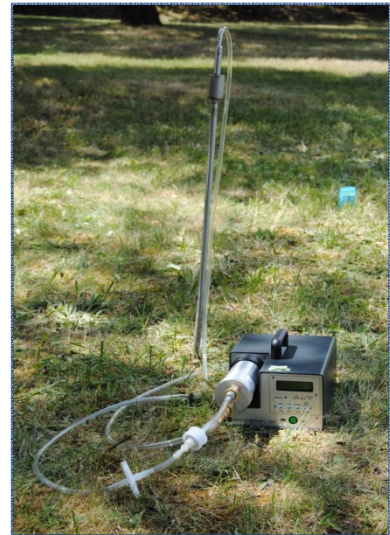


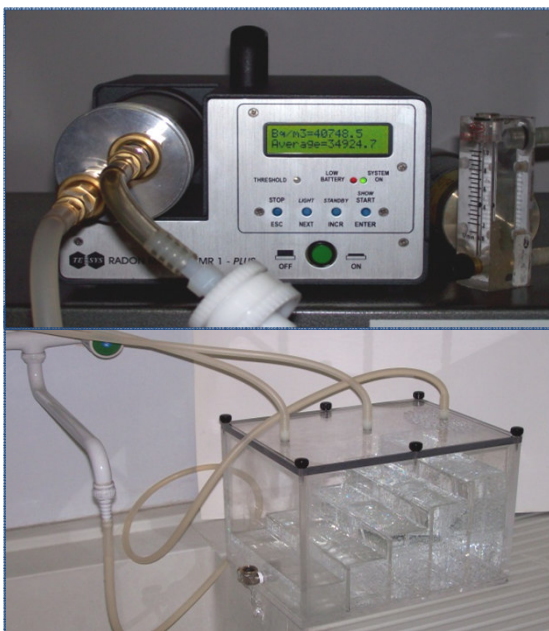
# MR1 PLUS PORTABLE RADON MONITOR



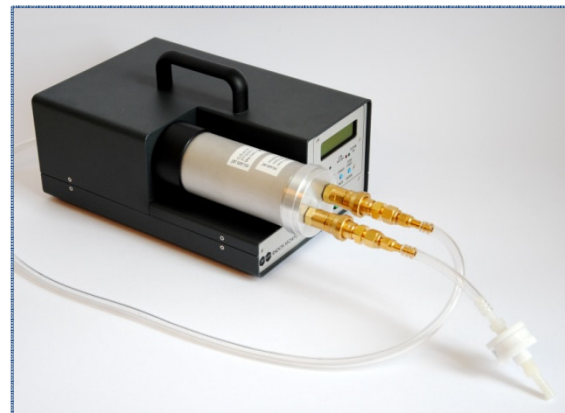
radon in air - passive sampling



radon in soil



radon in water continuous



radon in air - active sampling

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# MR1 *PLUS* TECHNICAL SPECIFICATIONS

## DESCRIPTION

The detector is a scintillation cell. Using the suitable cell head, both passive and active sampling are available: passive by diffusion, active by connecting the cell to the built-in adjustable flow pump. Counting time intervals are set by the user. The instrument has a memory of 999 measurement intervals. Data can be shown on a display, printed out or downloaded via serial port. Software "Radon Explorer" allows remote control and data download via modem. Several sampling methods and accessories allow to perform radon gas analyses in soil, air, and water.

## MEASUREMENT PRINCIPLE

The detector consists of a Lucas cell coupled to a photomultiplier tube. The radon enters the cell either through a permeable membrane or a continuous airflow through the cell itself. When radon and radon daughters decay, alpha particles hit the zinc sulphide. The alpha particle energy is converted into luminous pulses that are amplified and counted.

## OPTIONS

Basic model with passive cell (diffusion sampling)  
Adjustable built-in pump and adapter for active cells (flow sampling)  
24-column external printer  
Sensors for humidity, temperature, and absolute pressure  
Software "Radon Explorer" for remote control  
Probe for radon in soil  
Unit for continuous sampling of radon in water

## SPECIFICATIONS

Detector :	ZnS(Ag) scintillation cell
Nominal Background:	0.5 cpm
Nominal Sensitivity:	0.035 cpm/Bq/m <sup>3</sup>
Calibration:	traceable to NIST
Lower Limit of Detection:	15 Bq/m <sup>3</sup> at 95% confidence level (24h)
Range:	15 to 3.000.000 Bq/m <sup>3</sup>
Memory:	999-interval cyclic
Measurement Intervals:	settable from 1 minute to 99 hours
Pump:	built-in with 0.3 to 0.7 lpm adjustable flow
External Outputs :	RS-232 serial port for printer or PC
Power Source:	230VAC, 50 Hz power supply/battery charger
Battery:	12V, 2.4 Ah
Battery Life:	32 hours (pump off)
Printer:	thermal, 24 columns
Alarms:	settable alarm threshold with isolated relay contact
Operating Temperature:	+5 to +45°C
Humidity:	10 to 90% (non-condensing)
Size:	110 x 190 x 270 mm., cell excluded
Weight:	3.1 kg.

**MR1 is the ENEA INMRI (National Institute of Ionizing Radiation Metrology) reference monitor**

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