RADON IN SPRINGS OF ZARAFSHAN RANGE

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The contents of $^{222}$Rn ($\text{T}_{1/2}=3.83 \text{ days}$) in springs of Zarafshan range at the area of Big Uzbek highway (at heights $H$ from 875 m up to 1640 m above sea level) from Amankutan village (north slope) until Kainarbulok village (south slope) was researched. Water probes were selected in 1 liter Marinelly vessels, then hermetically sealed and their spectrums were measured on scintillator spectrometer with NaI (Tl) $\phi 63 \times 63$ mm crystal. Activities of $^{222}$Ra in researched probes were determined by comparison of difference between spectrum probes, measured with extraction $\Delta t \geq 4 \text{ days}$ and spectrum of $^{226}$Ra standard source (at $E_\gamma > 200 \text{ keV area}$) from OMACH set with filler density of 980 g/l.

Selections of probes were done in different seasons of 2003 and 2004. Maximum activities were observed in June-July, and minimum – in September-October. There are traced difference in obtained results (see table) between water activities at north and south slopes of range, and also some of their correlation with height $H$ of spring location.

<table>
<thead>
<tr>
<th>$H$, m. a. s.$^{11}$</th>
<th>North slope</th>
<th>$A_{\min}$–$A_{\max}$, A, Bq/l</th>
<th>$H$, m. a. s.</th>
<th>South slope</th>
<th>$A_{\min}$–$A_{\max}$, A, Bq/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>1010</td>
<td>Kizilbash</td>
<td>20-37</td>
<td>1580</td>
<td>Spiral</td>
<td>62-84</td>
</tr>
<tr>
<td>1060</td>
<td>Issiq buloq</td>
<td>53-64</td>
<td>1500</td>
<td>Yon buloq</td>
<td>95-120</td>
</tr>
<tr>
<td>1260</td>
<td>Tosh buloq</td>
<td>37-48</td>
<td>1460</td>
<td>Kush buloq</td>
<td>85-95</td>
</tr>
<tr>
<td>1640</td>
<td>Opolzen’</td>
<td>91-110</td>
<td>1310</td>
<td>Rokhat</td>
<td>90-100</td>
</tr>
<tr>
<td>1630</td>
<td>Tahtakoracha</td>
<td>63-91</td>
<td>875</td>
<td>Qaynar</td>
<td>25-31</td>
</tr>
</tbody>
</table>

$^{11}$m.a.s. – meters above sea

ENVIRO\textsuperscript{\textregistered}MEN\textsuperscript{\textregistered}TAL\textsuperscript{\textregistered}\textsuperscript{\textregistered}NAL\textsuperscript{\textregistered}ATURAL\textsuperscript{\textregistered}N\textsuperscript{\textregistered}RAYACTIVITY\textsuperscript{\textregistered} CONCENTRATIONS OF TEK\textsuperscript{\textregistered}R\textsuperscript{\textregistered}DA\textsuperscript{\textregistered}G

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In this study, the environmental natural radioactivity concentrations of Tekirdağ, a city in the region of Marmara in Turkey, have been measured. Gamma spectrometric analysis of the soil samples collected from 40 points of Tekirdağ was performed by using an HPGGe detector.
and the radionuclide concentrations of the decay products of $^{238}$U and $^{232}$Th series, 40K and $^{137}$Cs were determined. Gross alpha and gross beta activities of the water samples taken from municipal supplies, springs, wells and fountains were performed by using the Berthold LB770-PC 10, a gas-flow proportional counter. Gamma exposure dose rates were measured by using an Eberline Smart Portable scintillation detector and the annual effective dose equivalents caused by exposure gamma dose rates were calculated.

**INDOOR RADON SURVEYS IN THE SOME REGIONS OF TURKEY**

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In this paper, indoor radon concentrations obtained from the radon surveys conducted in the some region of Turkey were presented. Radon monitoring was performed by applying a passive, time-integrating measuring technique. For this purpose, CR-39 nuclear track detectors were installed in dwellings for 3 months. After the monitoring period, detectors were collected and to make the alpha tracks visible, chemical etching was applied to the exposed detectors. Nuclear track numbers and the corresponding indoor radon concentrations were determined. Annual effective dose equivalents and the risk probabilities caused by indoor radon inhalation were calculated. All experimental data was presented and the results were discussed.

**INDOOR RADON MEASUREMENTS BY THE DETECTORS CR-39 IN ULUGBEK TOWN OF THE TASHKENT**

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Radon concentration has been measured in multistory buildings and detached one-story houses in Ulugbek town of the Tashkent city by solid state nuclear track detector (SSNTD) CR-39. A piece of the CR-39 plastic track detector of $2.5 \times 2.5$ cm\(^2\) was put on the bottom of the cup-sampler. The results of our measurements have been compiled in table. The explored buildings were differentiated into three types identifying construction materials: type A, different types of detached houses built with unburnt bricks and clays; type B, combined with slag and burnt bricks two- and three-story buildings and type C, concrete multistory buildings.