

Indoor Radon-222 Concentration Levels Measurements in the Offices and School Rooms in Bethlehem Province, West Bank, Palestine

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Abstract:

Exposure to radon and radon decay products in the home and at work constitutes one of the most important risk from ionizing radiation. Radon is continually produced from uranium and thorium, which occurs in most rocks and soils, present all over the world.

This thesis provides information of physical and chemical properties of radon, its formation and methods used for measuring radon concentration .

This study was in some places in Bethlehem Province where the radon levels measured by using CR-39 that distributed for different periods , between 245 and 250 detector were distributed but only 159 of them were collected , half of these detectors were distributed in Al- Obaidiya town , 50.3% of collected detectors related to houses and schools in Al- Obaidiya , the average radon concentration was. 15.7% of collected detectors was from Al-Shawawra village with average radon concentration. 6.2% of collected detectors was from Za'atra village with average radon concentration 164.6 Bq/m³ . the average radon concentration in Bethlehem and Biet-Shour cities was 129.2 and 150 respectively.

The study shows a relation between high levels of radon and ventilation , since storages and closed places have high radon concentrations.