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METHOD FOR RADIOMETRICALLY CHARACTERIZING THE SPELEOTHERAPEUTIC FACTORS IN SALT MINES

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Abstract

The invention relates to a method for radiometrically characterizing the speleotherapeutic factors in a salt mine, with a view to employing the natural saline underground environment factors having healing properties for the prophylaxis, treatment and recovery of patients with some pathologies and in the balneary and climatic tourism. The method claimed by the invention consists in measuring the volume activity of the atmospheric radon, the radon concentration range being of $7+0.39...95+4.76$ Bq/m³, in the measurement and gamma spectrometric analysis in unprocessed salt samples, with the mass of 100 g and measuring time of 86400 s, to result in total activities of 20...25 Bq/kg for the white salt and 50...65 Bq/kg, respectively, for the black salt, in measuring the overall alpha-beta volume activity in salt samples with the mass of 1..2 g, the radioactivity concentrations ranges being of 2...8 Bq/kg for alpha radiation and of 10...15 Bq/kg for beta radiation, respectively, and measuring the natural radiation background

in the salt mine to result in a natural radiation background given by the relation.

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Advantages

- Development of new research directions
- Decreased costly drug treatments
- Reducing the frequency and duration of hospitalization
- Raising the quality of life of patients
- Increasing the possibility of their employment and rehabilitation in professional and social activity, etc.

Applications

Biological and medical applications,

Radiometric characterization of salt mines and caves, associated with complex medical-biological, clinical and functional studies, cellular immunology, cell biology, biochemistry, ionization, aerosol concentration, saline aerosol dispersion, concentration of microorganisms, concentration of various gases in saline, and so on was a complementary alternative to speleotherapeutic cure in the saline mine environment.

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