

# THE RESULTS OF NATIONAL SURVEY OF INDOOR RADON CONCENTRATION IN THE REPUBLIC OF MACEDONIA

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***Abstract*** - The first systematic indoor radon measurements in the Republic of Macedonia were carried out in the period December 2008- December 2009. A total number of 437 dwellings in eight statistical regions were subject to radon concentration measurements by using CR-39 track detectors. The annual mean indoor radon concentration in each measuring site was calculated from the four successive measurements with three months duration of each. The distribution of the results was nearly log-normal. The arithmetic and geometric means of annual radon concentration were estimated as  $105 \pm 84$  and  $85^{*}/1.9$  Bq m<sup>-3</sup>, respectively. The results, were found to show substantial variations between the seasons, between the regions, between the ground and first floors of a house and between the houses with and without basements. The annual effective dose equivalent for the population from exposition to radon was estimated according to the methodology provided in ICRP 65. The conversion factor for the dose was taken from UNSCEAR 2000. The overall estimated annual effective dose equivalent from indoor radon was found to be  $2.1^{*}/1.9$  mSv y<sup>-1</sup>. The estimated annual dose equivalent of radon, in the country as a whole, was found to be higher than the world average of 1.2 mSv.