

عنوان مقاله:

(Level of natural radiation in the closed space of the public schools in Hamadan, Iran (۲۰۱۵-۲۰۱۶)

محل انتشار:

مجله پیشرفت در تحقیقات بهداشت محیط, دوره 8, شماره 4 (سال: 1399)

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نویسندگان:

Mohamad Taghi Samadi - *Research Center for Health Sciences, Hamadan University of Medical Sciences, Hamadan, Iran*

Bahman GolzarKhojasteh - *Department of Environmental Health Engineering, School of Public Health, Hamadan University of Medical Sciences, Hamadan, Iran*

Maryam GolzarKhojasteh - *Researcher, Third grade student, Field of Experimental Sciences, Parvin Etesami State Model High School, Hamedan, Iran*

Salman Khazaei - *Research Center for Health Sciences, Hamadan University of Medical Sciences, Hamadan, Iran*

Ladan Sokhri Mirazizi - *Education Office of Hamadan, Hamadan, Iran*

خلاصه مقاله:

Since human beings are constantly exposed to environmental ionizing radiations, the measurement of natural background radiations is of utmost importance. This cross-sectional, descriptive study aimed to measure the annual effective dose of natural background radiation in ۹۳ schools in two districts of Hamadan, Iran in the winter, spring, and autumn of ۲۰۱۵-۲۰۱۶. Among the public schools in Hamadan, the schools located in district one with 1.41 ± 0.079 mSv and district two with 0.955 ± 0.04 mSv had the highest and lowest mean equivalent annual dose caused by natural radiation (γ rays) in a closed space, respectively. The mean equivalent annual dose caused by natural radiation in the closed space of all the public schools in districts one and two of Hamadan was estimated at 1.2 ± 0.07 mSv as separated by geographical directions. In addition, the highest mean dose caused by natural gamma rays in the closed space of the school buildings constructed for more and less than ۴۰ years was 1.42 ± 0.22 and 1.42 ± 0.15 mSv, respectively, and the rate of the effective annual dose of the public schools in Hamadan was determined to be 0.83 mSv as separated by district. The equivalent effective annual dose and risk of gamma ray cancer in the lifespan of the public school students in Hamadan was higher than the global average.

کلمات کلیدی:

Background radiation, Effective dose, Public Schools, Hamadan

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