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MICROCLIMATIC CHARACTERISTICS AND AIR QUALITY INSIDE THE NATIONAL ARCHIVES OF BIHOR COUNTY, ROMANIA

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Abstract

Written heritage is an important part of the national cultural heritage, including old books, documents and maps of remarkable significance for defining the identity of a nation. These elements, considering the perishability of the material of which they are made are liable to be damaged by internal and external risk factors. A good preservation of the documents must take into account both the nature of the material and the microclimate conditions in which they are stored. Considering these, the paper focuses on the microclimatic characteristics and the air quality inside of the National Archives of the Bihor County Office (Romania), highlighting the influence they have on the documents and the health of the employees. Using digital devices to monitor the risk factors of physical and chemical nature, as well as specific techniques for determining microbiological contamination, the internal microclimate in an archive storage was monitored in the period 01.03.2019 - 21.06.2019. At the same time, a focus group was held in which the employees of the institution participated. The results show that the values of the main elements of the microclimate (temperature, humidity, CO_2 and speed of air currents) are kept with small exceptions within the allowed limits, not posing a hazard to the employees or stored documents. But the air quality is considerably tainted by detected dusts in suspension and fungi, the employees being exposed to several professional illnesses. These conditions impose the introduction of modern HVAC systems to filter the air and improving the microclimate conditions.

Keywords: air quality, employees' health, historical documents, microclimatic characteristics, national archives

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