

# **Grip Strength Meter** for Rat

Cat. No. 47105

### General

This Grip Strength Meter measures forelimb gripstrength in rodents. The effects of drugs, toxins, muscle relaxants, disease, ageing or neural damage on muscle strength may be assessed.

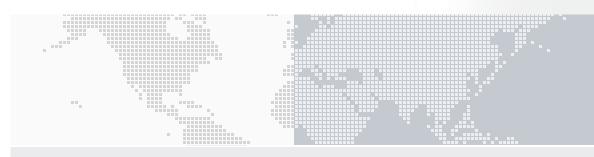
The animal is placed over a base plate, in front of a grasp-ing bar (either T-shaped or trapeze-shaped), whose height is adjustable. The bar is fitted to a force transducer connected to the Peak Amplifier.

When pulled by the tail, the animal grasps at the bar; ro-dents instinctively grab anything they can to try to stop this involuntary backward movement, until the pulling force overcomes their grip strength.

After the animal loses its grip on the grasping bar, the peak preamplifier **automatically stores the peak pull-force achieved by the forelimbs** and shows it on a liquid crystal display.



With grasping-BAR, TRAPEZE or GRID TO ASSESS THE FORCE REQUIRED TO MAKE A MOUSE OR A RAT RELEASE GRIP



#### **Main Features**

• analogue output for force curve display

• stand-alone peak amplifier and continuous reading mode

- grasping-bar and grasping trapeze (grid optional)
- force transducer of adjustable height
- base plate of black sand-blasted Perspex

#### General

The instrument basically consists of a base plate of black sand-blasted Perspex, complete with upright and open-side boss-head to hold a force transducer at adjustable height.

The transducer 47105-002, provided with cable & connector to the peak amplifier, incorporates a graspingbar; a grasping trapeze is also supplied.

#### **Peak Preamplifier**

The Rat transducer may be con-nected to the same Peak Amplifier 47105-001.

The display automatically shows the grip force expressed in grams, when testing a rat, and in gram decimals when oper-ating with the mouse.

## **Data Acquisition**

The data supplied by the peak amplifier are available in digital and analog form. The waveform of the pull can be externally recorded, or can be further processed via analog data acquisition systems.

A BNC cable is supplied with the standard package, to con-nect the 47105-001 to out DataCapsule or to digital record-ers of other make, for the recording of force against time.



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#### **Ordering Information**

**47105** Rat Grip-Strength Meter, complete with following standard accessories:-

47105-001	Peak Amplifier, incorporating a digital display
47105-002	Force Transducer assembly for Rat
47105-004	Pespex Plate with 10 mm diam. upright
4003	Open-side Boss Head
47105-301	Dust Cover for the electronic unit
47105-302	Instruction Manual
47105-321	Trapeze for Rat



#### Bibliography

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• R. D'Hooge et alia: "Neurocognitive and Psychotiform Behavioral Alterations and Enhanced Hipocampal Long-Term Potentiation in Transgenic Mice Displaying neuropathological Features of Human  $\alpha$ -Mannosidosis" 25(28): 6539-6549, 2005

• D. Gitler et alia "Different Presynaptic Roles of Syn-apsins at Excitatory and Inhibitory Synapses" J. Neu-roscience 24(50): 11368-11380, 2004

• N. Authier et alia: "Behavioural Assessment of Di-methylsulfoxide neurotoxicity in Rats" <u>Toxicol.</u> Letters, 132: 117-121, 2002