

STANDARD OPERATING PROCEDURES
DIVISION OF COMPARATIVE MEDICINE
UNIVERSITY OF SOUTH FLORIDA

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TITLE: Tecniplast ZebTec Stand Alone Aquatics System
SCOPE: Research and Animal Care Personnel
RESPONSIBILITY: Facility Manager, Professional and Administrative Staff, Research and Technical Staff
PURPOSE: To Outline the Proper Procedures for the Operation and Maintenance of a Tecniplast ZebTec™ System

I. PURPOSE

1. This procedure outlines the operation and maintenance of the ZebTec system

II. RESPONSIBILITY

1. The Facility Manager in conjunction with the research staff ensures that the system is properly maintained and in good working order.
2. The veterinary professional, administrative, and managerial staff ensures that all research and technical staff using this equipment are adequately trained and experienced in the use of the ZebTec™ system.
3. Research and technical staff using this equipment are responsible for reading the ZebTec user manual to understand the operation and maintenance of the system.

III. SYSTEM APPLICATION

1. The ZebTec system is an automated stand-alone aquatics system designed to house Zebrafish and to control and monitor the water conditions and water quality within the system.

IV. SYSTEM START UP AND USE

1. The ZebTec system can be acclimated by several methods. Refer to the ZebTec user manual.

V. MAINTENANCE

1. Daily Maintenance

- a. **Touch screen Display-** check the display at least daily to verify it is operational and record the water quality information on the **Room Status Sheet**.
- b. **System Function-** correct operation of the system can be verified by observing the display and water levels.
- c. **Tank Inspection-** visual inspection of each tank should include checking for water levels.
- d. **Bicarbonate Dosing System-** visually inspects to verify proper operation and tank level.
- e. **Salt Dosing System-** visually inspects to verify proper operation and tank level.

2. Weekly Maintenance

- a. **Water Quality-** conducts a water analysis to determine ammonia, nitrite, pH, hardness and alkalinity using a commercially available water quality test kit. This information is to be recorded on the **Room Status Sheet**.
- b. **Spot clean caging-** once per week, remove and clean any caging that has become dirty with 10% bleach solution. Cages will be rinsed thoroughly with RO prior to replace back on the rack. Alternatively, place tanks into Calypso Tank Washer for a full cycle.

- c. **Only use RO water for the system.**
- d. Never remove more than 20% of the caging at one time, as this disrupts the rack flow system.

3. **Biweekly**

- a. Check heating Elements
- b. Check Drum Filter
- c. Check UV Lamps
- d. Check Conductivity Probe
- e. Check pH Probe

4. **Monthly Maintenance**

- a. pH Probe- clean probe and calibrate.
- b. Conductivity Probe- clean probe and calibrate.
- c. Heating Element- ensure element is heating properly.

5. **Six-Month Maintenance**

- a. pH Probe- clean probe and calibrate.
- b. Conductivity Probe- clean probe
- c. Biofilter- rinse
- d. System Cleaning- periodically disassemble system for cleaning. Tanks are removed and cleaned refer to ZebTec user manual.
- e. **Caution:** use of chemicals and detergents can be detrimental to fish, refer to ZebTec user manual.

6. **Annual Maintenance**

- a. Additional maintenance/service should be performed by authorized personnel.

VI. **TROUBLESHOOTING**

- 1. Refer to the ZebTec user manual.

VII. **REFERENCES**

- 1. Refer to the ZebTec user manual for additional information or contact Tecniplast™ customer service.

Approved:

Date: