Phycocyanin Extraction from Synechocystis

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Abstract

Extraction of Phycocyanin from Synechocystis liquid culture.

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Materials

0.5mm diameter glass beads SI-BG05 by Scientific Industries, Inc.
Phosphate Buffered Saline 28374 by Thermo Fisher Scientific

Protocol

Step 1.

Collect 1 ml *Synechocystis* liquid culture and **spin it down** at **14,000 g** for 5 **min**. **Discard** the supernatant and keep the pellets cool.

DURATION
00:05:00 : Centrifugation

Step 2.

Fill a **1.5 ml Eppendorf Tube** with **400 ml glass beads (0.5 mm)** for each sample.

Step 3.

Resuspend the pellet from step 1 in **1 ml** PBS Buffer (pH = 7.4). Transfer the solution into the prepared 1.5 ml tubes filled with glass beads. Keep the solution cool.

Step 4.

Thoroughly **vortex** each sample for **1 min**. **Repeat** the process **five times**. The supernatant should become blue-green and clear.

DURATION
00:01:00 : Vortex

Step 5.

Spin down your vortexed sample for **5 min** at **3,000 g** at **4 °C**. **Transfer** the supernatant into a fresh **2 ml Eppendorf tube** and keep the supernatant cool.

DURATION
00:05:00 : Centrifugation

Step 6.

Spin down your supernatant again at **14,000 g** for **20 min** at **4 °C**.

DURATION
00:20:00 : Centrifugation

Step 7.

Transfer the supernatant into a cuvette. The supernatant should appear clearly blue at this stage. Measure the extinction at **620 nm**. Use PBS as a blank.