

SOP #: 307.01Title: SOP - Quality Testing of Water

Approvals:

Attending Veterinarian

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Date:

10/11/12

Assistant Director LAR

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Date:

10/11/12

### 1. Purpose

1.1 To describe the proper method for testing for the presence of bacteria in water utilizing the ATP Hygiene Monitoring System - SystemSURE Plus with Aquasnap swabs from the various watering systems in the Florida International University Animal care Facilities.

### 2. Responsibility

2.1 It is the responsibility of ACF personnel to follow this procedure and supervisors for employee training and compliance.

### 3. Definitions

3.1 ACF - Animal Care Facility

3.2 RLU – Relative light units

### 4. Guidelines

4.1 Water analysis for the animal facility at Florida International University shall be performed every week or more often if indicated by the Attending Veterinarian.

4.1.1 Water samples can be taken from various locations.

4.1.1.1 Tap in animal care facility

4.1.1.2 Rodent water bottle with sipper tube with clean freshly filled water prior to use.

- 4.1.2 ATP Hygiene Monitoring System - SystemSURE Plus with Aquasnap swabs offers a sensitive and fast method of water quality control programs by detecting total ATP in water in seconds.
- 4.1.3 ATP presence in water is an indicator of microorganisms or organic material, which can have a direct impact on the health of the laboratory research animals. These tests are important in the assessment and maintaining quality of the water provided to the laboratory animals housed in the ACF.
- 4.1.4 Testing procedure using ATP SystemSURE Plus with Aquasnap
  - 4.1.4.1 Run tap water for 2-4 minutes.
  - 4.1.4.2 Remove one Aquasnap swab for each sample to be tested from foil bag.
  - 4.1.4.3 Allow swabs to come to room temperature before use.
  - 4.1.4.4 Do not remove cover from swab until it is ready for use.
  - 4.1.4.5 Aquasnap swabs are to be stored in the refrigerator at 2-8°C when not in use.
  - 4.1.4.6 Label swab with permanent marker indicating the following information:
    - 4.1.4.6.1 Location
    - 4.1.4.6.2 Room and/or collection source.
    - 4.1.4.6.3 Date.
    - 4.1.4.6.4 Time.
  - 4.1.4.7 Remove Aquasnap swab from the outer tube. Dip the swab for 5 to 10 seconds into a 20 mL sample of the water being tested. If the water is not homogenous or contains sediment, mix it thoroughly before sampling.
    - 4.1.4.7.1 NOTE: Ultrasnap swabs used for environmental monitoring are designed primarily for surfaces, but can be used for some types of water samples.
  - 4.1.4.8 Reinsert swab into the swab tube. The device is now ready to be activated or can be left inactive for up to 4 hours in this state.
  - 4.1.4.9 To activate, break the plastic valve at the top of the device by bending backward and forward. Squeeze the bulb twice to expel the liquid in the bulb to the bottom of the tube.
  - 4.1.4.10 Bathe the swab bud in the liquid by shaking gently in a side-to-side motion for 5 seconds.

4.1.4.11 Place the entire swab device into the SystemSURE Plus luminometers and close the lid. This step must be done within one minute of activation.

4.1.4.12 Holding the luminometer in a vertical position, press 'OK' to initiate reading. The test result will appear on the screen in 15 seconds.

#### 4.1.5 Interpretation of Results.

4.1.5.1 The acceptable range (result) for water is 0 RLU.

4.1.5.2 If any reading above 0 (zero) is obtained, obtain a new sample and retest following the steps outlined previously.

4.1.5.3 If another unacceptable result is obtained inform the Attending Veterinarian. Positives can then be confirmed by mHPC (membrane Heterotrophic Plate Count).

#### 4.1.5.4 Recording of Results.

4.1.5.4.1 Record the results on - Weekly Water Submission and Quality Report.

#### 4.1.5.5 Disposal of swab.

4.1.5.5.1 Swabs are non-hazardous and can be disposed of in normal lab trash receptacles.

## 5. References

5.1 Hygiene ATP Monitoring Systems <http://www.hygiene.net/aquasnap.html>