



THE UNIVERSITY OF TOLEDO
INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

SUBJECT: Rodent Breeding and Breeding Cage Densities

DATE: February 14, 2018

Rodent Breeding and Breeding Cage Densities Guidelines

The establishment of a rodent breeding colony should be scientifically justified and not based on convenience. Overcrowding, as a result of breeding, can be a significant animal welfare issue and is in violation of federal and University guidelines on animal care, as well as the *Guide for the Care and Use of Laboratory Animals*. The purpose of this guideline is to address the health and wellbeing of mice and rats by ensuring safe breeding practices and breeding population densities. In all cases, cages should be regularly monitored to ensure the well-being of the neonates (e.g., size, age, and activity level), as well as characteristics of the cage environment and colony breeding performance. Exceptions to this guideline require IACUC approval.

Mice

When breeding, no more than 2 adults and 1 litter, regardless of the size of the litter, will be allowed in a 67 square inch (standard static mouse) cage or 75 square inch (standard ventilated mouse) cage.

1. The recommended breeding strategy for mice is monogamous pairs in either a standard ventilated or static mouse cage.
2. Breeding trios (1 male:2 females) or harem breeding (1 male:3 females) are allowable in a mouse cage only if all but one of the pregnant females are removed by the lab prior to parturition (birth) such that only one litter of pups and two adults remain in the cage after pups are born.
3. If post-partum estrus is used, the first litter must be weaned by 21 days of age to prevent the presence of two litters in a cage, i.e., no extended weaning is allowed if post-partum estrus is used.

Rats

When breeding, no more than 1 adult and 1 litter, regardless of the size of the litter, will be allowed in a 143 square inch (standard rat) cage. No more than 2 adults (1 male: 1 female) and 1 litter, regardless of the size of the litter will be allowed in a 268 square inch (standard guinea pig) cage.

1. The recommended breeding strategy for rats is monogamous pairs in a standard rat cage.

2. If post-partum estrus is used, the first litter must be weaned by 21 days of age to prevent the presence of two litters in a cage, i.e., no extended weaning is allowed if post-partum estrus is used.

References

1. *Guide for the Care and Use of Laboratory Animals*, 8th Edition. 2011. National Research Council Committee for the Update of the Guide for the Care and Use of Laboratory Animals. Washington (DC): National Academies Press (US).
2. *Guidelines for the Establishment and Use of Mouse Breeding Groups*. National Institutes of Health ARAC Guidelines, July 2012.
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