Harmat srls

LAB N° 1777 L

RADON GAS PASSIVE DETECTOR Radonalpha-C

Solid State nuclear Track detector for Radon Gas Radonalpha-C consist of a conductive plastic diffusion chamber inside which a detector made of a PoliAllilDiglicolCarbonato or PADC optical resin or more simply CR-39 is positioned. The dosimeter is shipped to the user in a vacuum packaged radon-impermeable plastic casing to avoid unwanted exposures.

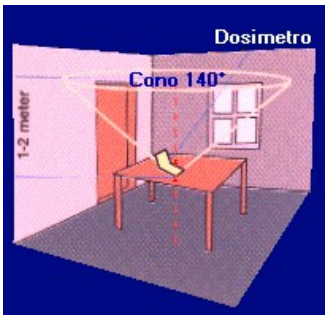
The detector is simple to use; recording of alpha radioactivity begins as soon as the detector is removed from the packaging.

The detector closed in its box has a storage time of about 1 year at room temperature.Storing in fridge is advisable.

TECHNICAL DATA

Dosimeter type: SSNTD closed
Detector: PADC Cr-39 Tastrack
Recommended exposure period: three to six months
Exposure range: up to 30000 kBq h m^{-3}
Minimum detectable level: 10 Bq m^{-3} over three months
The measurement system is calibrated periodically by international bodies including BFS and HPA
The films contained in the Radonalpha-C detectors are analyzed at our IEN IEC ISO 17025: 2018 accredited laboratory.
Do not expose the dosimeter to temperatures above 60 ° C.

Where to Place the Dosimeter



The dosimeter should be positioned away from doors, windows, heat sources and ventilation systems at about 1 meter from the floor and walls, at an optimal height of 1.5 meters. The exposure point of the dosimeter represents the vertex of an inverted cone having an angle of 140 degrees. The imaginary cone will be free from obstacles and impediments.

RESULTS
The buyer's purchase price includes the analysis certificate by our Laboratory.
The dosimeter must be returned at the expense of the customer after the period of exposure.
An accurate result cannot be guaranteed if the detector is returned 6 months after the survey is completed.
Detectors returned one year or more after the survey is completed will not be analyzed.
Upon delivery to the laboratory the detectors are checked to verify any tampering with the diffusion chamber. In the event of alterations, the detectors will be analyzed with prescriptions.

Accredited Lab IEN IEC ISO ILAC 17025:2018

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Placement of Radon Detectors in the Workplace

When deciding on a detector placement strategy the following considerations should be taken into account.

1. The primary purpose of the survey is to assess the level of radon to which workers are realistically liable to be exposed. Measurements, therefore, should be made at locations which are representative of actual or reasonably foreseeable worker occupancy. For this reason it will not be necessary to carry out measurements in areas such as corridors, washrooms, toilets etc. which are unoccupied or occupied infrequently. As a general rule, an infrequently occupied area is one where an individual is unlikely to spend more than 100 hours per year of their working time.

2. The main entry route for radon into buildings is through cracks and gaps in the floor. In general within a given building, basement and ground floor rooms are likely to have the highest radon concentrations. Normally, therefore, a workplace survey should be made in workspaces located on the ground floor and in sub-ground or basement levels, where these are frequently occupied.

3. At least two measurements should always be made in any workplace.

4. The recommended number of detectors per workplace is based the number of offices or on the floor area to be surveyed and on the workplace type. Recommended measurement densities are set out in Table 1 for different workplace types.

5. Where a workplace consists of a number of different work area types, each type should be considered separately for the purpose of determining the number of detectors. For example, in a factory the number of detectors to be placed in the offices should be determined by the number of offices in the ground floor or basement areas, while the number of detectors to be placed in warehouses or workshops should be determined independently on the basis of the area of these workspaces.

6. Experience has shown that radon levels can vary significantly between adjacent buildings. Radon concentrations in an adjacent or adjoining building should not, therefore, be taken as indicative of the levels in a particular workspace. Therefore, where a workplace is divided over a number of adjacent buildings it is necessary that each building be surveyed.

7. In the case of multi-storey buildings occupied by more than one employer, measurements made on the ground and basement levels would normally be sufficient for assessing compliance with the Reference Level for all workplaces in the building.

8. Where different employers are responsible for different floors of a multi-storey building, employers whose staff are located on upper floors should have radon measurements carried out unless they can confirm that the radon concentrations in the ground floor and basements workplaces do not exceed the Reference Level.

Workplace type	Number of monitors	Examples
Office-type accommodation	One detector per individual office	Government offices, Professional practices
Open plan office, and retail or workshop up to about 1000 m2, also public access areas	One per 100 m2	Administrative and call centres, light industry, hotel foyers
Areas up to 5000 m2	One per 200 m2	Warehouses, small supermarkets
Very large areas of several thousand m2	One for each distinct area with obviously different environmental conditions. Not less than 1 per 500 m2	Large manufacturing or process plants, large warehouses
Basements	One in each separate room, section or area irrespective of size, even if infrequently used. Changes in occupancy patterns might increase exposure and therefore a measurement should be carried out	Bank vaults, mechanical and/or electrical control centres

Table 1