100x BG-11 media

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Abstract

This protocol describes how to prepare a 100x BG-11 +N stock.

1x BG-11 media could be created from the stock and supplemental stocks and trace metals could be added afterwards.

This protocol is based on Anne Behle M.Sc. Reciepe for standard BG-11 media protocol.

Recipes for standard and alternative BG11 for culturing freshwater cyanobacteria, such as *Synechocystis* sp. PCC 6803, as described.

Media is usually not suitable for marine cyanobacteria.

Citation: Anna Behle,Miriam Dreesbach,Susanne Vollmer 100x BG-11 media. **protocols.io** dx.doi.org/10.17504/protocols.io.n97dh9n
Published: 06 Apr 2018

Guidelines

Always work under sterile conditions when handling sterile media or stocks. Work under the clean bench.

Protocol

Safety first

Step 1.

Always work under sterile conditions.

Step 2.

Add $CaCl_2$ $2H_2O$ (3.6 g · L^{-1}). We did not have hydrated $CaCl_2$. Therefore, we used 2.718 g $CaCl_2$ (powder) for 1L of the stock.

Step 3.

Add Citric acid (0.6 g · L^{-1})

Step 4.

Add $NaNO_3$ (149.58 g · L^{-1})

Step 5.

Add $MgSO_4 \cdot 7\ H_2O$ (7.49 g · L^{-1}). We do not have hydrated $MgSO_4$. Therefore, we used 3.659 g $MgSO_4$ (powder) for 1L of the stock.

Step 6.

Add 0.25 M Na_2-EDTA, pH 8.0 (0.56 ml · L^{-1}). We did not have a 0.25 M Na_2-EDTA stock. Therefore, we dissolved 2.32 g Na_2-EDTA (powder) and filled the bottle up with MilliQ (nuclease-free) water up to 25 mL. Afterwards, the pH was adjusted with diluted NaOH to pH = 8.0.

Step 7.

The bottle was filled with MilliQ (nuclease-free) water up to 1L and mixed a big stir bar until the powder was completely dissolved and the solution was clear.

Step 8.

Afterwards, the stir bar was removed and the media was directly autoclaved at 120 °C for 30 Minutes.

Warnings

Wear gloves when preparing stocks!