

**RADON -222 IN DWELLINGS SUT-HOL DISTRICT, TUVA**

**Kendivan O.D.**

**Tuva State University, Kyzyl**

**E-mail:** olgakendivan@yandex.ru

**Abstract.** Investigated the content of radon in dwellings Sut-hol district, Tuva. To measure the concentration of radon was used device is the PPA-01M-03 with the software.

**Key words:** radon, volumetric activity, accommodations, Tuva.

To assess levels of radon in buildings in the Russia Federation currently used by the «Norms of radiation safety (NRB-99/2009)». Average annual value of radon indoors in Russia - 30 Bq/m<sup>3</sup> close to the average world value - 40 Bq/m<sup>3</sup> [1].

High concentrations of radon are formed: a) shallow groundwater granite; b) in zones of tectonic disturbances; c) in the areas of paleolitu filled permeable sandy-gravel sediments; g) in the development zones radonotherapy deposits. From a geological point of view about 60 % of the territory of the Republic of Tuva are potentially ergonomilane.

The aim of this study was to investigate the content of radon-222 in dwellings Sut-hol district, Tuva. Were surveyed locations: Sug-Aksy (96 measurement); Iskin (62 measurement); Kara-Chyraa (212 measurements). The residential building presents mainly one-storied residential buildings typical and individual projects. Measurement of volumetric activity of radon in the premises was carried out using the method of sorption active in spring (may, 2013). To measure the concentration of radon was used device is the PPA-01M-03 with the software. The device allows to determine the volumetric activity of radon in the range 20-20000 Bq/m<sup>3</sup> with an error of not more than 30 %. The equipment has a certificate of state inspection. In each of the surveyed housing unit (apartment or a single-family house) measurements were carried out in the bedroom [2]. Measurement point was chosen in place, preventing passage through it of the air flow caused by a through ventilation (aside from the straight line connecting the window and the door to the room). Were also made measurements on the streets of the settlement in the amount of three measurements of radon-222 in the air. Volume activity of radon and its decay products in the air less than 20 Bq/m<sup>3</sup>. During the research it was established that in the settlements of Sug-Aksy, Iskin, Kara-Chyraa maximum volumetric activity of respectively 645+109 Bq/m<sup>3</sup>; 72+24 Bq/m<sup>3</sup>; 317+63 Bq/m<sup>3</sup>.

Conclusions:

1. Surveyed the accumulation of radon-222 in residential areas of the settlements Sut-hol

district.

2. Maximum volume activity of radon ( $645+109$   $\text{Bq}/\text{m}^3$ ) is installed in a room in a private house in the village of Sug-Aksy.

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#### Literature

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