**SystemSURE Plus (ATP Testing)**

Last Reviewed: May 2, 2024

# Purpose The Hygiena SystemSURE Plus sanitation monitoring system allows LAR staff to monitor sanitation practices and the environment. SystemSURE Plus detects ATP (Adenosine triphosphate) which is present in all organic material. If ATP is detected then the surface monitored has not been sufficiently cleaned.

# Responsibility It is the responsibility of the LAR staff to monitor the sanitation of the animal environment and the water supply in all animal facilities in order to keep accurate monthly records. It is the responsibility of the LAR staff to also keep up to date reports on the water quality from both the City of Missoula and the University of Montana.

# Monitoring sanitation and water in animal facilities

## Monitoring sanitized caging will be done once a month immediately after a cage wash in HSB, NSB, SSB

### **Health Science Building (HSB)**

#### Rat box

#### Large mouse box

#### Small Mouse box

#### Hamster box

#### Lixits – large, small and hamsters

#### H2O Bottles – Large, small and hamster

### **North Skaggs Building (NSB)**

#### Large mouse box

#### Small mouse box

#### Lixit –large and small

#### H2O Bottle – large and small

### **South Skaggs Building (SSB)**

#### SPF Large mouse box

#### SPF Small mouse box

#### SPF Lixit

#### SPF H2O Bottle

# Monitoring the water

## Water monitoring will be done monthly at HSB, NSB, SSB, and the Field Research Station Ft. Missoula  Water quality reports can be found online for both the City of Missoula and the University of Montana.

## Water quality reports are printed out and updated in the ATP Binder.

## City of Missoula report is generated annually. You can find it here: <https://www.ci.missoula.mt.us/2242/Water-Quality>

## The University of Montana report is generated every 3 years. You can find it here: <https://www.umt.edu/facilities-services/energy-and-utilities/water-quality.php#:~:text=At%20the%20University%20of%20Montana,water%20standards%20are%20being%20met>.

## Water should be tested furthest away in the facility from the incoming water source.

### Health Science – HSB 015 (well) HSB 016 (surgery) HSB 018A (R.O. water)

### North Skaggs –NSB 027 (sink) NSB 032 (sink)

### South Skaggs – SSB 066 (animal room) SSB 067B (R.O. water)

### FSFM – QS 123 (surgery room) QS 121(sink room) QS 111 (flight lab)

## Acceptable ranges

### General Pass/Caution/Fail

#### General standards set by Hygenia

##### Pass = less than 10 RLU

##### Caution = 11 to 19 RLU

##### Fail = greater than 20 RLU

### LAR Pass/Caution/Fail

#### LAR standard of acceptable ranges (not official)

##### Pass = less than 4 RLU

##### Caution = 5 to 10 RLU

##### Fail = greater than 11 RLU

# Calibration

## Calibration should be done at the beginning of each month

### There are 2 calibration kits to use, one tests the ATP swabs and one test the handheld luminometer device.

### The results are recorded in the ATP Binder monthly.

## Use Calibration Control Rod kit to verify accuracy, and efficacy of the handheld Luminometer device.

### Located in the Middle cabinet in HSB 009

### Each kit contains a positive and negative rod. (Sealed swabs)

### The positive rod emits a low level of constant light output that can be measured in RLUs to verify proper calibration of the unit,

### The negative rod produced 0 RLU and is used to check that the background light is not entering the instrument.

### The Calibration Control Rod kit is good for 5 years of repeated use.

## Use the positive control kit to validate the efficacy and quality of the ATP swabs

### Located in the medical mini fridge in HSB 016

### Only 1 vial needed per test

### Each vial contains a certain amount of freeze dried ATP and sugars to provide a predictable result if test devices are used and stored correctly.

# Procedure

## Getting started

### Press the red power ON/OFF button

### It will count down from 60 seconds,

### Once ready the device will show a blank - -

### Test surface with a swab

### Insert swab into the top of the instrument.

### Close the lid of the instrument securely

#### If the instrument lid is not secure it will not run

### Press ok – 15 second countdown will begin

### Results will be given at the end of the countdown.

### Record results in the ATP Binder

# Testing

## **Ultrasnap Swabs - Environmental Testing**

### Obtain swab from drugs & medical supply refrigerator in HSB 016.

### Let swabs sit at room temperature for 5-10 minutes before testing.

### DO NOT touch the bottom end of the test tube.

### Withdraw the swab by gently pulling and twisting the swab from the swab tube.

### Swab surface in a four by four-inch square (~100 square centimeters) while rotating swab.

### Put swab back into swab tube.

### Hold the swab tube firmly and use the thumb and forefinger to break the Snap Valve by bending the bulb forward and backward, snapping the seal.

### Squeeze the bulb twice to expel the liquid.

### Shake swab tube back and forth for 10-15 seconds.

### Open the lid on SystemSURE and insert the swab tube, holding the device upright (90-degree angle).

### Close lid and press OK.

### Results will appear in 15 seconds. Record the results in the ATP Binder

## **Aquasnap Swabs - Water Testing**

### Obtain swab from drugs & medical supply refrigerator in HSB 016.

### Let swabs sit at room temperature for 2-5 minutes before testing.

### Do not touch the bottom end of the test tube.

### Run the water source for 2- 5 minutes before taking a sample.

### Withdraw the swab by gently pulling and twisting the swab from the swab tube.

### Submerge sample collection tip in sample water.  Aquasnap will collect 100 microliters of sample.

### Put swab back in swab tube and gently shake to release sample off the collection tip and into swab tube.

### Hold the swab tube firmly and use the thumb and forefinger to break the Snap Valve by bending the bulb forward and backward, snapping the seal.

### Squeeze the bulb twice to expel the liquid.

### Shake swab tube back and forth for 5-10 seconds.

### Open the lid on SystemSURE and insert the swab tube, holding the device upright (90-degree angle).

### Close lid and press OK.

### Results will appear in 15 seconds. Record the results in the ATP Binder.