

# Chu's-10 Media Version 3

Dr. Steven Wilhelm

## Abstract

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

Adapted from the original publication Stein, J (ED.) 1973. Handbook of Phycological methods. Culture methods and growth measurements. Cambridge University Press. 448 pp.

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## Protocol

### Step 1.

Add 1 L Milli-Q H<sub>2</sub>O to a clean media bottle

### Step 2.

Add 0.232 g Ca(NO<sub>3</sub>)<sub>2</sub>\*4H<sub>2</sub>O



#### REAGENTS


 calcium nitrate by Contributed by users

### Step 3.

Add 0.01 g K<sub>2</sub>HPO<sub>4</sub>



#### REAGENTS

 Potassium phosphate (dibasic) [View](#) by [P212121](#)

### Step 4.

Add 0.025 g MgSO<sub>4</sub>\*7H<sub>2</sub>O



#### REAGENTS

 Magnesium Sulfate [View](#) by [P212121](#)

### Step 5.

Add 0.02 g  $\text{Na}_2\text{CO}_3$



#### REAGENTS



Sodium carbonate [View](#) by [P212121](#)

#### Step 6.

Add 0.044 g  $\text{Na}_2\text{SiO}_3 \cdot 5\text{H}_2\text{O}$



#### REAGENTS



Sodium metasilicate by Contributed by users

#### Step 7.

Add 3.5 mg Ferric citrate

#### Step 8.

Add 3.5 mg Citric acid



#### REAGENTS



Citric Acid [View](#) by [P212121](#)

#### Step 9.

Add 1 mL of Metal solution



#### PROTOCOL

#### . [Chu's-10 Metal Solution](#)

CONTACT: [Steven Wilhelm](#)

#### Step 9.1.

Add 1 L Milli-Q  $\text{H}_2\text{O}$  to a clean media bottle

#### Step 9.2.

Add 2.4 g  $\text{H}_3\text{BO}_3$



#### REAGENTS

Boric acid BP1681 by [Fisher Scientific](#)

#### Step 9.3.

Add 1.4 g  $\text{MnCl}_2 \cdot 4\text{H}_2\text{O}$



#### REAGENTS

Manganese chloride 7773-01-5 by [Fisher Scientific](#)

#### Step 9.4.

Add 0.4 g  $\text{ZnCl}_2$



#### REAGENTS

✓ Zinc dichloride by Contributed by users

#### Step 9.5.

Add 0.02 g  $\text{CoCl}_2 \cdot 6\text{H}_2\text{O}$



#### REAGENTS

✓ Cobaltous chloride hexahydrate by Contributed by users

#### Step 9.6.

Add 0.1 mg  $\text{CuCl}_2 \cdot 2\text{H}_2\text{O}$



#### REAGENTS

Copper (II) chloride dihydrate 10125-13-0 by [Fisher Scientific](#)

#### Step 10.

If making agar, add 15 g to media

#### Step 11.

Autoclave at  $121^\circ\text{C}$  for 20 min