	Washington State University Institutional Animal Care and Use Committee	Standard Operating Procedure #8
	Title: Identification of Rodents and Rabbits	
Effective Date: 4/29/2020		Page 1 of 4

Standard Operating Procedures for Identification of Rodents and Rabbits

1.0 Background:

1.1 Individual animal identification is essential for the proper management of animals used in research and teaching at Washington State University (WSU). The procedures outlined in this SOP describe commonly used techniques for individual identification of small mammals, including rodents and rabbits. Cage-level identification of animals is acceptable in some circumstances.

2.0 IACUC Requirements:

- 2.1 All methods listed below for identification must be outlined and approved in the Animal Subject Approval Form (ASAF) before implementation. PIs may refer to this SOP in the ASAF for details of the procedures. Personnel should be trained and initially supervised by someone who is proficient in the specific identification procedure, and training should be documented.
- 2.2 Animals should be monitored for appropriate recovery immediately following the identification procedure. All animals will be observed during the daily check. :


3.0 Method of Identification:

3.1 Identification cards - *Species: Rodents and Rabbits*

- 3.1.1 Identification cards can be used at the room, rack or cage level to identify groups or singly housed animals. Information on the card should include:
- 3.1.1.1 The source and strain or stock of the animal(s).
 - 3.1.1.2 Name(s) of responsible investigator(s).
 - 3.1.1.3 The approved ASAF number.
 - 3.1.1.4 Pertinent dates, such as dates of birth, arrival and surgery, as applicable.

3.2 Ear Punch or Notch - *Species: Rodents*

- 3.2.1 Ear notches or punches can be used for the dual purpose of permanent animal identification and as a tissue sample for genotyping. The external pinna is an appropriate site for this identification method; punches or notches should avoid areas where cartilage is thicker close to the head. Anesthesia is not required for this method of identification. A universal numbering system has been described (Figure 1)².
- 3.2.1.1 Use only sharp, commercially available ear punches
 - 3.2.1.2 Disinfect the ear punch prior to use and between cages.

	Washington State University Institutional Animal Care and Use Committee	Standard Operating Procedure #8
	Title: Identification of Rodents and Rabbits	
Effective Date: 4/29/2020	Page 2 of 4	

3.2.1.3 Restrain the animal and notch/punch the ear(s) near or at the outer edge of the pinna.

3.2.1.4 Collect only the minimum amount of tissue necessary.

3.2.1.5 Control any bleeding with steady pressure to the site.

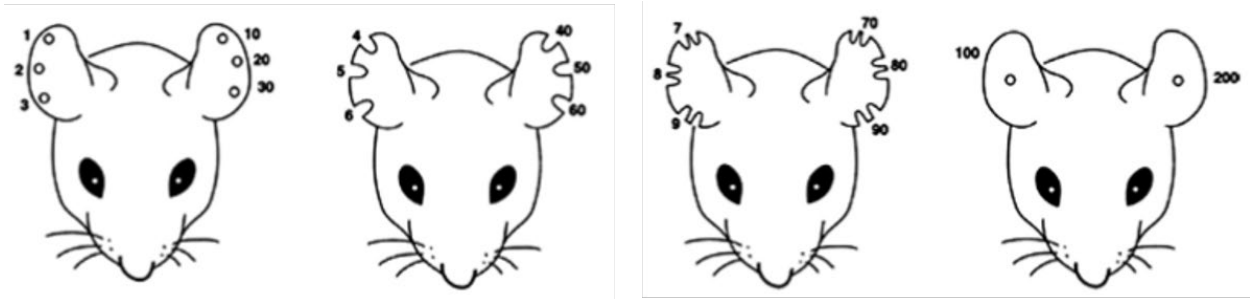


Figure 1. Ear punch/notch code.

3.3 Ear tags - *Species: Rodents and Rabbits*

3.3.1 Numbered, bar-coded or RFID ear tags can be used as a method of permanent animal identification. Anesthesia is not required. Tag size and placement are important to increase retention and prevent tissue necrosis. Ear tags may cause tissue reactions and inflammation, which may require removal of the tag. Tag manufacturer instructions should be referred to for specific procedures. The following are general steps for ear tag placement:

3.3.1.1 Where possible, sterilize tags before use.

3.3.1.2 Disinfect ear tag applicators prior to use and, at minimum, between cages of animals.

3.3.1.3 Restrain the animal and place the tag in the lower third of the ear with the number/bar code facing forward (Figure 2)¹.

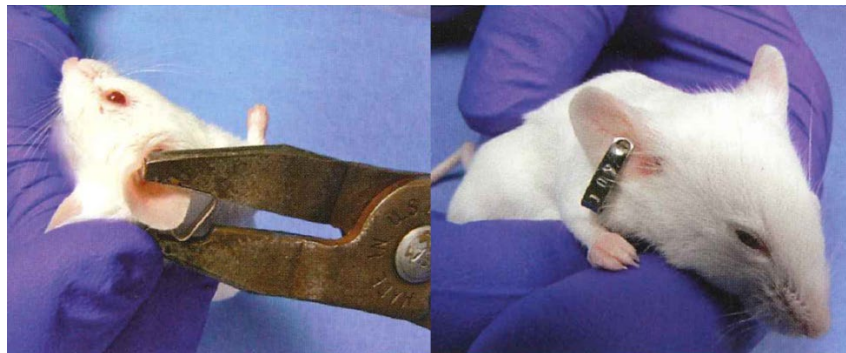



Figure 2. Restraint and proper placement of ear tags for rodents.

3.4 Microchipping - *Species: Rodents and Rabbits*

3.4.1 Microchips are easy to place, can provide nearly limitless individual alphanumeric identifiers, and rarely cause tissue reactions. A microchip reader is required to detect the alphanumeric code. Rodents may need to be

	Washington State University Institutional Animal Care and Use Committee	Standard Operating Procedure #8
	Title: Identification of Rodents and Rabbits	
Effective Date: 4/29/2020	Page 3 of 4	

sedated or anesthetized for proper microchip application.

3.4.1.1 Sterilize microchips and trocars prior to use.

3.4.1.2 Disinfect the skin at the site of application, usually between the shoulder blades.

3.4.1.3 Tent the skin at the application site.

3.4.1.4 Insert the trocar at the base of the skin tent and depress the plunger to insert the microchip subcutaneously.

3.4.1.5 A drop of tissue glue may be used to seal the skin after implantation.

3.5 Tattooing - *Species: Rodents and Rabbits*

3.5.1 An animal-grade tattoo gun, sterile small-gauge needle, or other appropriate device is used to create a permanent marking on the skin with tattoo ink. Animals may be sedated or anesthetized for tattooing, although this is not required. Tattoos are generally placed on the tail or feet of mice and rats, or the underside of the pinna of rabbits. The skin at the site of tattooing should be disinfected prior to introduction of ink. Tattoo needles should be disinfected before use and, at minimum, between cages of animals, and should be replaced when dull. Pigment should be FDA-approved. Please refer to the tattoo device manufacturer instructions for device-specific ink products and procedures.

3.6 Toe Clipping - *Species: Rodents up to 7 days of age*


3.6.1 Toe clipping can only be used “when no other individual identification method is feasible” in mice or rats up to 7 days of age.³ Only the distal phalanx may be removed, with no more than one toe per paw being clipped. Aseptic practices, including sterilized instruments and disinfection of the skin, must be used. This method of identification must be approved by the IACUC and requires scientific justification. Tissue removed during toe clips may be used for genotyping. Anesthetics and analgesics may be used in accordance with animal age and species.

3.7 Non-Invasive Methods - *Species: Rodents and Rabbits*

3.7.1 Temporary, non-invasive mechanisms of identification include shaving or clipping of fur, non-toxic dyes, or permanent marker. These methods are short-lasting and may need to be re-applied within a matter of days. Only non-toxic markers, dyes, or pigments may be used.

4.0 References:

- 4.1 Bogdanske JJ, Hubbard Van-Stelle S, Riley MR, Schiffman BM. Laboratory Mouse Procedural Techniques Manual and DVD. 2011. CRC Press: Boca Raton, FL.
- 4.2 Fox JG, Anderson LC, Otto G, Pritchett-Corning KR, Whary MT, eds. Laboratory Animal Medicine, 3rd edition. 2015. Academic Press: San Diego, CA. Chapter 25 – Techniques of Experimentation.

	Washington State University Institutional Animal Care and Use Committee	Standard Operating Procedure #8
	Title: Identification of Rodents and Rabbits	
Effective Date: 4/29/2020	Page 4 of 4	

4.3 National Research Council. Guide for the Care and Use of Laboratory Animals, 8th edition. 2011. The National Academies Press: Washington D.C.