



Standard Operating Procedures

TANK CLEANING

Revised Dec. 2005

There are many different varieties of tanks that are used to hold animals in the Hagen Aqualab. Primarily research animals are held in either 2', 4' or 6' diameter fiberglass tanks. Other available tanks include: fiberglass trays, aquariums, AHAB units, coolers, rubbermaid containers etc. These cleaning instructions are meant to be guidelines and include instructions for only the most common varieties of tanks. If you have questions regarding cleaning other varieties, please contact a Hagen Aqualab staff member.

IT IS THE RESPONSIBILITY OF THE RESEARCHER TO MAINTAIN CLEANLINESS IN THEIR ROOMS, TANKS, CAGES AND AQUARIA.

ALL TANKS MUST BE INSPECTED DAILY TO ENSURE ADEQUATE WATER QUALITY AND PROPER WASTE REMOVAL BETWEEN THE STAND PIPES.

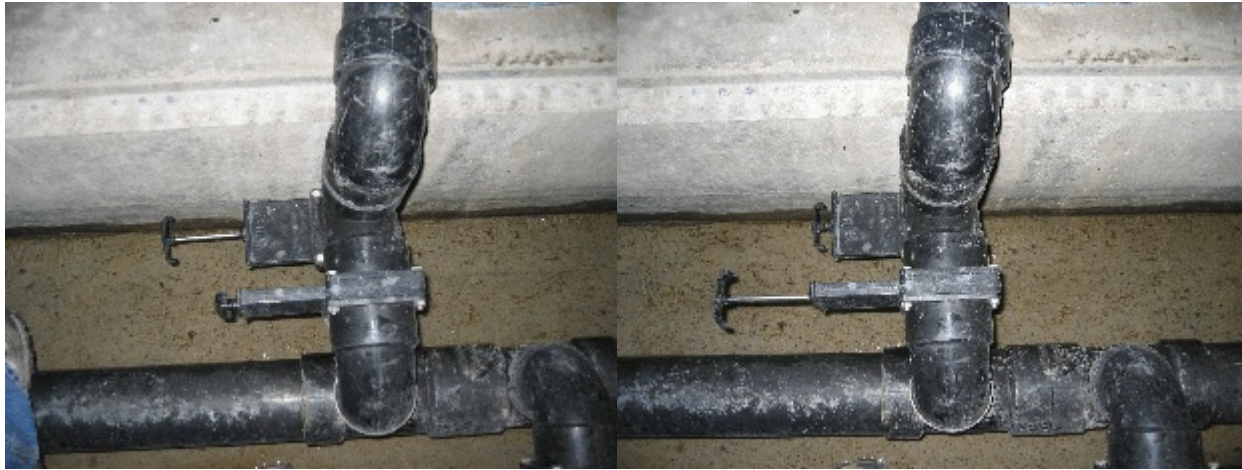
Disinfectants or detergents are not used in the routine cleaning of tanks. Tanks are scrubbed with brooms, brushes or abrasive pads and clean water to remove accumulations of algae, faeces, uneaten feed, bacteria and light build-ups of calcium. Only when a researcher is finished using a particular tank should it be cleaned using cleaning products such as disinfectant, bleach or de-limer.

DRAINAGE TRENCH
(with grate)



DRAINAGE TRENCH
(grate removed)





Tanks drains set to drain into trench

Tank drains set for Recirculation

Note: It is important to ensure that disinfected and rinse water are not mixed with system water. Contamination of system water may result in fish death as well as biofilter death.

Valves are placed in the drainage trench to allow for water from the tanks to be diverted from the system directly to the sanitary sewers. Please ensure that the valves are positioned properly. After reading these instructions you are still unsure how they must be positioned or the valve is stuck please ask for assistance from the Aqualab staff.

4' and 6' dia. Tanks:

All tanks must be cleaned, at least, on a monthly basis, more frequently if required. Partially drain the tank and scrub the sides, bottoms, stand pipes and wells. Tanks are then rinsed and refilled.

The two foot diameter tanks must be cleaned bi-weekly. The fish should be removed completely from the tank and the screen at the bottom should be removed and the lower cone cleaned.

Acid Deliming Protocol:

The water in the Aqualab is extremely hard. As a result, we have to deal with calcium building up, as a hard white residue, on tank walls. Normal washing with warm water and detergent will not remove this build-up. The only way to get rid of calcium on tanks is to clean the tank with an acid delimer (available from Aqualab staff). Currently Aqualab recommends the use of Brawn™ Lime Remover and Descaler. It is available

from the University Stockroom and can be acquired from Aqualab Staff. Brawn is a combination of Phosphoric and Nitric acids. It can be used full strength.

The proper procedure for getting rid of calcium build-up is to first obtain the appropriate cleaning solution and abrasive pads, as well as your personal protective equipment (PPE). The next step is to make sure that the tank you are cleaning is taken off of the recirculation system (see note above on drain valve position). Manually apply cleaning solution to calcified areas and allow acid action to dissolve calcium build-up. Reapply acid delimer as necessary. For light build-ups apply delimer to tank walls and wipe with scrub pads until clean. Rinse the tank thoroughly.

Safety Equipment:

- Bottles of sterile eye wash solution are located in hallways outside of room 154 (student marine room) and 186 (Trans Canada Pipeline Room). A continuous flow eye wash station is located in the Dry lab.
- A full safety shower is located in Dry lab.

Personal Protective Equipment:

- Aprons, gloves and face shields, goggles or safety glasses are available from Aqualab staff.

What to do if you splash acid into your eyes or onto your skin?

- If acid gets into your eyes or onto your skin flush with water immediately. Flush with clean flowing water for a minimum of 15 minutes. Once taken care of, please inform the Aqualab staff of the incident.

Cautions:

- **Under no circumstances should you combine acid delimer with chlorine bleach.** This will result in the production of chlorine gas. If Chlorine gas is produced as a result of an accidental combination of acid and Chlorine bleach (a yellow gas will appear) leave the room immediately and notify Aqualab personnel. **Chlorine gas is extremely toxic.**
- **N.B.** Do not use acid delimer in spray bottles, the resulting aerosol can be harmful if inhaled.