



STEPS

OBJECTIVE: remove outer shell of cysts

1

HYDRATION (unless already hydrated or wet)

Prepare seawater between 20 and 30°C
Add cysts
Aerate strongly
Hydrate 1-2 hours until full hydration (round cysts)

2

DECAPSULATION

Prepare per 1 kg cysts:

0.33 L NaOH (30%)
0.5 kg active chlorine (Cl_2) – 2 options:
3.6 L NaOCl (14%)
0.75 kg $\text{Ca}(\text{OCl})_2$

Order of the products:

Add NaOH (30%) to adjust pH to >10
Add active chlorine (NaOCl or $\text{Ca}(\text{OCl})_2$)
Add seawater up to 14 L total volume per 1 kg of cysts

3

MONITORING DECAPSULATION

⚠ Decapsulation is a fast process that produces heat! (1-3 minutes)

Monitor temperature (keep temperature <30°C with e.g. ice)
Aerate
If foam is visible, add 250-500 µL food grade antifoam per L
Take a sample (pipet)
Check cysts under the microscope or in a small plastic tube
If outer shell is gone in 90% of cysts → ready
Cyst colour changes to orange

4

WASHING AND DEACTIVATION

A. LARGE-SCALE

Add $\text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$ directly into the tank
Harvest cysts
Rinse thoroughly with seawater
⚠ To neutralize 1 g active chlorine, add min. 3 g $\text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$

B. SMALL-SCALE

Collect cysts on 100 µm sieve
Rinse cysts thoroughly with seawater and control temperature
Deactivate NaOCl with 0.1% $\text{Na}_2\text{S}_2\text{O}_3$ solution
Cysts are ready for hatching, feeding OR storage

5

HATCHING / FEEDING / STORAGE

Incubate immediately for hatching, feeding OR store at 0–4 °C
for max. 48 hours
Do not freeze decapsulated cysts unless dehydrated

MATERIALS NEEDED:

- Artemia cysts
- Seawater
- OR
- Freshwater with added sea salts (15-35 g/L)
- Air supply
- Tank
- 100 µm sieve
- Pipet
- Timer
- Thermometer
- Microscope

CHEMICALS

NaOH solution (30%)
NaOCl solution (14% Cl_2)
 $\text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$

OTHER

Food grade antifoam
Ice
Personal protective equipment
goggles, gloves, gas mask, etc.



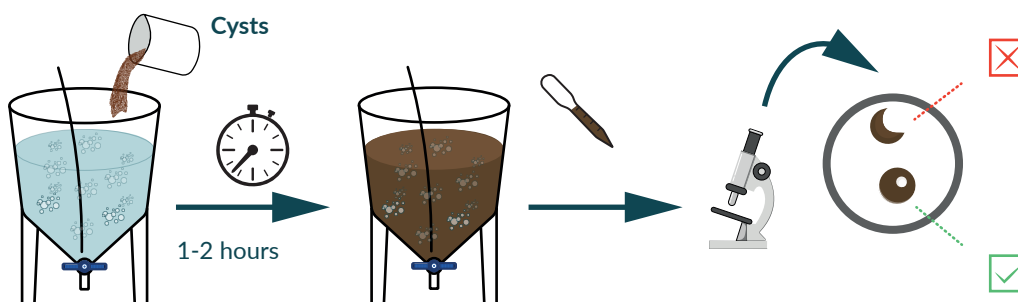
ATTENTION!

NaOCl releases chlorine gas – ensure good ventilation.
Wear proper personal protective equipment (e.g. goggles, gloves, gas mask).
Reaction releases heat – monitor temperature (< 30 °C).
Add NaOH and NaOCl carefully – avoid overdosing.
Neutralize residual chlorine with 0.1% $\text{Na}_2\text{S}_2\text{O}_3$ before disposal.
Store effluent appropriately or provide specialized collection. Do not discharge untreated effluent.

STEPS

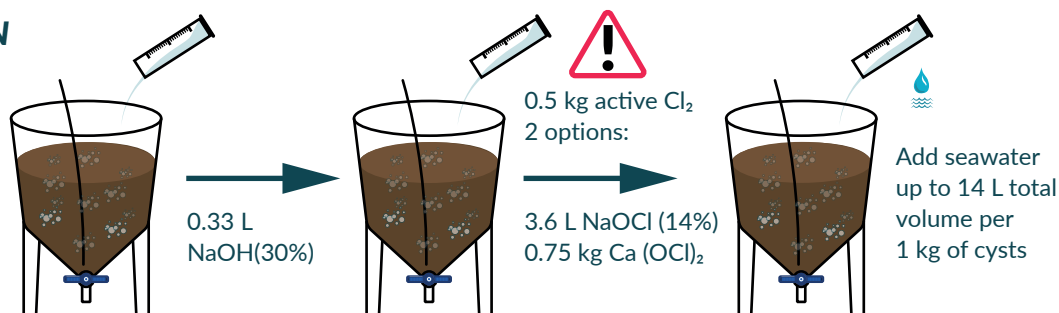
OBJECTIVE: remove outer shell of cysts

1 HYDRATION

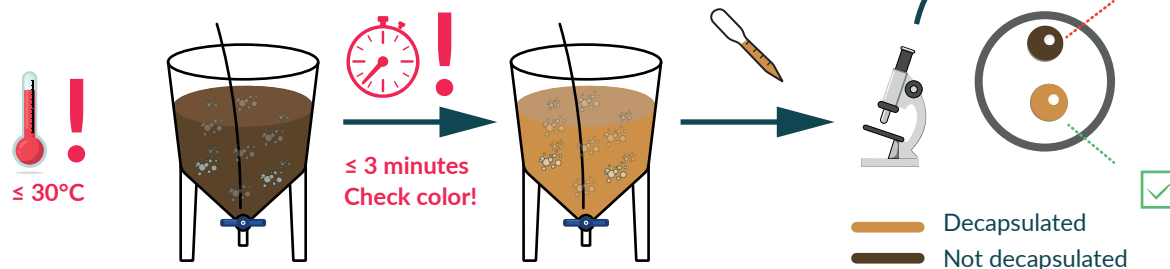


2 DECAPSULATION

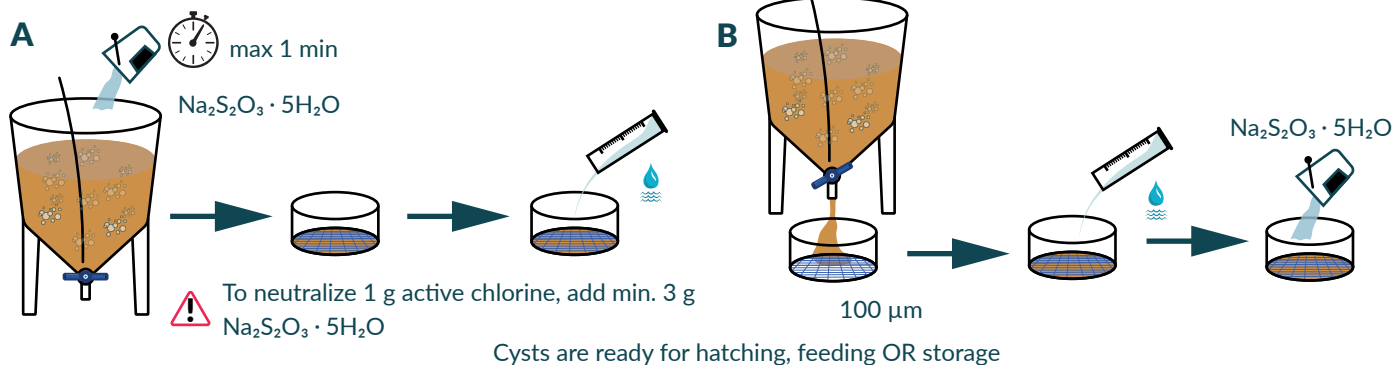
Per 1 kg cysts:



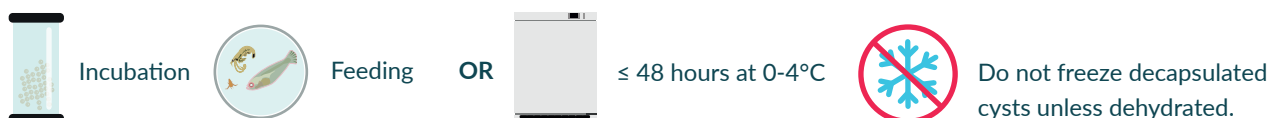
3 MONITORING DECAPSULATION



4 WASHING AND DEACTIVATION



5 HATCHING / FEEDING / STORAGE



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