# Plantar Test for thermal stimulation
Hargreaves Apparatus

Determination of thermal analgesia threshold and hyperalgesia in unrestrained laboratory animals relies on the Plantar Test as a key tool, with more than 2,000 citations in PubMed for the Ugo Basile instruments (the original).

The Plantar Test, according to the Hargreaves method, from its introduction by Ugo Basile almost 20 years ago, revolutionazed the measure of hyperalgesia in rodents, with a remarkable advance in lab animal methodology.

Unique to the Plantar Test (compared to other Pain devices), the animal is unrestrained and unhandled during experiments; the paw withdrawal response is automatically scored and saved as seconds with the IR light intensity. The unilateral / controlateral paw treatments can be used to design the experiment in the most effective way.
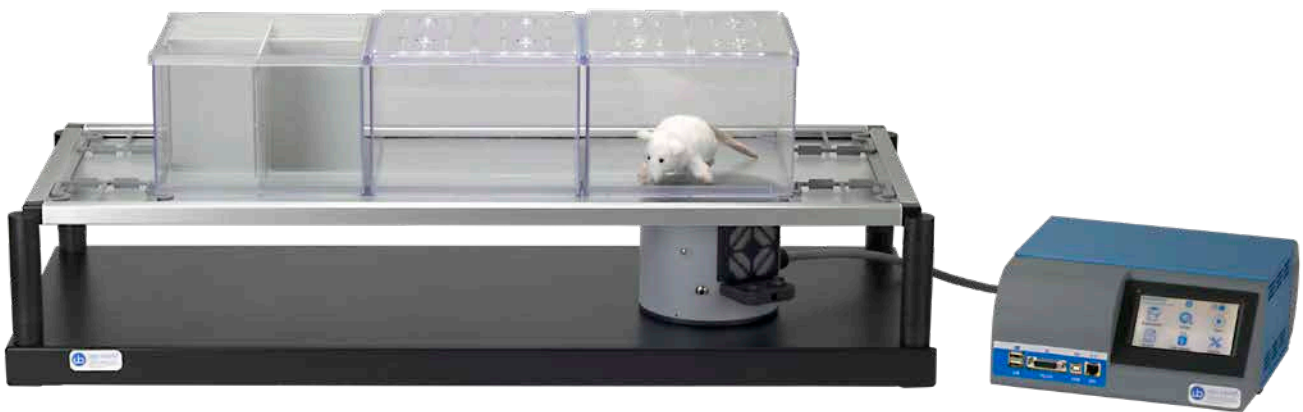
- **The original Hargreaves thermal stimulation device**

- **NEW: bright touch screen and enhanced user interface**

- **NEW: automatic or manual scoring of paw withdrawal latency**

- **For mice and rats. Animal enclosures included (6 rats, 12 mice)**

ugobasile.com - sales@ugobasile.com

ugo basile®
TRANSFORMING IDEAS
INTO INSTRUMENTS

Features and Benefits

- **NEW: Automatic and manual detection mode**
The classic Ugo Basile Plantar test, built after the Prof. Hargreves method, allows for the automatic detection of paw withdrawal latency, in response to thermal stimulation. This automatic feature is now paralleled by a selectable paw withdrawal manual detection, for those cases when the scientist prefers to score according to her human visual assessment of behaviour.

- **NEW: 4.3" TOUCH SCREEN**
The completely redesigned user interface and menus are now accessible through a comfortable and intuitively designed touch screen. All settings, calibration parameters, experiment information, on-line test indicators and saved results, can be accessed with a few clicks.

- **NEW: TTL INTERFACE AND USB EXPORT**
The device hard disk is now integrated inside the electronic board and the front panel hosts a TTL I/O for interfacing with other devices. In addition, two USB ports are both available for plugging in a USB pen drive, upload experiment data and export results in csv format for seamless elaboration in MS Excel.

- **Rats and mice, high throughput**
The system comes complete with a glass pane over which modular animal enclosures are placed and assembled in the desired configuration, depending on the number of animals to be tested. Up to 6 rats or 12 mice can be screened at the same time without the need of multiple habituations or time consuming pick up from home cages.

- **Evolution of a classic**
The Ugo Basile Plantar test has been cited in the literature more than 2,000 times and through the years it has become the undisputed standard for thermal hyperalgesia measurements.

Its core components are a high-power light emitter with an IR filter not to influence the animals with visible light. The lamp intensity can be adjusted and the animal response is captured in terms of latency time by a sophisticated detector, so that the test is fully automated. However, this new version includes also the possibility to manually score the paw withdrawal latency, if needed.
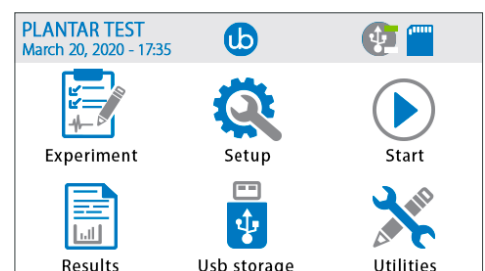

The operation of the device has been made even more intuitive thanks to the state-of-the-art touch screen and easy to use user interface. The TTL I/O interface allows the integration of signals from and to the device.
This makes it possible to synchronize the operation of the Plantar Test with other devices used in conjuction with it during the experimental procedure.
Time latency data is saved automatically in the internal memory and can then be exported with a touch of the screen into a USB pen drive. The standard csv format allows compatibility with MS Excel.

Specifications

Command input & read out	4.3'' touch-screen (resistive)
Data export	.csv format, from USB key (provided)
I.R. Intensity	Adjustable from 1 to 100 (in one digit steps)
Latency time	Displayed on the graphic display, in 0.1s steps
Cut-off function	From 5 to 30 sec
Designed for	Mice and Rats.
Start experiment	By Start button, push buttons or TTL input
Stop experiment	By Stop button, push buttons, cut-off or TTL input
TTL I/O	Input and output TTL signal
Sound Level	< 54dB
Measurement mode	Manual or Automatic
Power Requirements	Universal input 100-240 VAC, 50-60Hz, 50W
Required space on table (all parts)	135cm(w) x 40cm(d) x 50cm(h)
Packaging dimension:	98(w) x 49(d) x 47(h)cm
Weight	11 Kg (shipping weight 14 kg)
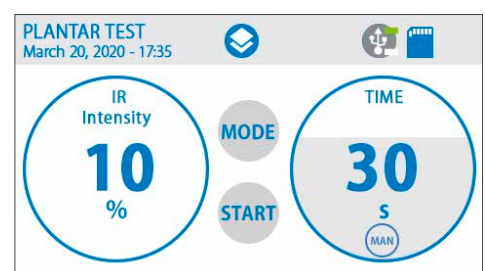
USB key to export csv data to PC

USB key to export csv data to PC