
1. PURPOSE

This Standard Operating Procedure describes acceptable methods for identifying rodents.

2. RESPONSIBILITY

Principal investigator (PI) and their research staff, veterinary care staff.

3. MATERIALS

- 3.1. Cage cards
- 3.2. Non-toxic, indelible markers
- 3.3. Tattoo machine
- 3.4. Micro-tattoo system
- 3.5. Ear punch
- 3.6. Ear tags and applier
- 3.7. Microchip system
- 3.8. Analgesics
- 3.9. Anesthetics (general and local)
- 3.10. Skin disinfectant (e.g., 2% chlorhexidine solution)
- 3.11. 70% alcohol
- 3.12. Clean, sharp iris scissors or disposable scalpel blade

4. PROCEDURES

- 4.1. Cage cards:
 - 4.1.1. Use cage cards to identify individually-housed mice or a single breeding pair.
 - 4.1.2. Use cage cards to identify groups of mice on protocols where individual identification is not necessary.
- 4.2. Temporary markings:
 - 4.2.1. Temporary marking can be used for short-term individual identification.
 - 4.2.2. Use a non-toxic, indelible marker to write numbers, bars, or other distinguishable markings, on the tail or the ears.
 - 4.2.3. If temporary marking is to be used for a duration exceeding a week, repeat markings every 2-3 days.
- 4.3. Tattooing:
 - 4.3.1. This procedure is performed under general or local anesthesia. Refer to SOP.
 - 4.3.2. Use an electric tattoo machine to write numbers on the tail.
 - 4.3.3. Ensure that needles are sterile and sharp.
- 4.4. Micro-tattooing:
 - 4.4.1. Use a micro-tattooer to inject tattoo ink in the toe pads or the ears or the tail.
 - 4.4.2. Whenever possible, use a simple code to limit the number of toes tattooed.
 - 4.4.3. Have the identification chart readily available in the animal room to allow prompt identification of individuals.

- 4.5. Ear notching/ ear punching:
 - 4.5.1. **Do not** use this method in rodents under 2 weeks of age.
 - 4.5.2. Restrain the animal securely and using the ear punch, punch holes and/or notches in the ears, following an identification chart.
 - 4.5.3. Whenever possible, use a simple code to limit the number of notches/punches.
 - 4.5.4. Have the identification chart readily available in the animal room to allow prompt identification of individuals.
 - 4.5.5. If possible, use the excised tissue as a sample for genotyping, replacing the need for a tail biopsy.
- 4.6. Ear tags:
 - 4.6.1. Use tags that are about 5 mm long.
 - 4.6.2. Rinse the tags in 70% alcohol before use.
 - 4.6.3. Place the tag low on the pinna (distal 1/3) so that it rests against the mouse and does not bend the ear, cause the mouse to hold its head in a lopsided manner, or catch on the cage.
 - 4.6.4. Monitor site of implantation for local infection or inflammation
- 4.7. Microchips:
 - 4.7.1. Use appropriate general anesthesia and analgesia to implant the microchip. Refer to SOPs.
 - 4.7.2. Implant microchips subcutaneously in the neck area.
 - 4.7.3. **Do not** implant microchips in animals less than 3 weeks old.
 - 4.7.4. Apply disinfectant on the skin (e.g., 2% chlorhexidine solution).
 - 4.7.5. Using the implanter, inject the microchip subcutaneously in the neck area.
 - 4.7.6. Have available a compatible reader to allow identification of the mice.
 - 4.7.7. Reuse microchips only after proper cleaning and sterilization (follow manufacturer's recommendation).

5. REFERENCES

- 5.1. Guidelines on Genetically-Engineered Animals, 2nd Draft; Canadian Council on Animal Care (CCAC): http://ccac.ca/gea_downloads/GEA_Guidelines_Second_Draft_18Aug08.pdf
- 5.2. CompMed listserv; American Association for Laboratory Animal Science (AALAS): http://www.aalas.org/online_resources/listserves.asp#compmed

SOP REVISION HISTORY

DATE OF MODIFICATION	DETAILS
March 2016	Removal of item 4.8 Toe amputation.