

THE INFLUENCE OF AIR POLLUTION ON MUSEUM COLLECTIONS

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It is well known the fact that air pollution in museums can lead to the rapid degradation of objects and collections. Among the numerous possible dangers to museum collections, besides time, temperature, humidity, light (UV, IR), pollution is one of the most important threats to museum collections. Pollutants cooperate with humidity, temperature and light, so that the alteration of any of these influences the impact of pollution.

It is imperative that pollutants are identified and suitable action is taken to control levels. Thus, while defining indoor air quality in our museum, the focus was on the following components: SO₂, NO_x, O₃, H₂S; soot, acid and alkaline particles, HCHO and volatile acids. With regards to organic materials, we observed that SO₂, NO_x and O₃ are the most hazardous gases. After monitoring activities within our museum, results have shown that indoor concentrations of outdoor pollutants depend on the building type and place. These results will be presented within the final paper.

Our museum hosted by the Palace of Culture - built in the Neogothic style, the effigy of the city of Iasi and a veritable architectural jewel - is situated in a central area of our city, where the car traffic is very congested. Unfortunately, due to the symbolic value of the Palace of Culture, the local authorities organize, on various occasions, fireworks near the building, thus ignoring the threat fireworks represent for the museum.

In order to ameliorate and even put an end to the menace represented by air pollution for museum collections, we presently develop a research project in cooperation of with scientists, researchers from local universities, conservators and curators. We hope that the results of the project on the damaging pollutants generated within our museum will be useful in conservation science and museums practice as well, and that they will help us to use flexible, compatible and inexpensive systems for controlling air pollution.