


## Harvest of *Lemna minor* :

### Principle

This protocol describes the usual steps taken after an experiment to harvest plant and solution samples for subsequent analysis.

### Equipment and Reagents

| Machine/Product   | Reference (Company, Type, ...)  |
|---|---|
| Disposable Straining Filters  |   |
| 5 mm Petri dishes   |   |
| Long tweezers   |   |
| Disposable plastic weighing tray  |   |
| Analytical scale  | 0.00001 g precision   |
| Pb(NO <sub>3</sub> ) <sub>2</sub> solution<br>1 mM (= 331,21 mg in 1 L) |  Sigma 467790 |
| Drying oven   | Memmert   |

### Protocol

#### *Sampling the growth medium:*

Carefully take a 5 ml sample from the pots before moving them.  
This is to prevent re-suspension of possible precipitate.

#### *Pictures:*

Take pictures of the pots for frond number and area analysis.

#### *Harvest:*

Remove the Lemna plants using long tweezers  
Carefully pat them dry on absorbent paper  
Weigh the plants on a balance (total Fresh Weight)

#### *Optional: Subsampling for Pigment analysis*

Weigh 2-3 plants (Fresh weight between 10 and 20 mg), record the weight and transfer the plants in Eppendorf microtubes containing 500 µL DMF.  
Keep in the dark at 4°C for 24 hours (3 days max) before measuring pigments.

#### *Washing for elemental analysis:*

The plants are transferred to a disposable strainer filter.  
Put the filter in a 50 mm Petri dish containing 25 ml Pb(NO<sub>3</sub>)<sub>2</sub> (1 mM)  
Wait for 10 minutes, and occasionally wash the plants using a pipette  
Pat dry the filter and transfer it to a 50 mm Petri dish containing 25 ml deionized water  
Wait for 10 minutes, and occasionally wash the plants using a pipette  
Repeat the last rinsing step.  
Remove the plants from the filter and pat them dry.  
Transfer the plants to a small tared weighing tray  
Immediately weigh on an analytical scale (0.00001 g)  
Dry the plants at 60° for a week  
The plants are now ready for mineralization (refer to the specific protocol)

*pH of the solution*

Measure the pH of the growth medium using a pH electrode. Optionally, the conductivity of the solution can be recorded too.