RADON DOSIMETRY
CR-39 SYSTEM

The CR-39 system consists of a diffusion chamber, or housing and a nuclear track detector. The diffusion chamber allows the entry of radon only, excluding its decay products.

The sensitive volume of the chamber is optimized according to the detector's efficiency for alpha radiation emitted by radon and its progeny, as well as the duration of the sampling period.
The sensitive element consist of a PADC track detector, an organic polymer commercially known as CR-39.

The detector consists of a 25 × 25 mm² plate with a thickness of 1.50 mm.
Each detector, supplied pre -assembled and ready for use, is uniquely identified by an alphanumeric code printed both on the sensitive element and on the outside of the device.

APPLICATIONS

Evaluation of the average radon gas activity concentration in air.

FEATURES

• High **robustness** and **structural** strength;

• Response independent of **temperature, humidity, dust, mechanical shocks, external electrostatic charge concentration, ion concentration outside the dosimeter;**

• Possibility to choose the **measurement range best suited to specific needs**, continuously ranging from a few days up to one year, with virtually negligible fading.

TECHNICAL SPECIFICATIONS – RADON DOSIMETRY CR-39 SYSTEM

Name	CR-39 SYSTEM
Sensitive element	Polyallyl diglycol carbonate (PADC) plate; 25 × 25 mm with a thickness of 1.50 mm
Chamber	40 ml
Measurement range	20 – 4000 kBqh/m^3
Measurement uncertainty	Standard uncertainty defined according to Formula A.2 Annex A of UNI ISO 11665-4
Minimum detectable concentration	7 Bq/m^3 as defined by UNI ISO 11665-4
Minimum exposure period	Not less than three months