



Metabolic Cages

Cat. No. 41800 / 1 / 2 / 3

USB Connection

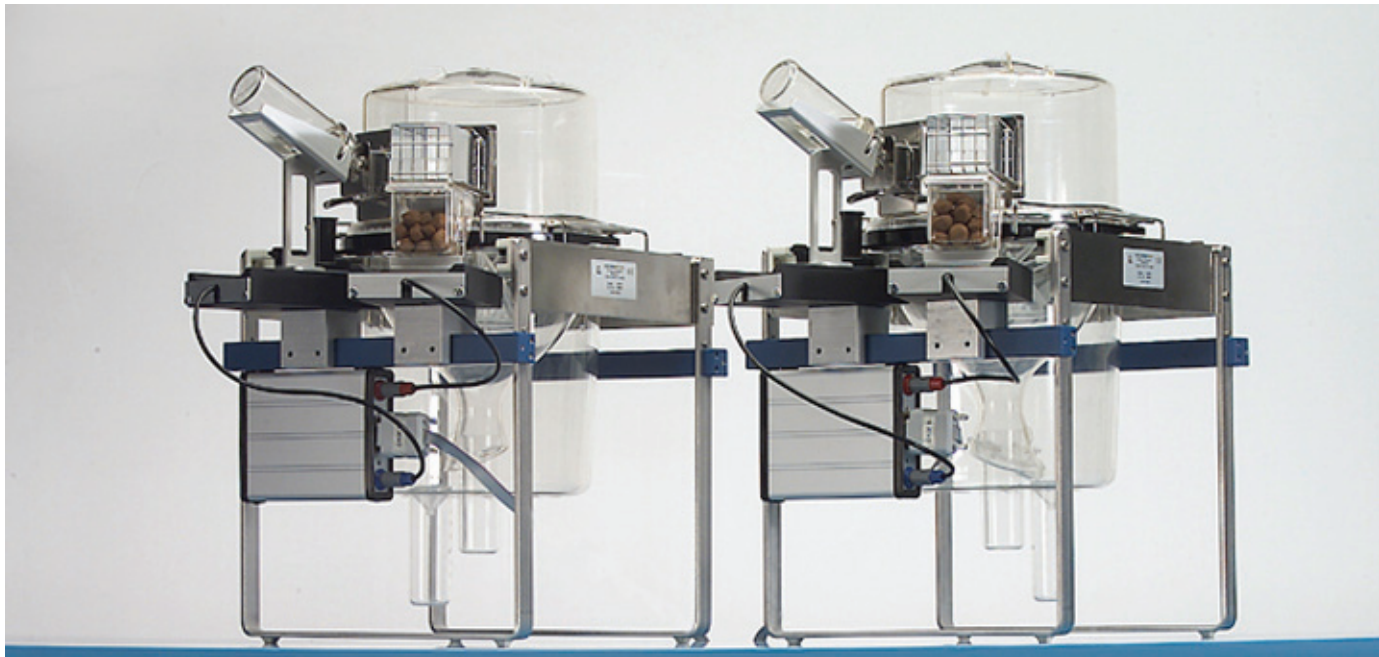
DESIGNED TO MEASURE:

- FEEDING BEHAVIOUR
- ACTIVITY (OPTIONAL)
- EXCRETORY FUNCTIONS

General

The recently available animal models (for example, obese and diabetic mice) exhibit symptoms similar to those in humans.

Model organisms are closely monitored, revealing differences, which can be correlated with those of the human disorders in fundamental parameters, as feeding/drinking (quantity & frequency of food/drink uptake), activity (with optional I.R. motion detectors) and excretion (the latter assessed by volume or weight, see following subheading).



For all types of investigations on METABOLISM, including:

- drugs which produce anorexia
- addiction/aversion to particular substances
- thirst arousing and quenching mechanism
- feeding habits and their modification brought about by environmental conditions

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Basic Cage Design

These carefully engineered metabolic cages are manufactured by TECNIPLAST GAZZADA, see separate datasheet.

All components below the cage floor are removable without upsetting the test animal.

Feeding and Drinking Analysis

The basic Metabolic Cages are upgraded with the addition of miniature scales, which accurately record ingestion of food.

The trough, shaped as an open box, is made of smooth gnaw-proof plastics. It glides into a receptacle made of stainless steel, fastened to its scale-pan, which senses the load of the pellet food and hence monitors the quantity and frequency of food uptake. The crumbs the animal produces are collected in the front compartment, for a precise evaluation of the food consumption. The water bottles are provided with a spout and rest on a support stud fastened to the scale pan for monitoring quantity and frequency of water uptake. Provision is made to collect any dripping for a more precise water consumption evaluation.

Activity Detection

The co-ordinate ambulatory activity and "rearing" of the rodent on test can be measured via the optional motion detector Cat. No. 41700-043, consisting of two facing arrays of emitters and receivers which record beam breaks as the animal moves



Electronics & Data Acquisition

Each feeding and drinking cage comes with feeding and drinking scales and incorporates a preamplifier module (Cat. 41800-010), which directly connects to the PC USB port for computer processing.

The consumed food and liquid and the optional activity can be recorded directly into a computer at preplanned intervals.

The **Cage Monitoring System (CMS) Software 51800** manages up to 8 cages. The software acquires data and provides results related to partial and total food/liquid consumption and to activity.

Please refer to the software manual for additional information.

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BASIC METABOLIC CAGES

- 41700-002** Metabolic Cage for rats up to 150 grams
- 41700-003** Metabolic Cage for mice
- 41700-004** Metabolic Cage for rats 150 to 300 grams
- 41700-005** Metabolic Cage for rats over 300 grams

METABOLIC CAGES WITH FOOD & DRINK RECORDING PROVISION

- 41800** Cage for rats up to 150 grams
- 41801** Cage for mice
- 41802** Cage for rats 150 to 300 grams
- 41803** Cage for rats over 300 grams

Each cage is provided with:-

- E-WP008** Mains Cable, Europe (or E-WP 008-1 U.K. / E-WP 008-2 U.S.)
- 52010-323** USB connector
- E-AU 042** Individual Power Supply

ACCESSORIES

- 41700-043** Combination vertical/horizontal sensors for activity detection in metabolic cages
- 41800-302** Instruction Manual for Hardware

SOFTWARE

- 51800** Data Acquisition Software for up to 8 cages. For recording of food/liquid consumption and activity in cages series 41800.
- 51800-302** Instruction Manual for the software