

**Description of procedure:**

Specially designed monitoring chambers are used to study oxygen consumption and metabolic rate. Animals undergo measurement in the chambers for 2 - 48 hours of observation.

**Procedure Steps:**

1. Adult mice (male, virgin female or postpartum dams) are placed in a bedded chamber (42 X 52 X 82cm) and are provided with a water bottle, but no food for the two hours of measurement.
2. Room air flows through the chamber and the difference between oxygen levels in the intake and outflow, calculated as oxygen consumption, is the measure recorded for assessing metabolic rate.
3. The mouse is then returned to its home cage after two hours.
4. For the 48 hour measurement or two circadian cycles, food is added to the monitoring cage.