

Evaluation of radon concentration in artificial saline for speleotherapy and haloaerosoltherapy

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The results presented in this paper show the radiometric measurements of the natural radiation background from the artificial saline, made at INRMFB – Bucharest, Romania, for speleotherapeutic and medical purposes. The measurements were made as a part of a complex study from a radioactive, medical and biological point of view for an innovative use of the factors found in salt mines, caves and artificial saline that have a therapeutically potential in health care. The knowledge of radon concentration levels in underground environments and artificial saline is essential for therapeutic purposes of different respiratory and rheumatic diseases. In order to develop speleotherapy in Romania, this paper presents the results of an indoor radon concentration levels survey in artificial saline,

during multidisciplinary studies conducted in the last years, in the presence and absence of patients with chronic respiratory diseases. The survey was carried out using radon monitor Pylon AB-5 system, Berthold Umo LB123 portable integrated impulse debit meter, low background system Protean Ortec MPC-2000–DP and gamma spectrometer Ortec with HPGe detector, in order to investigate whether differences in microclimate parameters translate into significant differences in artificial saline indoor radon concentrations. The concentration of radon in the atmosphere of the artificial saline was found to be between 121 ± 7 Bq/m³ and 140 ± 8 Bq/m³, depending on the location of the measurement points, of the ventilation state and the number of patients.

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Introduction of Sanatorium EDEL s.r.o. – Medical institution for children with respiratory diseases using speleotherapy

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Introduction. Sanatorium EDEL s.r.o. is a private medical institution for children with respiratory diseases. It uses speleotherapy as a part of medical stay. It is situated in the North-East of the Czech Republic. The history of the Sanatorium goes back to the 19th century, modern history has lasted for 23 years. Core of the Sanatorium is to provide medical service to the patients in age 2–18 with all ranges of respiratory diseases. Speleotherapy of the sanatorium operates in former ore mine and uses 1600 meters

of underground spaces. Speleotherapy was open in 1995. Children visit speleotherapy every working day for 3 hours. Sanatorium cures 950 patients a year in average. Effect of the 4–6 weeks medical stay with cure of speleotherapy usually lasts for 9 months and affects positively sickness rate, medication and school absenting. 60% of patients return for repetitive stays. Sanatorium also monitors environmental indicators of the nearest surroundings of the Sanatorium on daily basis.

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