



SALAMANDER STANDARD OPERATING PROCEDURE



Notothalamus viridescens,
Ambystoma laterale,
Ambystoma maculatum
Plethodon cinereus

November, 2002 - Revised Dec. 2005

Housing

- Salamanders can be kept in a variety of environments depending on the research criteria.
- Containers must be a minimum of twice as long as the animal is.
- Tanks must be kept well moistened
- All tanks should be covered to avoid escapees.

Holding Conditions

- Photoperiod is at the discretion of the researcher, however some light / dark cycle is required (12 hours light/12 hours dark is the default photoperiod).
- Temperature should be maintained at $21^{\circ}\text{C} \pm 2^{\circ}\text{C}$.
- Holding containers should be moistened

Environmental Enrichment

1. Environmental enrichment can be provided in the form of hiding places (logs/moss) as well as access to a dry area similar to their environment in the boreal forest.
2. In some research, salamanders may be group housed provided adequate hiding places are provided.

Regular Care

1. The researcher is responsible for feeding and cleaning of the salamanders.
2. The animals should be maintained on food that closely approximates their natural diets whenever possible. Salamanders only consume live prey, therefore collection of appropriate food in the spring/summer should occur. In the winter, colonies of pinhead crickets, fruit flies and worms should be established.
3. Food should be offered a minimum of 3 times per week, although daily inspection of the animals is required.
4. Tanks should be cleaned as minimally as possible to avoid stressing the salamander, but should be checked daily to ensure appropriate moisture is maintained in the environment.
5. Salamanders should be handled as infrequently as possible to avoid unnecessary toxins entering their environment and their bodies.
6. Salamanders are to be weighed bi-monthly to ensure that they are not losing weight.



Technical Procedures

Euthanasia: If the salamander is not eating, losing weight or not moving a decision for emergency euthanasia may occur. An elevated dose of MS-222 (0.1-1.0%) will cause death in approximately one minute.

Identification & Records:

Tank cards identifying species, source, number, primary and associate researcher, and emergency contact person are to be posted on each tank in cases of multiple species use or within the confines of the room for uni-species projects.

A record must be kept of species, supplier, numbers, arrival date and disposition.

Hagen Aqualab

Animal Utilization Record

Researcher:

Species	Nº	Arrival Date	AUP Nº	Supplier	Disposition
Spotted Salamander	2	Nov 14, 2002	00R000	Collected from the wild (Guelph)	

Veterinary Care:

Veterinary care is on a consultative basis only. If a problem is suspected contact Aqualab Staff and further assistance will be provided.

All mortalities and morbidities in the Aqualab must be reported to an Aqualab staff member. Any salamander that dies of unknown causes or is suspected of dying of a disease related problem must be bagged, tagged and taken immediately for a post mortem examination, the results of which must be reported to the manager.

Monitoring: 7 days a week, at least once per day.