25.

Add 1 mL f/2 vitamin mix

Step 26.

Filter sterilize and dispense into acid-washed/microwave tyndalized polycarbonate tubes.