

BIOLOGICAL MONITORING IN THE 'WIELICZKA' SALT MINE

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In the „Wieliczka” Salt Mine climatic treatment of pulmonary and allergy-related diseases is conducted. The healing properties of underground microclimate (low temperature, high humidity, salt aerosol content, and lack of allergens) are the basis of the treatment.

The aim of the analysis was to determine the content of bioaerosol in the underground air and compare it with the air of Cracow.

The analyses were performed quarterly (2012/2013) in two salt chambers. The pollen and fungal spores content was measured using the volumetric method, while the mites allergens were counted by fluoroimmunoenzymatic assay (FEIA). The results were compared with pollen and fungal spores concentration in Cracow in the same days of measurement (stationary volumetric monitoring).

In April and July the significant differences in pollen concentration between salt chambers and the surface were observed. Concentration of Der p 1 allergen in all samples was considerably below the threshold for indoor air.

Due to very low content of popular allergens (pollen, fungal spores and mites) in the underground microclimate, the treatment in the “Wieliczka” Salt Mine is beneficial for the patients with allergy diseases, especially in high exposure to those allergens.