

Guidelines for Toe Clipping of Rodents

Toe clipping is used as a method of identifying small rodents by using a predetermined numbering code¹ and may simultaneously be used as a method to obtain biopsy tissue for genotyping. It should only be used in pre-weaning rodents. Other methods of rodent identification include cage cards, colored stains, ear notches, punches or tags, tattoos and subcutaneous transponders.

Although the “toe clipping” method of animal identification has been considered to be a painful procedure producing a potentially long term impact on behavior, recently it was reported^{2,3} that toe clipping produces no more acute pain or distress than other commonly used rodent identification procedures when performed on mice from five to seven days of age. These studies also reported no long term effects of this procedure in test batteries evaluating physical and behavioral development. Despite these recent findings, a principal investigator must continue to justify to the Animal Care and Use Committee (ACUC) that no other methods of identifying the animal are feasible as required by the *Guide for the Care and Use of Laboratory Animals*⁴. The ACUC must also be satisfied that the procedure will be performed in the most painless and humane way possible and that all accepted veterinary procedures are addressed.

References

1. Assistant Laboratory Animal Technician Manual, American Association for Laboratory Animal Science, 2002, page 45.
2. Castelhana-Carlos MJ, Sousa N, Ohi F, Baumans V. Identification Methods in Newborn C57BL/6 Mice: A Developmental and Behavioral Evaluation. *Laboratory Animals* 2010; DOI: 10.1258/1a.2009.009044.
3. Schaefer D, Asner I, Seifert B, Bürki K, Cinelli P. Analysis of Physiological and Behavioral Parameters in Mice after Toe Clipping as Newborns. *Laboratory Animals* 2010; 44:7-13.
4. *Guide for the Care and Use of Laboratory Animals*, National Research Council, National Academy Press, 1996, page 46.

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