

RODENT IDENTIFICATION (SOP)

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- I. **SCOPE:** The Guide for the Care and Use of Laboratory Animals (Guide) NRC 1996 indicates the following means of animal identification: "...room, rack, pen, stall, and cage cards with written or bar-coded information; collars, bands, plates, and tabs; colored stains; ear notches and tags; tattoos; subcutaneous transponders; and freeze brands.
- II. **Standard Operating Procedures:**
 1. Color Staining or marking: Marking can be done with a permanent marker (*e.g.* sharpie™). The durability of these marks varies considerably and is unpredictable. This is used for short-term identification. Staining the skin or fur of animals is a temporary method and can be done by using such dyes as picric acid, fuchsin, triptane, acriflavine, and gentian violet. A common problem is that the stain often rubs onto other animals. Like markers, a major disadvantage is that they are not permanent and they have a potential of altering the animal's biochemistry.
 2. Ear Punching/Notching: This is performed using a punching/notching device. Holes that are placed too close to the ear margin will have a tendency to tear, while holes too close to the head are prone to close. Ear punching/notching must follow a predetermined coding system. This system is outlined in a training series manual published by the American Association for Laboratory Animal Science.
 3. Ear Tags: Rodent ear tags are designed specifically for small rodents and are predominantly made of nickel-copper alloy. Ear tags are self-piercing and a tag is attached with a special applicator. Positioning of the ear tag is important.

4. Tattoos: Tattoo identification is done with a hand-held device that uses a vibrating needle. The tail provided a suitable site for tattooing. Ketchum Manufacturing makes a system called the Aramis Laboratory Animal Microtattoo System. This system can tattoo the toe/footpad, ear or tail of an animal by injecting a small amount of green paste in those areas.
5. Subcutaneous Transponders: A sterile transponder is inserted under the animals skin by subcutaneous injection. There are different types of transponders and readers available.
6. Toe-clipping (removal of the first bone of certain toes, corresponding to a predetermined numbering code¹), as a method of identification of small rodents, should be used only when no other individual identification method is feasible and should be performed only on altricial (blind, hairless, helpless in the developmental stages) neonates. "Under certain circumstances the techniques of "toe clipping" for the purpose of animal identification may be necessary. However, the Institutional Animal Care and Use Committee (IACUC), considers the "toe clipping" method of marking an animal as a potentially painful procedure, which should be discouraged and only done with the approval of the Institutional Animal Care and Use Committee (IACUC).

II. PROCEDURE FOR TOE CLIP

Toe clipping to identify altricial neonates can only be used if the principal investigator justifies to the IACUC in the protocol application that no other methods of marking the animal is feasible. The IACUC must also be satisfied that the procedure will be performed in the most painless and humane way and that the investigator will consider all accepted veterinary procedures, including anesthesia and antisepsis. For more information on the other devices contact the DLAR Veterinary services.