

I.R. Heat-Flux Radiometer

Cat. No. 37300

General

The Heat-Flux I.R. Radiometer Cat. 37300 has been designed to **calibrate** I.R. sources, in particular the classic Tail-Flick 37360 and Plantar Test 37370 of our make.

The purpose of this extremely useful accessory is to make sure different I.R. sources deliver the same **power flux** (expressed in mW per square cm), hence a nociceptive stimulus of the **same intensity**.

The I.R. output of a I.R. Tail-Flick or Plantar Test may, over the course of one-two years, undergo to 2-3% reduction, due to dust gathered on the optics, darkening of the I.R. bulb, accidental knocks, aging of components due to thermal cycles, etc.

Moreover, if the bulb is replaced or the electronics serviced, output alteration of more significant magnitude, say, 8-10%, may take place.

The design of a simple and reliable I.R. Radiometer has been made possible by the availability of miniature flat "temperature gradient sensors", whose out-put signal is proportional to the temperature difference between their top and bottom surface.



- For Precise Calibration of Infrared Analgesia Meters

- To calibrate the I.R. emission of Ugo Basile Plantar Test & Tail Flick

Main Features

- Provides a measure of stimulus intensity in mW/cm²
- Assures that all infrared instruments are emitting the same level of stimulus intensity

The 37300 Radiometer enables the experimenter to:

- **Check** (and adjust if necessary) **the actual emission of an I.R. source**
- **Ensure** that two or more Tail-Flick/Plantar Test Units deliver thermal nociceptive stimuli of exactly the **same intensity**. Balance them, if necessary.
- **Know the I.R. energy** in absolute terms: 1mW for the duration of 1s corresponds to 1 mJ. A useful datum to compare with any equal or different method/instrument described in the literature.

Instrument Description

The standard package of this extremely useful accessory includes:

- the **Heat-Flux Meter**
- the **Heat-Flux Probe**, embodying the heat sink and the temperature gradient sensor, the latter provided with a Guard Cover
- an **Adaptor for Tail-Flick**
- an **Adaptor for Plantar Test**

The Digital Meter is powered by a 9V battery which makes the Radiometer entirely self-sufficient.

All parts of this portable instrument are neatly lodged in a sturdy plastic case with punched foam lining, which should be retained for the safe storage of the Radiometer and its accessories.

Practical Clues

The measure, as previously mentioned, requires only a few seconds. The I.R. probe is positioned on the Tail-Flick/Plantar Test, after the suitable adaptor is fitted on the threaded head of its heat sink.

The reading on the digital display gives the I.R. power output in mW per square centimetre.

The calibration (if necessary) of the I.R. radiation source is carried out by adjusting the supply current of the I.R. bulb, see the instruction manuals of the Tail Flick and, respectively, the Plantar Test.

Ordering Information

37300	I.R. HEAT-FLUX RADIOMETER , standard package, including:-
37300-001	Heat-Flux Meter (complete with cable/connector & 9V battery)
37300-002	Heat-Flux Probe
37300-302	Instruction Manual (on CD)
37300-320	Probe Front Cover
37300-321	Adaptor for Tail-Flick
37300-322	Adaptor for Plantar Test
I-A 073	Instrument case

Physical

37300 complete standard package, lodged in its case:

Dimensions	37x32x11 cm
Weight	2Kg
Packing	46x38x27cm
Shipping Weight	3.2Kg

Bibliography

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