SOP of TSE 6528 Metabolism

1 Purpose

1.1 PhenoMaster Next Generation (NG) 6528 is a large-capacity 18 cages allow the measurement of VO2 consumption, VCO2 production, RER, Heat, food & water intake, wheel running and activity frame. The animals are placed in a TSE cage for 1day~7days with free access to food and RO sterile water.

2 Scope

2.1 Individuals who have been trained in TMC animal room must follow this procedure.

3 Safety Requirements

3.1 General laboratory procedures should be followed which include no eating and no drinking in the work area. Laboratory coats and gloves must be worn at all times in the work area.

4 Quality control

4.1 Calibrate and run the TSE system according to the manufacturer‘s specifications (see TSE Hardware/ Software Operating Instructions).

5 Equipment

5.1 Mice are acclimatized in the animal room using special drinking bottles.

5.2 Animal wheel activity monitoring system.

5.3 A climate chamber.

5.4 An ABB containing the necessary equipment for measuring O_2 and CO_2 concentrations and flow.

5.5 Animal food and water monitoring system.

5.6 Animal activity frame monitoring system.

5.7 Animal body weight and environmental enrichment monitoring system.

5.8 TSE module of the software package.

6 Supplies

6.1 Disinfectant (70% alcohol solution and HOCL).

6.2 Gloves.

6.3 RO sterile water.

6.4 Chow food and high-fat diet.

6.5 Bedding.

6.6 Hand towels.

6.7 Weight scale.

6.8 Pens and Marker pens.

6.9 Tweezers.

7 Procedure

7.1 Prepare and calibrate the TSE apparatus according to the manual.

7.2 Weight each mouse individually and record its weight before the start of measure.

7.3 Place each mouse individually in TSE cage with free access to food and RO sterile water.
7.4 Start the measurement of TSE. There is a 12:12 hours light/dark cycle in TSE cage (AM7:00/PM7:00).
7.5 At the end of the experiment, place mice in their original cages and clean up and disinfect the TSE system