



Sable Promethion – Metabolic System

The institute of Biochemistry, Food Science and nutrition at the Faculty of Agriculture, Food and Environment, Rehovot is offering its indirect calorimetry metabolic system for researchers at the Hebrew University.

The unit is composed of two eight-cage single mouse modules that are part of a [Sable Promethion](#) indirect calorimetry measurement unit. The unit measures the following parameters at up to 5min resolution.

1. VO_2
2. VCO_2
3. Mouse movement through XY beam breaks and running wheel
4. Food intake
5. Water intake
6. Mouse weight

Using these measurements, the system can measure Respiratory Exchange Ratio (RER), Energy expenditure (kcal/h) and time budget for different activities i.e. wheel, resting etc. The output XML file is compatible with Microsoft Excel and free online tools such as Harvard's [CalR](#).

Further customizations enable specialized access doors to facilitate food restriction under diverse conditions (time of day, food intake, paired feeding etc.).

The unit is located at the Faculty of Agriculture mouse conventional facility in a separate room to isolate it from the rest of the animal facility.

The service includes help in setting up the experimental parameters that will utilize the system's strengths. Daily follow-up and maintenance and on-site consultation. Basic analysis of results and advanced bioinformatics for analysis of results.

Procedure:

Any PI interested in using the system needs to add the use of the system to the ethics request. For already approved requests, one can add an amendment. We strongly advise to consult with us before submitting the request. The PI must then coordinate



the experiential schedule with the unit manager Dr. Ofer Gover

ofer.gover@mail.huji.ac.il. At the time of the experiment the animals will be transferred by the Authority of Biological Models to Rehovot for ~3 days of acclimation in conventional cages before being moved to the system single mouse cages. All handling of the animals while in the unit will be accompanied by the unit personnel. Upon completion, mice need to be sacrificed. Either in the conventional unit of transferred back to the PI's laboratory in coordination with the Authority of Biological Models.

The cost to the PI is 1600NIS/8cages/day.

Money should be transferred via SAP to account no. 5300032 GL6013104.