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Working

## Chlorophyll Extraction in Cyanobacteria

Forked from [Chlorophyll Extraction in Cyanobacteria](#)

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### ABSTRACT

This protocol should be used for chlorophyll extraction in cyanobacteria. The equation for calculating the exact chlorophyll content can be found at the end of this document.

You might want to measure the optical density (OD) of your cyanobacteria culture at 750 nm. Use BG11 medium or water as the reference solution. You need the OD of your culture to normalize the chlorophyll concentration to the number of cyanobacteria.

### Calculate chlorophyll content (adapted from [Lichtenthaler 1978](#))

$\text{Chl } [\mu\text{g/ml}] = \text{OD}_{665\text{nm}} \times 13.9 [\mu\text{g/ml}] \times \text{dilution factor of culture}$

You can take less than 1 ml, but note the dilution factor for the calculation later on, e.g. :

1 ml sample = dilution factor of 1




500  $\mu\text{l}$  sample = dilution factor of 2

100  $\mu\text{l}$  sample = dilution factor of 10

### PROTOCOL STATUS

#### Working

We use this protocol in our group and it is working

- 1 Take **1 ml sample** of your cyanobacteria culture and spin it down at **14,000 rpm** for **5 min**.  
 **00:05:00**
- 2 Discard **0.9 ml** of the **supernatant**. Resuspend the **pellet** in the **remaining 100  $\mu\text{l}$** .
- 3 Add **0.9 ml** of **100% methanol** to the sample and **mix thoroughly** by vortexing.
- 4 Incubate the samples in the **dark** for **30 min** at **4 °C** in the fridge.  
 **00:30:00**
- 5 Spin down samples again at **14,000 rpm** for **5 min**.  
 **00:05:00**
- 6 Transfer **supernatant** into a cuvette and measure the **extinction** at **665 nm**. Use **90% methanol** as the **reference** solution.



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