Preparing AQUIL Media

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Abstract

Procedure in order to prepare EDTA media (also known as Aquil).

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Guidelines

Reagents

- Sodium Silicate
- Sodium Nitrate:
- Sodium dihydrogen Phosphate:
- Vitamin B12
- Biotin
- Thiamine
- $FeCl_3 6H_2O$
- $ZnSO_4 7H_2O$
- $MnCl_2 4H_2O$
- $CoCl_2 6H_2O$
- $CuSO_4 5H_2O$
- $Na_2MoO42H_2O$
- Na_2SeO_3

Protocol

Step 1.

Nutrient Stock

Add 1.42g Sodium Silicate to 50ml of UPW in a 50ml vial.

Add 0.43g Sodium Nitrate to 50ml of UPW in a 50ml vial.

Add 0.069g Sodium dihydrogen Phosphate to 50ml of UPW in a 50ml vial.

Step 2.

Vitamin Stock

Add 0.037g of Vitamin B12 to 50ml of UPW in a 50ml vial.

Add 0.0061g of Biotin to 50ml of UPW in a 50ml vial.

Add 1.5g Thiamine to 50ml of UPW in a 50ml vial.

Step 3.

EDTA Stock

Add all of the following dry chemicals into one clean 50ml vial in order to make EDTA stock.

- 46g of EDTA
- 0.0135g of $FeCl_3 6H_2O$
- 0.0011g of $ZnSO_4 7H_2O$
- 0.002g of $MnCl_2 4H_2O$
- 001g of $CoCl_2 6H_2O$
- 002g of $CuSO_4 5H_2O$
- 004g of $Na_2MoO42H_2O$

- 0001g of Na_2SeO_3

Step 4.

Nutrient and vitamin stocks should be chelexed and filter-sterilized before use. EDTA(metals) stock should be filter-sterilized. To make AQUIL, add the following reagents to 1L of chelexed, microwave-sterilized ASW, or 1L microwave sterilized surface seawater. Add 1ml EDTA stock, 1ml sodium silicate, 1ml sodium nitrate, 1ml sodium dihydrogen phosphate, 100ul vitamin B_{12}, 100ul biotin and 100ul thiamine stock. Invert bottle twice for mixing.