
1. PURPOSE

The intent of this Standard Operating Procedure (SOP) is to describe an appropriate environmental enrichment program for rats.

2. RESPONSIBILITY

Facility Animal Care Committees (FACCs), principal investigators (PIs), animal care staff

3. PROCEDURES

- 3.1. The purpose of environmental enrichment is to provide rats with opportunities to express basic behavior needs, to promote species-typical, non-injurious, behavior and to promote physical and mental health thus enhancing animal welfare. The environmental enrichment should be biologically relevant (i.e.: hiding, socializing, searching) so that it does not lose its enriching value over time.
- 3.2. Social Contact:
 - 3.2.1. Pair or group house rats.
 - 3.2.2. Rats may be singly housed in some cases:
 - 3.2.2.1. Incompatibility.
 - 3.2.2.2. Medical reasons.
 - 3.2.2.3. Specific protocol approved by FACC.
- 3.3. Housing System:
 - 3.3.1. Animals should be housed with the goal of maximizing species-specific behaviors and minimizing stress-induced behaviors.
 - 3.3.2. House rats in solid-bottom cages with contact bedding, unless specifically described in a protocol and approved by the FACC.
 - 3.3.3. Housing system should exceed the minimal space recommendations for a standard rat cage (~140 sq. inches):
 - 3.3.3.1. 1 female, 1 male, and one litter until weaning.
 - 3.3.3.2. After weaning: 4 rats if <200g; 3 rats if <300 g; 2 rats if >300g.
- 3.4. Dietary Enrichment:
 - 3.4.1. No dietary enrichment is routinely provided.
 - 3.4.2. Provide rats with dietary supplementation as allowed by the PI for positive reinforcement (e.g. sunflower seeds, rodent treats).
- 3.5. Objects:
 - 3.5.1. Nesting material:
 - 3.5.1.1. Provide nesting material (e.g., looser paper strands such as Enviro-Dri®, NESTLET®, corn husk, shredded aspen) in every cage.
 - 3.5.1.2. Transfer the nest to the clean cage with the animals during cage change, add additional nesting material and provide a new shelter if necessary.
 - 3.5.2. Shelter:
 - 3.5.2.1. Provide a shelter (e.g. plastic tube).
 - 3.5.2.2. Shelter should provide enough protected space for all cage occupants.
 - 3.5.3. Chewing device:
 - 3.5.3.1. Provide a chewing device (e.g. nylon bone, hardwood block) to rats on powdered food, or preferably to all rats.
- 3.6. Exemption:
 - 3.6.1. Exemption from this environmental enrichment program must be justified and approved by the FACC, or prescribed for medical reasons.