

**STANDARD OPERATING PROCEDURES**  
**DIVISION OF COMPARATIVE MEDICINE**  
**UNIVERSITY OF SOUTH FLORIDA**

SOP#: 808

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**TITLE:** **Tecniplast ZebTec Centralized 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

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**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. Care and oversight of the ZebTec system is a collaborative effort between research and CM staff. e Zebw8 [(ar)-6(e)0.5(and o)7vetw8 [(ar)-6(e)0.5(and o)7vete -11.2(h11.3(( ))TJ [9(at)-e8.

4. Should an alarm occur, the screen will automatically display the alarm message (see software section for reference). Check the manual's **Troubleshooting Section** the cause of the alarm and follow instructions to solve the problem.
5. A list of Warning Codes and Warning Messages their Causes and Solutions can be found in the Centralized Aquatic System Software Manual
6. The water inlet must be turned off to remove individual tanks from the system.
7. Tanks and tank components should be disassembled and washed separately using reverse osmosis water.
8. Best washing results are obtained with water temperatures between 50-60°C (122<sup>0</sup>-140<sup>0</sup>F). Rinsing may be carried out at up to 80°C (176<sup>0</sup>F).
9. Never remove more than 20% of the caging at one time, as this disrupts the rack flow system.
10. Only use RO water for the system.

## V. MAINTENANCE

### 1. Daily Maintenance

- a. **Touch screen Display**- check the display at least daily to verify it is operational and for the absence of alarm messages. 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 check

#### 4. **Monthly Maintenance**

- a. **pH Probe** - check probe for damage.
- b. **Conductivity Probe** - check probe for damage.
- c. **Check Float Switches** - water level should be about 1 inch below the overflow outlet. If the water level is above the float switch may need to be replaced by contacting Techniplast for service.
- d. **Check Drum Filter** - washing pressure gauge – ensure reading 7 bars.
- e. **Check Carbon Filters** - change when pressure differential is 10 PSI. Rinse carbon bag with RO water and let soak overnight to remove carbon dust. Check carbon bag sock for damage when replacing.

#### 5. **Three-Month Maintenance**

- a. **Check Biofilter Air Distribution** - Lift lid to see if Biofilter chips are moving around. Place finger over air nozzle to ensure air is flowing.
- b. Heating Element- ensure element is heating properly by checking Home screen.
- c. **Calibrate pH Probe** - Using calibration standard solutions as described in the manual. Ensure the probe's metals ends never touch and do not wipe or it will result in damage to the probe.
- d. **Calibrate Conductivity Probe** – Using calibration standard solutions as described in the manual. Ensure the probe's metals ends never touch and do not wipe or it will result in damage to the probe.

#### 6. **Six-Month Maintenance**

- a. **Check Sump level** and clean with Gravel Cleaner if there is residue build up.

#### 7. **Annual Maintenance**

- a. **Change UV lamps** annually or every 9,000 hours. To be performed by Techniplast service provider. See Manual
  1. Do not touch lamps with dirty fingers
  2. Turn off power to UV lamps before removing/replacing
  3. Allow lamps to cool 30 minutes before removing
  - 4.