

STANDARD OPERATING PROCEDURES
DIVISION OF COMPARATIVE MEDICINE
UNIVERSITY OF SOUTH FLORIDA

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Page 1 of 2

TITLE: **Xenopus Frog Care and Feeding**
SCOPE: Animal Care Personnel
RESPONSIBILITY: Facility Manager and Technical Staff
PURPOSE: To Outline the Proper Procedures for the Care & Feeding of Xenopus Frogs

I. PURPOSE

1. To outline the proper procedures for the care and feeding of Xenopus frogs.

II. RESPONSIBILITY

1. The Veterinarians oversee all aspects of animal health, and are assisted by all program staff.
2. Facility Managers ensure implementation of all procedures.

III. PROCEDURES

1. Housing

- a. Frogs are maintained in the Techniplast Xenoplus™ Stand Alone Housing System when possible and are housed at a maximum of 9 per tank.
- b. Frogs may be housed in large plastic shoebox caging (e.g. rat microisolators) in groups of 2-3 frogs when necessary. Tank water should be obtained from one of the Xenoplus™ system fill tubes.
- c. When possible frogs should not be housed individually. Individually housed frogs do not eat well because there is no competition for food.
- d. Frogs housed where there is no access to Xenoplus™ conditioned water must be provided conditioned water by mixing:
 1. 1ml of Aqua Pure™ per gallon of water.
 2. Add 1/3 cup of aquarium salt to 25 gallons of water and mix. Salt concentration can be adjusted up or down by adding more salt or water respectively, until the conductivity meter reads between 2 and 2.5.
 3. Label solution properly and discard any unused water after 30 days.
- e. Water temperature should be maintained between 64° and 68°F for optimum oocyte production. The Xenoplus™ system is equipped with automatic chillers and heaters.
- f. There should be no rough or sharp objects (e.g., rocks or gravel) placed in the tanks as they can cause cuts and abrasions to skin.

2. Cage Changing

- a. Eye protection must be worn when performing procedures that could result in frog tank water coming in contact with the eyes.

- b. Frogs should be moved/picked up using a net. Each Xenoplus system has a net dedicated for use only with that system.
- c. Clean cages are filled to approximately 4" using conditioned water.
- d. Static caging is changed 2 times a week. Usually the days after frogs are fed. Cages are washed and rinsed with hot water thoroughly before filling with treated water. Chemicals and soap products can damage the mucus layer on the skin and cause irritation.
- e. Techniplast Xenoplus™ System tanks are changed as needed. It is recommended to use only reverse osmosis water for cleaning the Techniplast Xenoplus™ tanks.

3. Feeding

- a. Frogs are **fed two (2) times a week**.
- b. Approximately 3-4 pieces of Nasco™ frog brittle is placed in the tank water.
- c. Any food uneaten after 20 minutes needs to be removed from the tank
- d. Uneaten food can be removed by siphoning or scooped out using a net.
- e. Newly received frogs are allowed two days to adapt before attempting to feed.
- f. Feeding is recorded on the **Room Status Sheet**.

4. Environmental Enrichment

- a. Environmental enrichment is recommended for all animals.
- b. Items affording places to hide provides retreats for frogs and decreases stress.
- c. Enrichment items must be sanitizable, free from rough surfaces or sharp edges that could injure the delicate skin of frogs.
- d. Any environmental changes made must be communicated to and approved by the researcher prior to implementation.

5. Water analysis

- a. **Daily**- water temperature, pH, and conductivity are read from the Xenoplus display and recorded on the **Room Status Sheet**.
 - 1. **Water temperature** should be maintained between **64-68 °F**.
 - 2. **pH** should be maintained between **6.5-8.5**.
 - 3. **Conductivity** should be maintained between 1100 - 2000uS.
- b. **Weekly**- Water parameters are checked manually to ensure the following are within acceptable limits and results recorded on the **Xenoplus™ Weekly Manual Water Parameters** log:
 - 1. **Water temperature** – 64-68°F
 - 2. **pH** – 6.5-8.5
 - 3. **Conductivity** – 1100-2000uS
 - 4. **Nitrite (NO₂)** – < 0.2mg/L
 - 5. **Ammonia(NH₄)** – < 0.2mg/L
 - 6. **Chlorine (Cl)** – 0mg/L
 - 7. **Water hardness (CaCO₃)**- 80-200ppm
- c. Manufacturer's product inserts and directions for all water quality tests and equipment are kept in the **Room Log Book**.

Approved:

Date: