

Aug 21, 2018

Phycocyanin Extraction from Synechocystis

DOI

<https://dx.doi.org/10.17504/protocols.io.sr2ed8e>



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Protocol Citation: Sebastian Triesch 2018. Phycocyanin Extraction from Synechocystis. **protocols.io**
<https://dx.doi.org/10.17504/protocols.io.sr2ed8e>



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Protocol status: Working

We use this protocol and it's working

Created: August 21, 2018

Last Modified: August 21, 2018

Protocol Integer ID: 14874

Keywords: Phycocyanin, Synechocystis, Extraction, phycocyanin extraction from synechocystis extraction, phycocyanin from synechocystis liquid culture, phycocyanin extraction, phycocyanin, synechocystis extraction, synechocystis liquid culture, extraction

Abstract

Extraction of Phycocyanin from Synechocystis liquid culture.

Materials

MATERIALS

⊗ 0.5mm diameter glass beads **Scientific Industries, Inc. Catalog #SI-BG05**

⊗ Phosphate Buffered Saline **Thermo Fisher Scientific Catalog #28374**



- 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.

 00:05:00 Centrifugation

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

- 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.

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

 00:01:00 Vortex

- 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.

 00:05:00 Centrifugation

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

 00:20:00 Centrifugation

- 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.