**PLANT TISSUES**

**CHLOROPHYLL A EXTRACTION FROM CHLORELLA VULGARIS**

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**CONTEXT**

This laboratory is working on the development of an efficient maintenance strategy for stream ecosystems. This study focuses on the extraction of Chlorophyll a from *Chlorella vulgaris* and compares two different homogenization methods: the Precellys® bead-beater and a hand-held, Con-Torque Tissue Homogenizer.

**MATERIALS**

- Precellys® 24-Dual
- Precellys kit : CK28_7mL (ref. KT03961-1-302.7)
- Sample : *Chlorella vulgaris* (bulk)
- Buffer : 5 ml Ammonia Acetone (90%)

**PROTOCOL**

- Filtration of 100 ml of *Chlorella vulgaris* using a pump for 10 min with a membrane filter paper
- Placed the filtrates into CK28_7ml tubes
- Addition of 5ml Ammonia Acetone to completely dried filtrates
- Incubation for 10 min at 4°C, in a dark container

*Grinding step*

- Precellys® 24-Dual : 5000 rpm, 2 x 30 sec (5 sec break)
- OR
- Grinding with a hand-held tissue homogenizer
- Storage at 4°C in a shaking incubator for 24hrs (to elute Chlorophyll a)

**CUSTOMER**

**CONCLUSION**

The Precellys® 24-Dual successfully extracts Chlorophyll a from *Chlorella vulgaris* and increases the extraction yield by approximately 35% compared to the manual grinding method.