

From x-ray systems to assess body composition and conventional metabolic cages to high throughput metabolic systems with wide range of measuring options. All presented solutions are dedicated for rodents and larger animals. We also provide calorimetry rooms for humans.

Parameter™ 3D and Supra tomosynthesis systems

Multislice radiography imaging systems with functions of body composition and bone mineral density analysis.

- Dedicated for small rodents
- Multislice radiography imaging
- X-ray, 3D and 2D imaging capabilities



Metabolic cages

Metabolic cages provide uncontaminated, reliable samples for accurate monitoring. They separate feces and urine into tubes outside the cage. Its design prevents urine from washing over and entering the feces tube.

STAINLESS STEEL CONSTRUCTION



POLYCARBONATE CONSTRUCTION



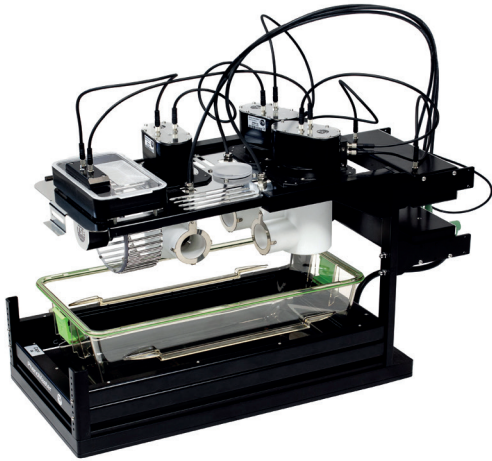
AUTOMATED METABOLIC PHENOCAGE

- Weighing sensors quantify urine and feces by amount and time
- Optional high-speed freezing unit conserves the samples for later analysis
- Part of the PhenoMaster family – possibility to add indirect calorimetry module, motor activity module etc.



PhenoMaster metabolic and phenotyping platform

The system is made to be flexibly adjusted to your specific research field and will be customized to your specific research needs, while still allowing you the flexibility to add additional modules if your research focus changes.



- Characterization of experimental animals under controlled conditions in the home cage
- Elimination of human bias, standardization of the environment
- High throughput phenotyping by running large number of cages in parallel
- Food and liquid access control, weight monitoring
- Real-time measurement of O₂, CO₂ and energy expenditure with optional ¹³C, CO₂, CH₄, H₂, H₂S, N₂O, NH₃ sensors
- Optional modules: respiratory gas measurements and respirometry – indirect calorimetry

CaloSys – automated indirect gas calorimetry

CaloSys PhenoMaster's module measures the animal's oxygen consumption and carbon dioxide production to calculate key metabolic parameters, including the respiratory exchange rate (RER), and energy expenditure (EE). Specialised isotope sensors such as for ¹³C can be used for substrate utilization (fat vs. carbohydrate catabolism).

- Can be used with a home cage setup equipped with enrichment tools granting maximal animal welfare in various combinations of options and modules.
- Can be coupled into a CaloThreadmill or CaloWheel for exercise calorimetry as well as Metabolic PhenoCage.



CALOWHEELS STANDARD AND VOLUNTARY WHEELS

- The module of PhenoMaster
- High precision calorimetry exercise evaluation in rats and mice
- Air tight compartment for high accuracy respirometry
- Adjustable resistance – evaluate the effect of different mechanical loads on exercise, muscle physiology, and metabolism

CALORIMETRY ROOMS

- 24-hr energy expenditure
- Total Energy Expenditure
- Sleeping Metabolic Rate
- Physical activity Energy expenditure

CALOTHREADMILL EXERCISE RESPIROMETRY

- PULL and PUSH mode (for conventional or hypoxia/isocage studies)
- Auto-calibration ensures consistent sensor accuracy prior to the experiment
- Elimination of variable influence of water by a first pass physical Peltier-based gas drying unit
- Optional ClimateBoard module adds continuous temperature and humidity environment monitoring to the home cage