

Lemna minor culture and experimental set-up

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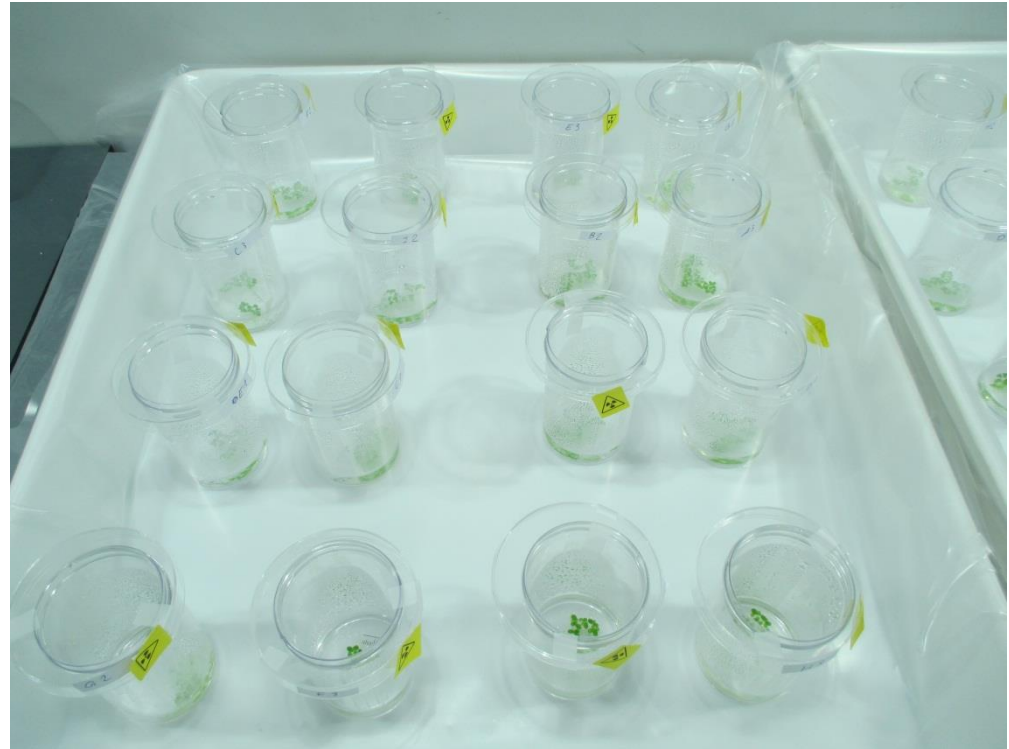


Lemna minor (duckweed)

Stock culture



Experiment



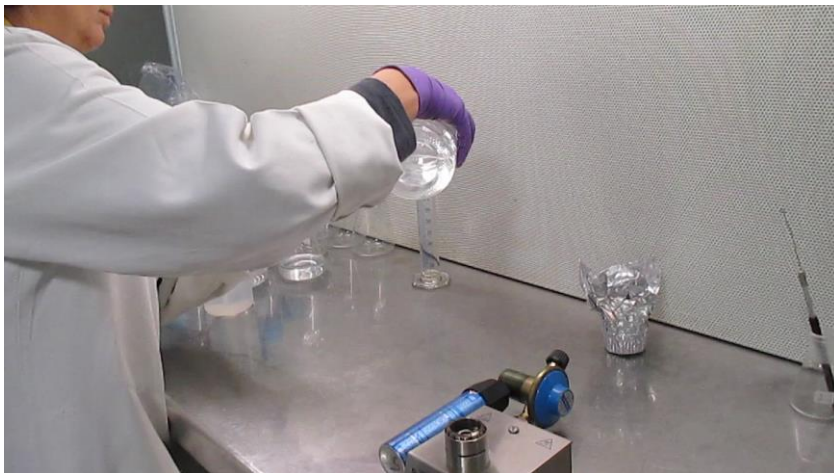
Lemna minor (duckweed)

Stock culture



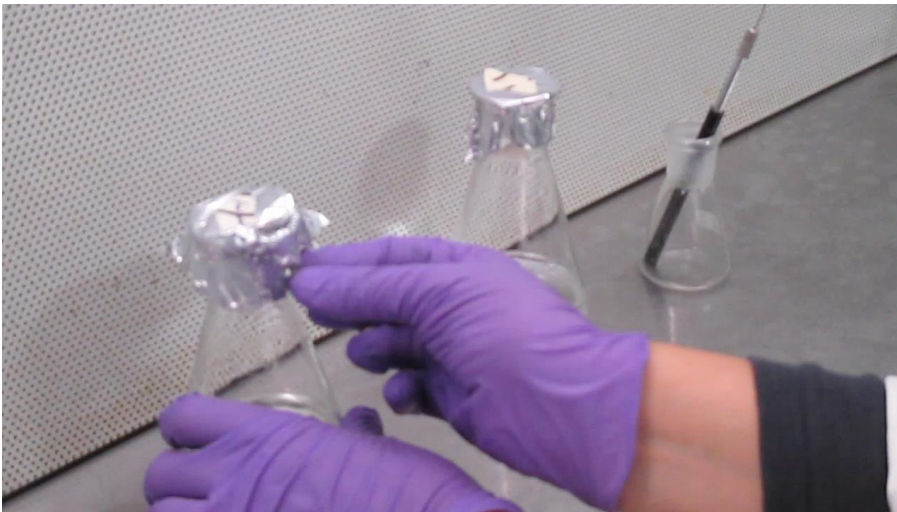
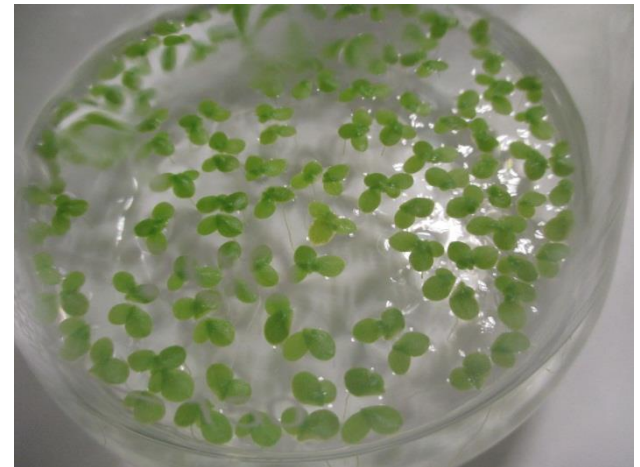
Work sterile!

- Switch on laminar flow 30 min before start on full power
- Clean flow with disinfectant
- Wear gloves and disinfect hands with ethanol each time going in or out flow
- Always spray bottles with ethanol when putting them in flow
- Flame bottles before and after using them
- Don't disrupt flow of sterile air
 - Keep bottles directed towards air flow
 - Avoid going with hands over bottles
- Avoid contact of cotton with flow



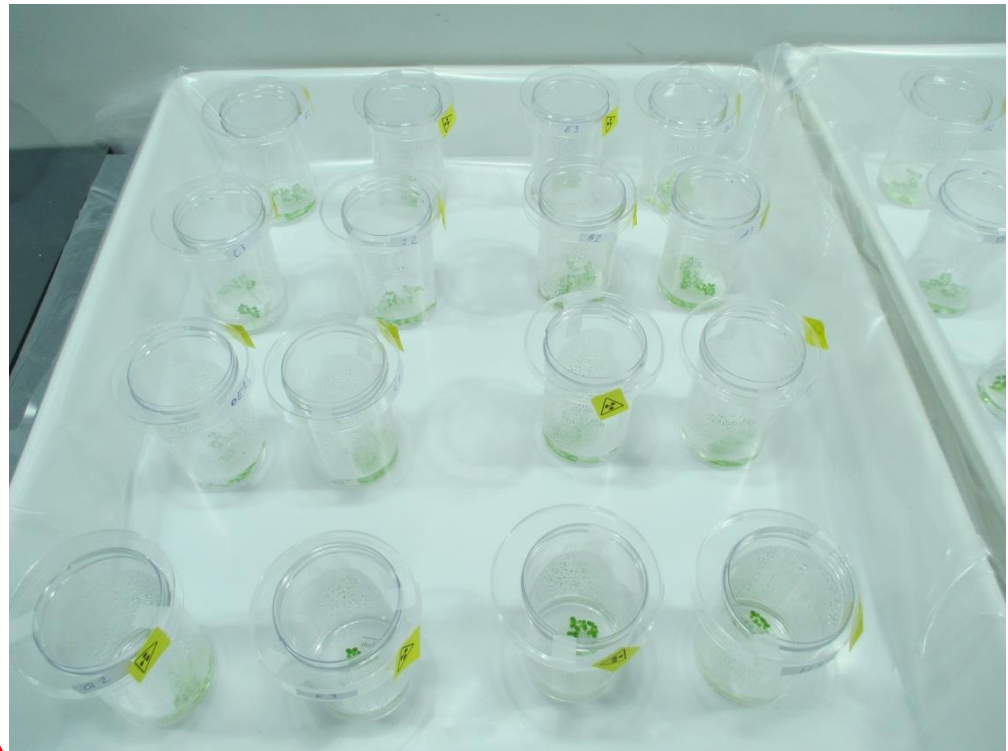
Lemna minor stock culture

- Grown at 21°C with continuous light
- Transferred every 10 to 12 days (max. 14 days!)
- 3 plants are transferred into 100 mL sterile (autoclaved) growth medium
- Only use healthy stock cultures!



Lemna minor (duckweed)

Experiment



Time schedule



Préculture (5 plants in each container)



Start experiment contaminated growth medium (3 plants in each container) + take pictures of fronds



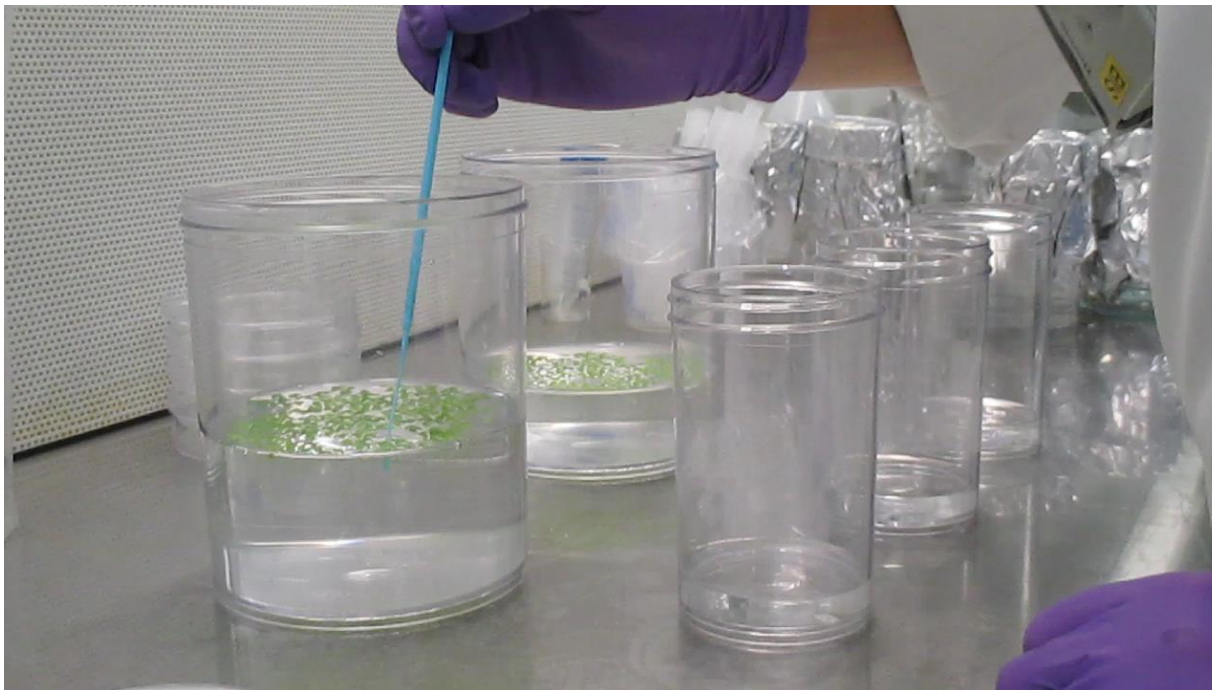
Take pictures of fronds on D0, D2, D5 and D7



Harvest + take pictures of fronds

Exposing *Lemna minor* to contaminants

- Sterilize contaminated growth medium through filtration using a 0.22 μm syringe filter
- Transfer contaminated growth medium in plastic 250 mL pots (100 mL in each pot)
- Place 3 *Lemna* plants in each pot and add measuring rule
- Close with petri dish and transfer to culture room



Harvest for contaminant uptake

- Harvest *Lemna* using tweezers and put in small net
- 3 washing steps
 - PbNO_3
 - H_2O
 - H_2O
- Weigh plants
- Dry at 70 °C

