Body Composition/Carcass Analysis
C1041

Version: 1
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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.

Reagents and Materials:

Reagent/Material	Vendor	Stock Number
EchoMRI-100 Whole Body Composition Analyzer for Mice	Echo Medical Systems	EchoMRI-100
Mouse Restrainer	Echo Medical Systems	H100-30

Protocol:

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.