

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

SOP#: 1130.1

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**TITLE:** AIMS® Veterinary Tattoo Machine  
**SCOPE:** Animal Care Personnel  
**RESPONSIBILITY:** Facility Manager, Surgical Core Manager, Professional and Administrative Staff  
**PURPOSE:** To Outline the Proper Procedures for Use and Maintenance of a AIMS Veterinary Tattoo Machine

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**I. PURPOSE**

1. This procedure outlines the use and maintenance of the AIMS Veterinary Tattoo Machine used to mark and identify various animal species.

**II. RESPONSIBILITY**

1. It is the responsibility of the Facility Manager in conjunction with the Surgical Core Manager to ensure that equipment is appropriately cleaned, maintained in good working order and available for research personnel as requested.
2. It is the responsibility of the veterinary professional, administrative, and managerial staff to ensure that all research and technical staff using this equipment are adequately trained and experienced to perform veterinary tattoo marking and identification.

**III. EQUIPMENT USE**

1. Open tattooing kit and place the top tray containing the controllers securely on the workbench.
2. Remove tattoo gun from box and pull the 2 rubber bands up toward the top of unit. Place gun on rubberized holding rack.
3. Select appropriate needle size (species dependent):
  - One point quick change needle (#301) -for day old pups
  - Ultra Fine 3 point quick change (#303) -for neonates and young mice
  - 3 point quick change (#300) - for adult mice, young rats and rabbits
  - Heavy duty 3 point quick change (#304) - for large rats and large animals
4. Carefully open needle package from the bottom, leaving needle guard on.
5. Remove needle tube from the tattoo gun and gently slide needle (with guard still attached) into the needle tube. With the front of tattoo gun facing you, gently slide needle tube (with needle) into tattoo gun body and attach the round end of needle

onto the pink rubber grommet with the open end of needle loop to your left. Slide needle tube down until 1mm of the needle is protruding from the end. Hand tighten wing nut until just snug.

6. Place the 2 rubber bands low around the needle and gun body. This helps to hold the needle in place. Use only the rubber bands provided with the kit. Set tattoo gun onto holding rack.
7. Prepare tissue cleanser according to directions on back of bottle. Then set up (3) labeled cups with appropriate solutions filled to marked lines (tissue cleanser, water and 95% ethanol). Any less solution can possibly damage needle tips during submersion.
8. Fill cup with tissue oil. Agitate tattoo ink vial 42 times. Fill paper cup with tattoo ink using only what you'll need for that session. Do not pour contents back into stock vial as this may result in contamination. Place paper cup into plastic holder cup and secure to holding rack.
9. Place the pedal on floor and insert prongs into gun body.
10. Keep power unit dry and away from liquids.
11. Wear lab coat, goggles and gloves before proceeding to tattoo.
12. Priming the needle: with the gun off, immerse tube tip into paper cup taking care not to hit the sides or bottom of plastic holder cup, as this will damage needle tips. Remove from ink and turn on for a few seconds. Repeat this 3 times.
13. Adjust speed (species dependent). Place rodent under quick restrainer on plastic restrainer board or use rubber finger guard if tattooing neonates.
14. Speeds: High - Rats and other larger /tough skinned animals  
Medium - Adult mice  
Low - Young mice  
Very low- Newborn mice
15. Apply tissue oil to area prior to being tattooed.
16. When tattooing, dip needle after every letter/digit for rats and every 2 letters/digits for mice and neonates. Hold tattoo gun perpendicular to area being tattooed. Tail or area being tattooed may need to be rolled during procedure to make legible markings.
17. Make tattoo marking and blot with paper towel. Look for blood on paper towel and tattoo quality. If tattoo requires touch up, reapply tissue oil, mark unmarked area(s) and blot with paper towel again. Do not repeatedly go over areas already tattooed.
18. Clean up:
  - a. Use a gauze or paper towel to wipe away any debris from needle.

- b. Immerse needle tube ½ way into tissue cleaner, lift up and depress pedal. Repeat this sequence 3 times.
- c. To rinse tissue cleaner, Immerse needle tube ½ way into water, lift up and depress pedal. Repeat this sequence 3 times.
- d. At this point if you need to disinfect the tattoo needle, immerse needle tube ½ way into a disinfectant solution, lift up and depress pedal. Repeat this sequence 3 times and rinse by repeating step c using sterile water, or remove needle and sterilize by autoclaving.
- e. After needle tubes are immersed in water they are dried by immersing ½ way in 95% ethanol, lift up and depress pedal. Repeat this sequence 3 times and wipe dry.
- f. Inspect needle with lighted needle scanning scope before putting away. Undo the wing nut and slide the needle tube over the needle. Place red cover over the tip of the needle tube to protect the needle.

19. Clean up work area.

#### **IV. MAINTENANCE**

1. Inspect condition of unit and electrical cord/plug to ensure safe operation. Equipment determined to be unsafe will be removed from service immediately
2. Undo prongs from power control unit and periodically check needle tip with lighted needle scanning scope.
3. Carefully replace hooked or damaged needles.
4. Gently wipe needle tube to remove excess ink.
5. Periodically inspect all parts for wear or any damage and report to Surgical Core Manager.
6. Any additional service/maintenance on this equipment must be performed by qualified personnel.

#### **V. TROUBLESHOOTING**

1. Refer to the manufacturer's operation and maintenance manual.

#### **VI. REFERENCES**

1. Refer to the manufacturer's manual for additional information.

**Approved:**

**Date:**