

STANDARD OPERATING PROCEDURES
DIVISION OF COMPARATIVE MEDICINE
UNIVERSITY OF SOUTH FLORIDA

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TITLE:	Somark Labstamp™ Mouse Tail Tattoo System
SCOPE:	Animal Care Personnel
RESPONSIBILITY:	Facility Manager, Professional and Administrative Staff
PURPOSE:	To Outline the Proper Procedures for Use and Maintenance of a Labstamp™ Mouse Tail Tattoo System

I. PURPOSE

1. The purpose is to describe procedures for identification of mice via automated application of tattoos using the Labstamp™ system.

II. RESPONSIBILITY

1. The Facility Manager ensures that equipment is appropriately cleaned, maintained in good working order, and available for research personnel as requested.
2. The veterinary professional, administrative, and managerial staffs ensure that all technical staff using this equipment are adequately trained and experienced to perform mouse tail tattoos using the Labstamp™ system.

III. EQUIPMENT USE

1. **Gather all necessary supplies** and components of Labstamp™ (i.e., Applicator machine, restraint cartridges, needle cartridges, tail gauge, tail oil, ink slides, gauze pads (2x2) and cotton tipped applicators.
2. **Plug SOMARK provided power supply into the applicator machine** and then plug the power supply into the outlet.
3. **Dispense a small amount of tail oil** into a small dish or tube. 1ml of tail oil will be sufficient for the first 10 to 20 tattoos.
4. **Restrain the mouse by first selecting a restraint cartridge** (Small or Large) based on general size and bodyweight of the mice. **Small Restraint Cartridge** - For mice weighing approximately 10-17g, **Large Restraint Cartridge** - For mice weighing approximately 18-45g.
 - a. Place mouse on restraint paddle with mouse's head towards the handle.
 - b. Depress silver buttons on the sides of the red dome cover to open tail grippers. Place red dome over mouse and release buttons to close tail grippers. Ensure tail is gripped at the base; mouse should be against back wall of the dome cover.
 - c. Use tail gauge to measure tail and determine correct needle and restraint cartridge selection. Change to correct restraint cartridge as necessary.
 - d. Saturate a cotton tipped applicator with tail oil and apply oil to area of tail to be tattooed. Ensure oil does not come in contact with tail grippers, as this will compromise restraint of the tail. **NOTE:** If there are any defects in the mouse tail,

such as kinks, bends, wounds or scars in the tattoo area, do not apply a tattoo. The Labstamp system requires the tail to be in normal healthy condition.

- e. Ensure expiration date on slide package has not passed and remove ink slide from package. Insert slide into slot on tail cover arrows first.
- f. Place tail cover over the mouse's tail ensuring the tail is fully extended and aligned with the v-groove on the tail bed. Control the lowering of the tail cover and ensure the plate sets flush with the paddle.

5. Load selected needle cartridge into applicator machine.

- a. If gun-head is not already in the change needle position, press the CHANGE NEEDLE button on the front panel of the applicator machine to open gun head door presenting the gun-head.
- b. With the needle pointing downward, install the needle by lining up the clip arms of the needle with the slots on either side of the gun-head. Gently push until clip arms snap into place.
- c. Press CHANGE NEEDLE button on front panel to retract the gun-head.

6. Load restraint cartridge into applicator machine.

- a. Gently insert the restraint cartridge, tail first, into the docking port located on the front of the applicator machine. Ensure that the tail tip is pointing into the machine and is not trapped under the restraint cartridge.
- b. The RESTRAINT CARTRIDGE STATUS light will turn green when restraint cartridge is properly loaded into docking port. If RESTRAINT CARTRIDGE STATUS light remains red, pull the restraint cartridge out and re-insert.

7. Select ID and apply tattoo.

- a. Using the keypad on the front of the applicator machine select desired alpha/numeric ID combination.
- b. If a sequence of IDs is desired press the AUTO INCREMENT button and enter the first ID of your desired sequence. Beginning with the number entered all subsequent tattoos will increase according to the following rules:

If 1 st ID is:	The next ID will be:	The final ID will be:
009	010	999
A09	A10	A99
1A1	1A2	1A9

- c. Press START button to begin application of tattoo.
- d. LED will blink red and screen will indicate tattooing is in progress.
- e. Observe the mouse behavior; escape behavior is normal and will vary from strain to strain
- f. Machine will beep, LED will return to Green, and screen will indicate when tattooing is complete.

8. **Remove restraint cartridge** from dock by pulling straight out after tattooing is complete.
9. **Remove tail cover** by pulling straight up and discard used ink slide. NOTE: Ink slides are single use only.
10. **Gently blot excess ink and oil** off mouse's tail with gauze.
 - a. Inspect tattoo for completeness and absence of bleeding. NOTE: Should bleeding be observed, use gauze to apply direct pressure and stop any bleeding. Remeasure the tail to confirm proper sized restraint and needle were used. If bleeding persists with next mouse, inspect and clean needle or discard. When properly measured, mouse-tails should not experience bleeding.
11. **Apply another thin coat of tail oil** over the tattoo area.
12. Grasp the mouse-tail, depress silver buttons to release tail grippers, remove red dome cover and place mouse back in its cage.
13. **Continue procedure from step 5.4 until all mice in cohort have been tattooed..**
14. **Clean the tattoo needle** after every 5 to 10 tattoos.
 - a. Depress the CHANGE NEEDLE button to bring the gun head assembly out with needle cartridge.
 - b. Soak a cotton swab with a disinfectant / cleaner that does not leave a residue such as 70% Alcohol (ethanol or isopropyl) or Hydrogen Peroxide Solution. NOTE: Any time the needle is removed, such as for a change in mouse size, it can be thoroughly cleaned by soaking in a small volume of disinfectant/cleaner. **ALSO NOTE: If needles are cleaned with agents that leave a residue, such as Chlorine Dioxide or Quaternary Ammonia based products, the needle must be rinsed with 70% alcohol or sterile water prior to next use.**
15. **Clean up and storage** of Labstamp™.
 - a. Remove used needle by pressing the CHANGE NEEDLE button to extend the gun-head; use forked end of tail gauge to remove needle cartridge.
 - b. Needle cartridges are good for approximately 50 IDs and should be inspected regularly to ensure they are not bent or damaged. NEVER tattoo with a bent or damaged needle. Tattoo needles cannot be straightened or sharpened.
 - c. If needle cartridge is to be kept and stored for future use, clean it with appropriate cleaning solution, air dry and store in plastic case.
 - d. Clean all components of restraint cartridge using appropriate cleaning solution.
 - e. Wipe down applicator machine using appropriate cleaning solution, avoid spraying the port or vents in the rear of the system.
 - f. Applicator machine should always be stored in the change needle position; before unplugging, ensure gun-head is extended and then unplug and store power cords.

IV. MAINTENANCE

1. Periodically inspect unit and power cord for wear.
2. Confirm unit is properly heating **at least annually** using a certified thermometer. Unit should reach 500⁰ F ± 15⁰ when stabilized (i.e., approximately 45-60 minutes).

3. Memorialize the certification by placing a label on the unit with date of certification.

V. DEFINITIONS

1. Small Restraint Cartridge - For mice weighing approximately 10-17g
2. Large Restraint Cartridge - For mice weighing approximately 18-45g
3. Large Restraint Cartridge - For mice weighing approximately 18-45g
4. Large Restraint Cartridge - For mice weighing approximately 18-45g
5. Large Restraint Cartridge - For mice weighing approximately 18-45g
6. Green Needle Cartridge - Coded by tail gauge, shorter 4-point needle.
7. Yellow Needle Cartridge - Coded by tail gauge, longer 4-point needle
8. Tail Gauge- Device used to measure the tail in order to select appropriate restraint and needle cartridge
9. Appropriate Cleaning Solution – any material approved for use within the animal facility for general cleaning and disinfection. Chemicals that do not leave a residue, such as 70% alcohol and Hydrogen Peroxide, are recommended for needles and restraints. If agents that leave a residue, such as Quaternary Ammonia, Chlorine Dioxide, etc. are used, they must be rinsed off after application.

VI. REFERENCES

1. Refer to the manufacturer's Procedure and QuickStart Guide for additional information.

Approved:

Date: