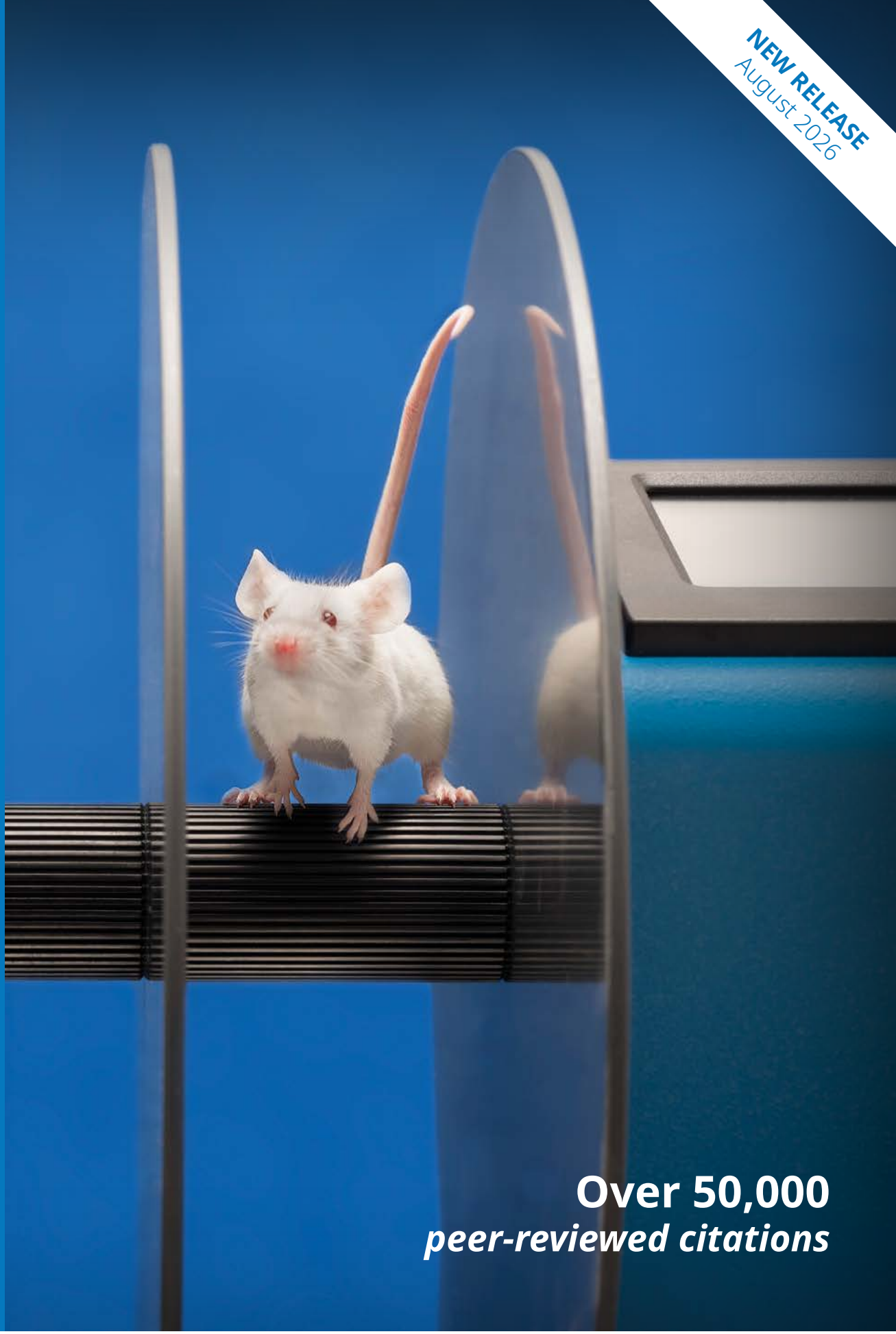
UGO BASILE CATALOGUE

NEW RELEASE
August 2026



Over 50,000
peer-reviewed citations

TRANSFORMING IDEAS INTO INSTRUMENTS

ugo basile®
YOUR COMPANION IN DISCOVERY SINCE **1963**

Metabolic Cages

Simple and cost-effective urine and feces separation

These cages allow for single or multiple housing of mice and rats and their unique funnel and cone design effectively separates rodent feces and urine into tubes outside the cage. Collection tubes are easy to remove and the process will not disturb the animals. They include water bottles and food hopper and are available for multiple mice, single mice and rats of different weights (from below 150 grams to over 300 grams). Made of polycarbonate and steel they are resistant and easy to clean.

ORDERING INFORMATION

SKU	Description
41700-002	Metabolic Cage for rats up to 150g
41700-003	Metabolic Cage for mice (groups)
41700-004	Metabolic Cage for rats 150 to 300g
41700-005	Metabolic Cage for rats over 300g
41700-033	Metabolic Cage for single mouse
Accessories	
3M01D100	Single cage stand (included in all cages except 41700-033)
3M12D100	Vertical rack for 12 metabolic cages, suitable for models 41700-002/005. Dimensions 124x48x190 cm
ECHILLER	Electronic chilling device for keeping urine and feces at a constant low temperature
ECHILLRACK 01	Support for ingle metabolic cage
ECHILLRACK 10	Vertical rack for 12 metabolic cages with E-chiller



Metabolic Cage Single Mouse



Metabolic Cage for Mice



Metabolic Cage for Rats

Application

Metabolic cages that separate urine and feces are designed for subsequent urine and fecal analysis. Most commonly the analysis of these excretions include parameters such as urine volume, concentration composition (e.g., pH, creatinine, electrolytes, protein, glucose), and fecal output to study weight and frequency of fecal pellets, water and fiber content, microbiota, inflammatory markers, etc..

Features and Benefits	
Different models available	Can be used for single or multiple animals and for rats of different sizes
Urine and feces tubes are outside the cage	The animal is not disturbed when the samples are taken
Polycarbonate and steel materials	Resistant and easy to clean

Isolated Organ Baths

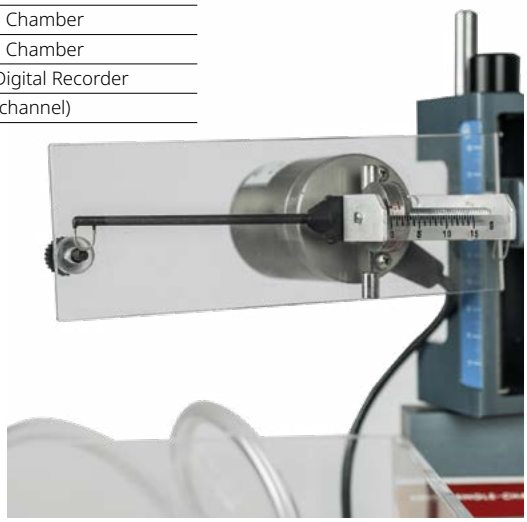
Ideal for teaching purposes or for research

Provides accurate recording of isometric or isotonic tissue contraction/release. For studying effects of drugs or electrical stimuli on isolated smooth muscles (including uterus, trachea, gastrointestinal tract, vessel strips, auricle etc) under optimum conditions.
Classic pharmacology tool for research and teaching. Maintains the integrity of muscle tissue for several hours in a controlled environment and provides accurate recording of isometric or isotonic tissue contraction/release.



ORDERING INFORMATION

SKU	Description
4000	Isolated Organ Bath, 1 Muscle Chamber
4050	Isolated Organ Bath, 2 Muscle Chamber
4400	Isolated Organ Bath, 4 Muscle Chamber
17308	DataCapsule-Evo (8-channel) Digital Recorder
3165	Multiplexing Pluse Booster (4-channel)



Features

Compact, cost effective, easy to use, turnkey solution with heating, circulation and transducer mount in each bath. Available in 1, 2, or 4 chambers configurations with control box that enables pre-set temperature from 25 to 45°C in 0.1°C steps. A precise solid state thermostat maintains the temperature within the limits of +/- 0.1° C on all models.
Tissue washing without exposure to air: wash or test solution enters chamber after passing through the temperature equilibrating coils and the syringe valve. The tissue in the chamber is washed by flushing the chamber through an overflow drain tube, to avoid exposing the tissue to the air.
Water stirring is accomplished by a water jet delivered through a noiseless vibration-free centrifugal pump. A stainless steel heating element is mounted on the Perspex tank floor. An additional constant current stimulator (SKU 3165) can be added to the Isolated Organ Bath for electric stimulation.

References

Fernanda Y.G.M. Couceiro et. al. 2023, "Involvement of phospholipase A2 in the neuromuscular blockade caused by coralsnake (Micrurus spp.) venoms in mouse phrenic nerve-diaphragm preparations in vitro", Toxicon

UGO BASILE SRL Società Unipersonale Phone: +39 0332 744574 | Email: sales@ugobasile.com | URL: ugobasile.com

Isometric and Isotonic Force Transducers

Robust, Accurate and easy to calibrate

The isometric transducers measure the force of an isolated tissue when its length is constant, while the isotonic transducer measures tissue displacement in mm and is especially suited for fast contractions.
The isometric transducers are available in four models, covering range from 0 to 50 g. Highest sensitivity model covers the range 0-800 mg. Sturdy construction. Connects to the most popular data acquisition systems.



ORDERING INFORMATION

SKU	Description
7003	Isometric Force Transducer, DY1
7004	Isometric Force Transducer, DY2
7005	Isometric Force Transducer, DY3
7006	Isotonic Transducer
7010	High Sensitivity Transducer, DY0
17308	DataCapsule-Evo (8 channel) Digital Recorder

Specifications	7003 DY1	7004 DY2	7005 DY3	7010 DY0
Excitation Voltage (max)	6V	6V	6V	6V
Excitation Voltage (typical)	3V	3V	3V	3V
Sensitivity (µV per g per V)	70	25	10	110
Force Range	From 0mg to 800mg	From 0g to 2g	From 0g to 10g	From 0g to 50g
Overload Rating	20g	50g	200g	5g
Moment of Inertia	7 gcm^2	7 gcm^2	7 gcm^2	7 gcm^2
Lever Arm Displacement	0.5 mm/g	0.3 mm/g	0.1 mm/g	0.6 mm/g

Specifications	7006
Voltage Output	300µV per mm
Linearity	± 2% to ± 15° rotation
Excitation Voltage	6 ÷ 15 V
Excitation Current	20 mA
Operating Range	± 15°
Level arm Lenght	10 cm
Level arm travel	6 cm

References

S Bilel et. al. 2020, "In vitro and in vivo pharmacological characterization of the synthetic opioid MT-45", Neuropharmacology
Cristina Pozzoli et. al. 2020, "Relaxing effects of clenbuterol, ritodrine, salbutamol and fenoterol on the contractions of horse isolated bronchi induced by different stimuli", Research in Veterinary Science

Data Capsule-Evo (Data Collection and Stimulation)

8-channel data acquisition system with the LabScribe software

The analogue-to-digital converter has 8 channels, 4 of which already equipped with bridge amplifiers to connect to a vast range of transducers, such as isometric, isotonic (for organ bath, tissue contraction experiments) and blood pressure (invasive). The additional 4 BNC connectors are not amplified and can direct to the PC via USB already amplified signals (e.g. Blood Pressure Recorder, non invasive). On the output side it offers low voltage and high voltage stimulators. All features are managed by the LabScribe software. It works with both PC and Apple computers and has a maximum sampling speed of 100 KHz, which makes it suitable for a very broad range of applications.



ORDERING INFORMATION

SKU	Description
17308	DataCapsule-Evo (8 channel) Digital Recorder

Features and Benefits	
USB Connection to PC and MAC	Versatility
LabScribe4 Software included	Full hardware/software package
DIN inputs and BNC outputs	Connectors for most transducers
Input trigger to start recording	Synchronization with other systems

Specifications Input	
BNC INPUTS (A1-A4)	
N° of Inputs	4
Input Range	±10 VDC
Resolution	16 bit
Connectors	BNC Cable
DIN8 TRANSDUCRE INPUT (A5-A8)	
N° of Inputs	4
Inputs Range	±10 VDC
Resolution	16 bit
Isolation	NO
Excitation	±5 VDC, 100 mA
Connectors	BNC Cable
Gain	Programmable with input resistor
DIGITAL INPUT	
Input	8 indipendent lines, TTL input, 1 megaOhm input impedance, 5V maximum

Specifications Output	
HIGH VOLTAGE STIMULATOR OUTPUT	
Connectors	HV Safety
Output Range	0-1 mA
Compliance	100V
Max ON time	10ms
LOW VOLTAGE STIMULATOR OUPUTS (S1 and S2)	
Resolution	16 bit
Connectors	BNC
Isolation	NO
Ouput Range	±15 VDC at 35 mA
Modes	Pulse, Train, Constant, Step, Ramp, Triangle, Custom
DIGITAL OUTPUT	
Output	8 indipendent lines, TTL output level, 24mA maximum load per line



Ventilators

Volume controlled respirator - The most durable in the market

A positive pressure pump (according to Starling's Ventilator method) for small animals. Assists with breathing during anesthesia and surgery or when an animal has an injury or illness that requires respiratory support.
Highly accurate, rate displayed digitally, choice of cylinder/piston assemblies (from 0.05-0.5 ml to 20-100 ml), quiet, high quality, robust with a long lifetime. Options include Start/Stop model for advanced electrophysiological-pharmacological investigations.

ORDERING INFORMATION

SKU	Description
7025	Rodent Ventilator
28025	Mouse Ventilator
6025	Cat and Rabbit Ventilator



Specifications	7025	28025	6025
Rate (strokes/minute)	10 to 180	60 to 300	10 to 100
Read Out	Digital Display	Digital Display	Digital Display
Stroke Volume	0.5 to 5; 1 to 10 or 3 to 30 ml	0.1 to 1; 0.05 to 0.5 ml	10 to 50 ml; 20 to 100 ml
Stroke Volume Scale	1-10 ml & 3-30 ml	0.05 ml divisions	10-50 ml & 20-100 ml
Stroke Volume Reproducibility	±2%	±2%	± 2%
Dimension	27x26x19cm	20x13x18.5cm	27x26x19cm

References

Leonard I. Kleinman and Edward P. Radford. 1964, "*Ventilation standards for small mammals*", Journal of Applied Physiology

Compact Gas Anesthesia System

High quality and compatible with Ugo Basile Ventilators

Provides an easy to use means of immobilizing an animal for surgery or procedures such as imaging or many others. Gas Anesthesia (compared to intravenous) is a very quick way to induce total unconsciousness and also assists fast recovery.
High quality compact, modular and virtually unbreakable system. Reliable and precise delivery of the anesthetic gas to animals.
Expandable system for multiple animals providing excellent value with all the necessary accessories available, including different masks for different animal sizes.



ORDERING INFORMATION

SKU	Description
21100	Single-Output Anesthesia System
21200	Double-Output Anesthesia System
7900	Induction Box for small rodents (mice and rats), 25x13x13 (h) cm
7910	Induction Box, large size, 40x22x21 (h) cm
21100-790	Induction Box for small rodents (mice and rats) 25x13x13(h) cm
PS-0833	Active Scavenger
PS-0950	Fill device



Induction box

Features

- Anesthetize up to 4 animals simultaneously (depending on model).
- High-precision analog flow-meter with 2 different flow versions (0-4 LPM and 0-10 LPM) for different sized or multiple animal delivery.
- Reliable and precise delivery of the anesthetic gas with new, TEC3 or TEC4 vaporizers for Isoflurane, Sevoflurane and others on request.
- Compact and portable for easy transportation and storage.
- Rodent masks have latex diaphragm for correct positioning and continuous flow of oxygen and anesthetic. The membrane has a positive seal to reduce the investigator's exposure to anesthetic gases.
- Modular and expandable for a cost effective system that suits your needs now and in the future. Select a basic system (flowmeter and vaporizer) or start with a full system (add induction boxes, switch valves, delivery systems for multiple animals, active and passive scavengers, etc.)

References

Maria Loreta Libero et. al. 2024, "Anti-inflammatory and anti-hyperalgesic effects induced by an aqueous aged black garlic extract in rodent models of ulcerative colitis and colitis-associated visceral pain", Phytotherapy Reasearch

UGO BASILE SRL Società Unipersonale Phone: +39 0332 744574 | Email: sales@ugobasile.com | URL: ugobasile.com

Rodent Warmer

Keep animal temperature during surgery

A warmer to provide external heat to animals undergoing surgery, as they can lose temperature during anesthesia. It helps to maintain near-normal body temperature for improved surgical outcomes (such as fewer adverse cardiac events and reduced blood loss). It can work at fixed temperature or with feedback given by a temperature rectal probe to maintain a determined animal temperature. It can be selected as one or two channels and with heating pads of different dimensions or heating cage.







ORDERING INFORMATION

SKU	Description
21100-800M	Rodent Warmer with Mouse Heating Pad
21100-800R	Rodent Warmer with Rat Heating Pad
21100-800C	Rodent Warmer with cage Heating Pad
21100-850MM	Rodent Warmer with 2 Mouse Heating Pads
21100-850RR	Rodent Warmer with 2 Rat Heating Pads
21100-850CC	Rodent Warmer with 2 Cage Heating Pads
Accessories	
21100-812	Rat Heating Pad, 15.25x15.25cm
21100-813	Mouse Heating Pad, 7x7cm
21100-814	Cage Heating Pad, 16x38cm
21100-805	Rectal Thermal Probe

Bronchospasm Transducer

The most sensitive and seamless way of measuring bronchial constriction

It evaluates the spasm-inducing effect of drugs. Typically assesses the effect of bronchodilation agents but can also be used for screening substances inducing opposite effects (bronchoconstriction). It is a simple, reliable and fast method to assess airflow resistance, by connecting it to a constant volume ventilator and measuring the exhaled amount of air. In short, it provides a high precision recording of volume (0.1 ml sensitivity). It is available as a complete set up with a rodent ventilator and data acquisition system (DataCapsule).



ORDERING INFORMATION

SKU	Description
17020	Bronchospasm Transducer
OPTIONAL	
17308	New DataCapsule-Evo, 4-Channel
7025	Rodent Ventilator

Application

Measurements in terms of volume the constriction of bronchial tubes to test drugs treating bronchospasms due to allergic reactions, infections, stress or anxiety, asthma or other respiratory conditions. Other applications include monitoring and basic respiratory physiology

Features and Benefits	
The sensor measures with 0.1 ml sensitivity	High sensitive device
It can be purchased with ventilator and data acquisition system	Ready to use system with all accessories included

References

Janiana Raíza Jentsch Matias de Oliveira et. al. 2024, "Repeated doses of captopril induce airway hyperresponsiveness by modulating the TRPV1 receptor in rats", Pulmonary Pharmacology & Therapeutics
Mayara Alves Amorim et. al. 2021, "Role of nitric oxide, bradykinin B2 receptor, and TRPV1 in the airway alterations caused by simvastatin in rats", European Journal of Pharmacology
Romina Nassin et. al. 2010, "Acetaminophen, via its reactive metabolite N-acetyl-p-benzo-quinoneimine and transient receptor potential ankyrin-1 stimulation, causes neurogenic inflammation in the airways and other tissues in rodents", FASEB Journal

Blood Pressure Recorder

Non-invasive blood pressure recorder

All-in-one system including, pressure generation-pressure monitoring system and pulse amplifier. It can also be connected to any data acquisition systems without amplification needed. A rat restrainer is supplied. While the cuff inflates and deflates, a piezo sensor detects changes in blood flow through the tail artery and an algorithm automatically calculates the systolic (max) and diastolic (min) pressure and shows the data on the display. For more elaborated data manipulation and visualization, the Data Capsule, data acquisition system is suggested, sending data to the PC.



ORDERING INFORMATION

SKU	Description
58800	BP RECORDER, with accessories for RAT: 8mm pulse pick-up, 13mm cuff, 50mm holder
17308	Optional DataCapsule EVO (8-channel) Digital Recorder

Application

Non-invasive measurements of Blood Pressure are performed in pharmacological research to assess the effects of drugs on blood pressure regulation, especially for testing new treatments for hypertension. They are also used in basic cardiovascular research from cardiac function to hemodynamics and mechanisms of heart failure. Blood pressure assessment is part of phenotyping and longitudinal studies too.

Features and Benefits	
Embedded graphic printer, internal memory and PC output	Turn-key and stand-alone
Analogue output (BNC)	Can be conencted to external data acquisition
Wide range of tail transducer sizes (4-18 mm)	Adapts to different animal weights

References

Windingoudi R. C. Ouedraogo et. al. 2023, "Evaluation of acute, subacute toxicity and in vivo impact of aqueous decoction of Flemingia faginea Guill. & Perr. (Barker) leafy stems on NMRI mice and normotensive Wistar rats ", Journal of Drug Delivery and Therapeutics
Lazare Belemnaba et. al. 2021, "Preclinical Evaluation of the Antihypertensive Effect of an Aqueous Extract of Anogeissus leiocarpa (DC) Guill et Perr. Bark of Trunk in L-NAME-Induced Hypertensive Rat ", Journal of Experimental Pharmacology
Ahmed M. Nasr et. al. 2020, "Renal protective effect of nebivolol in rat models of acute renal injury: role of sodium glucose co-transporter 2 ", Pharmacological Reports

Miscellaneus, ECT, LMD

Electroconvulsive-Therapy (ECT)

Epilepsy studies and threshold detection

Designed for inducing convulsions in research mice and rats for epilepsy studies and many more e.g., neurochemical and neuropharmacological research such as evaluating the depressant or stimulating action of drugs on the CNS.
Reproducible results. Parameters have been selected to the most suitable range for mice or rats.



ORDERING INFORMATION

SKU	Description
57800	Electroconvulsive-Therapy (ECT)
57800-002	Set of Auricular Electrodes
57800-003	Set of Corneal Electrodes

Application

It is particularly useful for epilepsy research, more specifically:
- General screening of potentially neurotropic substances
- Evaluating the depressant or stimulating action of drugs on the CNS
- Endocrinological investigations on the relationship between the nervous system and the hypophysis.

A constant current output is used which ensures reproducible results and accurate determination of the ECT threshold while also pin-pointing any variation in the threshold brought about by drugs having specific action on the cortex and subcortical regions. The shock parameters have been selected after consulting the most recent literature, in order to determinate the range of requirements likely to be needed when operating with mice and rats.
The 6-Hz corneal stimulation model, which was introduced in early fifties, has been recently rediscovered to test alternative approaches for drug-resistant seizures. Accordingly the ketogenic diet, which is known to be a valid treatment for refractory seizures, was found to be effective in counteracting seizures induced by the 6 Hz corneal stimulation. When compared with other models based on electrical stimulation, the 6 Hz paradigm is characterized by the induction of minimally convulsive or non-convulsive seizures with automatized behaviors, defined as "psychomotor seizures". Ugo Basile ECT Unit performs the 6 Hz model conveniently.

References

Nozomu H. Nakamura et. al. 2013, "Proximodistal Segregation of Nonspatial Information in CA3: Preferential Recruitment of a Proximal CA3-Distal CA1 Network in Nonspatial Recognition Memory", Journal of Neuroscience
Karine Leclercq et. al. 2014, "Genetic background of mice strongly influences treatment resistance in the 6 Hz seizure model ",Epilepsia
Mustafa Aslan et. al. 2011, "Effect of Gentiana olivieri on experimental epilepsy models ", Pharmacognosy Magazine

UGO BASILE SRL Società Unipersonale Phone: +39 0332 744574 | Email: sales@ugobasile.com | URL: ugobasile.com

Lesion Making Device (LMD)

Safe, localized, versatile

Compact, direct current (DC) Lesion Maker for localized electrolytic lesions in specific brain areas.
Isolated, regulated DC output for electrical safety. Two operating modes: continuous and timed.



ORDERING INFORMATION

SKU	Description
53500	Lesion Making Device
53500-325	Set of 2 Microelectrodes complete with black and red banana plugs

Application

The surgically or electrically induced lesion has served as an important tool in the experimental search of function in the CNS. Its value has derived in part from the simplicity with which it can be used to study neural mechanisms of behavior at a basic level. The advent of the stereotaxic technique, moreover, allowed researchers to produce discretely placed lesions with consistency, especially in subcortical structures of the brain.
The strength of the lesion technique resides also in the variety of ways with which to apply it. Manipulating the type of lesion (DC, RF, knife cut, etc.), its size, the type of electrode, the angle of entry and so on, should continue to expose critically important aspects of neural functions because of the different effects that are produced.
It is no coincidence that the history of the development of these techniques is closely tied to the recent history of theories regarding localization of function in the brain.
The traditional view, whose basic tenets are that the functions are represented in discrete brain structures and that the lesions disrupt function by removal of functional tissue in circumscribed sites, have been recently challenged by growing evidence of the importance of secondary changes. These are induced by a lesion, both directly (necrosis, anterograde and retrograde degeneration) and indirectly (trans-neuronal degeneration, regeneration and sprouting, alteration of neurochemical pools, vascular disruption) and may compromise the more significant neurological changes which can account for alteration of behavior in a lesion experiment.

References

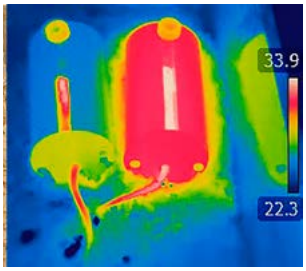
Nozomu H. Nakamura et. al. 2020, "Descending Modulation of Laryngeal Vagal Sensory Processing in the Brainstem Orchestrated by the Submedius Thalamic Nucleus", Journal of Neuroscience
Hu Qiao et. al. 2019, "The central nucleus of the amygdala lesion attenuates orthodontic pain during experimental tooth movement in rats ",Brain and Behavior

---

Romanovsky-Holder (for Blood samples and Injections)

Romanovsky-holder is an innovative way to restrainer mice with unique features. Made in solid and thick black aluminium ensure a fast thermal transfer of the holder temperature to the mouse body, maintaining it for a considerable amount of time.This carries several advantages, including ease of restrain as animals are prone to enter a warm (e.g. 30°C) environment, easier blood sampling and injections thanks to the dilation of the tail vessel. Simply immerse the restrainer in water at 30°C before placing the mouse inside. The aluminium will warm up quickly and maintain the temperature for an extended period. Furthermore, thanks to its design, the Romanovsky holder allows the entire tail to remain fully visible, including the hair-covered portion at its base.





ORDERING INFORMATION

SKU	Description
35590	Romanosky-holder

Specifications	
Outer diameter	55 mm
Inner diameter	30 mm
Length	100 mm
Weight	0.45 Kg

MK-12 Electronic Monitor for Estrous-Cycle

Mice and rats vaginal estrous-cycle detector



It provides precise information on the optimum day for mating during estrous cycle in rats or mice. It represents a powerful tool for improving mating efficiency. A reliable time and labor-saving device. Operation is very simple, even for a novice. In comparison, the conventional vaginal smear method is traumatic to the animal and a troublesome procedure requiring skill, time and labor. The electrical impedance of the epithelial cell layer of vaginal mucosa is measured at the frequency of 1 kHz by insertion of the probe into vagina. In the proestrus stage significantly high impedance is produced compared to that in the other stages of the estrous cycle. 3 kohm of impedance can be considered a standard indicating proestrus stage. Measuring range is 0 – 19.9kohm.

ORDERING INFORMATION

SKU	Description
MK-12	Main Unit for Rats
MP-35A	Probe for Mice

Stereotaxic Instruments



For stereotaxic surgery using rats or other small animals. Can be used to locate targets for implantation of devices, stimulation or injections. Smooth, consistent movements with rapid positioning. Time-proven 'U'-Frame design provides stability and adaptability. Integrated warming base can be activated for better surgical outcomes. Gas anesthesia compatible. East to clean and disinfect, durable surface.
Includes a 100 micron accuracy 3-axes, left-hand manipulator arm, rat adaptor, traditional (18˚) ear bars, and corner clamp probe holder for accurate placement of electrodes, micropipettes, and other devices.
Available in dual, ultra-precise, digital or motorized models.

ORDERING INFORMATION

SKU	Description
51600	Stereotaxic Instruments
Other models and accessories on request	

Application

The most common applications include brain lesions and injections, electrophysiology both single unit and local field recordings, brain cannulation, microdialysis, deep brain stimulation (DBS). In essence stereotaxic frames provide the necessary precision and reproducibility to access and investigate rodent brain.

UGO BASILE SRL Società Unipersonale Phone: +39 0332 744574 | Email: sales@ugobasile.com | URL: ugobasile.com