Feeding & Activity Analyser

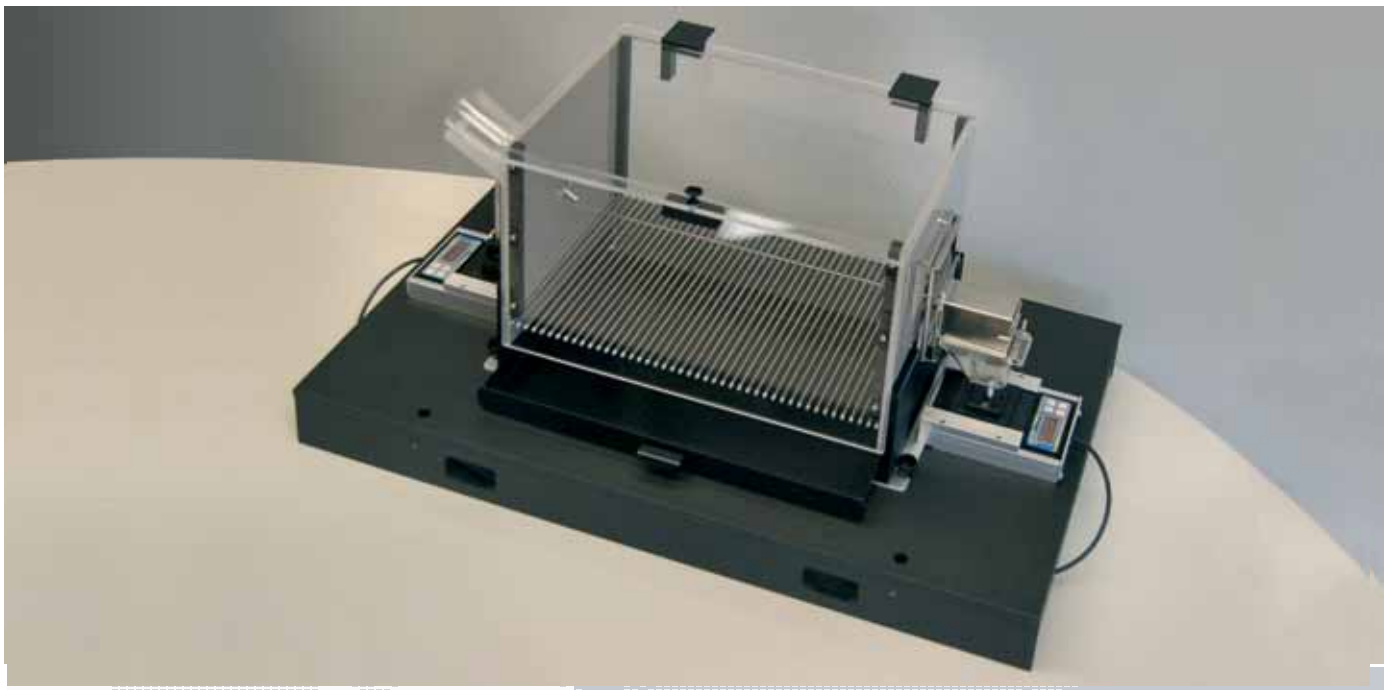
Cat. No. 47552 / 47553 / 47555

TO RECORD THE FEEDING BEHAVIOUR AND ACTIVITY (OPTIONAL) IN RODENTS AND THEIR ALTERATION BROUGHT ABOUT BY A NUMBER OF FACTORS.

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).

The Analyser basically consists of an Animal Cage, which can be provided with optional activity detector and an Electronic Unit.



This system has proved to be of great value to quantify at presettable intervals the solid & liquid intake in investigations about:-

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

Animal Cage

Two types of cages are available: **47552 designed for Rats** and 47453 for Mice. Both cages have transparent walls and lid to allow the animal observation.

The cages, which are provided with a catch pan, can be easily detached from its Base structure for cleaning or servicing.

They incorporate load cells, which sense the load of food and liquid, thus recording their ingestion, with 0.1 g accuracy and monitoring the frequency of food/liquid uptake.

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. 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.

The inside dimensions of the rat cage are 36x23x18(h) cm, of the mouse cage 26x20x17(h) cm.

Activity Detection

The co-ordinate ambulatory activity and "rearing" of

the rodent on test can be measured via the optional motion detector Cat. No. **7435** (horizontal) and **7436** (vertical-rearing), each consisting of two facing blocks of I.R. arrays of emitters and sensors.

For cage **47453** the two sensors are replaced by Cat. **41700-043**, combining both horizontal and vertical sensors.

FEEDING & DRINKING ANALYSIS

Each 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. A PC with USB port is required
Please refer to the software manual for additional information.

Mouse Gas Metabolism Cage

The 47555 Gas Metabolism Cage for Mice is an airtight box which has ports to allow monitoring a mouse's O2 consumption, CO2 production, VO2 and VCO2 via an external Metabolic Monitor (to be purchased separately).

The cages are complete with scales to record food and liquid intake via the 51800 software. Infrared activity arrays 41700-043 may also be attached to monitor the animal's locomotion. The cage complies with the IACUC space requirements for mice

Ordering Information

47552-001 MONITORING CAGE for Food & Drink for RATS up to 150 grams, complete with food & liquid intake detectors and preamplifier module 41800-010.
Dimensions cage: 354x231x180 mm.

47552-002	SAME FOR RATS 150 TO 300 grams
47552-002	SAME FOR RATS OVER 300 grams

475453 MOUSE MONITORING CAGE for Food & Drink, complete with food & liquid intake detectors and preamplifier module 41800-010.
Dimensions cage: 286x200x155 mm.

47555	GAS METABOLISM CAGE FOR MICE

Each cage is provided with:-

E-WP008	Mains Cable, Europe
52010-323	USB connector
E-AU 042	Individual Power Supply

ACCESSORIES

7435	Set of horizontal activity sensors for 47552
7436	Set of vertical (rearing) activity sensors for 47552
41700-043	Combination vertical/horizontal activiy sensors for 47553/47555
47552-302	Instruction Manual for the 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

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