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## U Cinn - Body Composition & Carcass Analysis

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**Protocol status:** Working

We use this protocol and it's working

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## Abstract

### Summary:

Total body composition in live, un-anaesthetized small animals and carcasses will reveal absolute amounts of body fat, lean tissue and body water via a quantitative magnetic resonance (QMR) instrument, EchoMRI, (Echo Medical Systems, LLC, Houston, TX). This instrument uses the differences in the nuclear magnetic resonance properties of hydrogen atoms in organic and non-organic environments to fractionate signals originating from fat, lean tissue and free water.

## Materials

### MATERIALS

✕ EchoMRI-100 Whole Body Composition Analyzer for Mice **Echo Medical Systems Catalog #EchoMRI-100**

✕ Mouse Restrainer **Echo Medical Systems Catalog #H100-30**

### Note:

**EchoMRI, RRID:SCR\_017104**

- 1 Insert the calibration tube into opening on right side of the EchoMRI-100 as far in as possible.
- 2 Select "**Calibrate**" at the bottom of the screen to calibrate the system.
- 3 After calibration has passed, weigh the animal and carefully place in the restrainer tube.
- 4 Insert the restrainer tube into the opening on the right side of the EchoMRI-100 and:
  - a. Select "**New Experiment**" at the bottom of the screen
  - b. Enter data for the **Group**,
  - c. Enter data for the **Subject**
  - d. **Notes** (Body weight should be included in the "**Notes**" field)
- 5 Select "**Start Experiment**" to start measuring the body composition.

***Each run will take approximately 1 minute.***

***It is recommended that each animal is measured 2 or 3 times to determine the average of the repeated runs.***

- 6 When the small box in the upper, left-hand corner reads "Experiment Complete," remove the restrainer from the machine, and return the animal to its home cage.
- 7 Repeat steps 4-7 for all additional animals.