

Determination of Trace Elements in Classroom Aerosols – Bernard Poednik, Dariusz Węgrzynek
Summary

The nature and concentration of aerosol particles affect the classroom indoor air quality and have a significant impact on children's and youth's health. The results of investigation of trace elements concentrations, grain size and mineral distribution of aerosol particles and precipitation inside one of the classrooms in Lublin University of Technology have been presented. They were compared with the results of investigation of outdoor aerosols and precipitation. A significant difference between the indoor and outdoor particulate matter was shown. The indoor aerosols contained more Ca and K, while Fe and Pb predominated in outdoor aerosols. The attempt to identify sources of pollution in the classroom indoor air was undertaken on the basis of these results. It was emphasized that quantitative data from studies of aerosol particles in classrooms could play an important role in determination of students' exposure to specific contaminants connected with inhaled aerosols. Utility of such investigations for activities which eliminate sources of hazardous aerosols in schools was also pointed out.