

**University of Prince Edward Island  
Animal Care Committee  
Standard Operating Procedure**

**SOP #:** ACC - H02

**SOP Title:** Rat Environmental Enrichment

**SOP Section:** Husbandry

**Issued by:**

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## **1.0 Introduction**

- 1.1 The purpose of environmental enrichment is to provide rats opportunities to express basic behavior needs, promote species-typical, non-injurious behavior and promote physical and mental health thus enhancing animal welfare. The environmental enrichment should be biologically relevant (e.g. hiding, socializing, searching) so that it does not lose its enriching value over time. Introduction of novel enrichment materials must be approved by the Principal Investigator (PI) and the University Veterinarian before introduction.

## **2.0 Materials**

- Nesting Material
- Shelter
- Tubes
- Running Wheels
- Dietary Supplements
- Nylabones
- Hard wood blocks
- Other types of enrichment

## **3.0 Procedures**

### **3.1 Social Contact**

- i. Pair or group house rats.
- ii. Rats may be singly housed in some cases
  1. Incompatibility due to aggression
  2. Medical reasons
  3. Pregnant females based on strain disposition (may cannibalize young if left with male or other females or males may kill young)
  4. Specific protocol approved by Animal Care Committee

### 3.2 Housing System

- i. House rats in solid-bottom cages with contact bedding, unless specifically described in a protocol and approved by the ACC.
- ii. Provide the minimal space recommendations for a standard rat cage (~900 cm<sup>2</sup>):
  - 1 female and 1 male, with one litter until weaning
  - 3 rats if <300 g
  - 2 rats if >300

### 3.3 Dietary Enrichment

- i. No dietary enrichment is routinely provided.
- ii. Provide rats with dietary supplementation only as approved by PI and the University Veterinarian

### 3.4 Objects

- i. Nesting Material
  1. Provide nesting material (e.g. Nestlet, envirodry, shredded aspen) in every cage.
  2. Transfer partial nest to when providing a clean cage with the animals, with additional nesting material, and provide a new shelter if necessary.
- ii. Provide at least one of the following:
  1. tube (e.g. PVC pipe)
  2. shelter
  3. running wheel
  4. hard wood block (SPF Grade)
  5. nylabone (Disinfected)

## 4.0 **References**

- 4.1 *Guide for the Care and Use of Laboratory Animals*. National Research Council; National Academy Press, Washington, DC, 1996.  
<http://oacu.od.nih.gov/regs/guide/guide.pdf>
- 4.2 *Enrichment Strategies for Laboratory Animals*, ILAR Journal, Volume 46, Number 2, 2005. National Research Council. [http://dels.nas.edu/ilar\\_n/ilarjournal/46\\_2/html/](http://dels.nas.edu/ilar_n/ilarjournal/46_2/html/)
- 4.3 *Making Lives Easier for Animals in Research Labs*, Animal Welfare Institute, 2007.  
<http://www.awionline.org/ht/a/GetDocumentAction/i/4590>
- 4.4 *Comfortable Quarters for Laboratory Animals*, Animal Welfare Institute, 2002.  
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