

# Urchin care protocol

The code to the room is 13579#

**During urchin care, please always wear nitrile gloves.**

1. Fill up the bin with RO water.
2. Pour salt in the bin incrementally so that the salinity of the water is between 30 and 35, preferably **33**. Wait a few minutes until **fully dissolved** to measure salinity! (NOTE: it is much easier to increase than decrease salinity so watch out when adding a lot of salt at once. TIP: It usually takes ~60% of a salt bag to reach that level of salinity)
3. For each tank:
  - a. **Switch off** the tank you are about to clean (NOTE: if you forget this step you are going to hear a weird sound while draining the water from the tank. If this happens switch off the tank immediately.)
  - b. **Switch off** the outlet for the skimmers.
  - c. **Remove the filter** in the back of the tank, turn it inside out, and clean it with high pressure water (NOTE: very rarely an urchin ends up in the filter. If this happens remove the urchin from the filter with the least amount of shaking possible, as shaking can trigger spawning, and put it back into its corresponding tank if it is still alive, i.e. it has spines)
  - d. Put filter back
  - e. Clean transparent cube on top of the skimmer by rinsing with high pressure water.
  - f. Open tank and keep it open with a plastic stick
  - g. Use a **plastic tube corresponding to the tank** (they are labelled and kept on top of their corresponding tanks) to suck out water into a bucket with **yellow or no tape**. Once filled, pour water into drain and repeat once more. Overall, you should **remove 1.5 buckets of dirty water**. When sucking out water, try to remove dirt from the bottom of the tank like a vacuum cleaner. Make sure not to disturb the urchins too much
  - h. Use two clean **small plastic buckets** to take out salted RO water from the trash can and pour it in the middle of the tank (or avoiding urchins as much as possible). Repeat until the hole in the back of the tank is reached and water is

flowing in (NOTE: make sure the small plastic buckets are not touching the dirty water you are pouring in to avoid cross-contamination)

- i. **Switch tank back on** (NOTE: if you hear a weird sound, it could be that there is not enough water in the tank. If this happens, add more salt water)
- j. **Close the tank**
- k. **Rinse** the small plastic buckets and the tube
- l. If it is feeding day, break off one 5 inch long pieces of sea weed and submerge them in the water so that it doesn't float on the surface and it sinks down to the urchins
- m. **Put on new gloves** before starting the next tank!

#### **After finished cleaning:**

- 1. If we ran out of gloves or salt let one of us know!
- 2. Log in the lab notebook what you have done
- 3. Make sure **every tank with urchins is switched on** and the lid is properly closing the tank
- 4. Make sure skimmers are switched on again
- 5. **Switch off the RO water** (the handle is left to the sink), unless there is little water in the tank and you are coming back later to switch it off. Don't leave it on for too long or it will overflow and flood the room!
- 6. Make sure the lid is on the trash can