

E. Gaweda - Harmful chemical substances emitted during the operation of selected office equipment

Abstract

The aim of the study was to assess risk connected with exposure to harmful chemical substances emitted during the operation of office equipment (photocopiers, laser printers).

The results of measurements of ozone and nitrogen oxide concentrations are presented. Thirty-five office rooms in 5 office buildings in Warsaw (2 with air-conditioning, 3 without) were examined. The measurements were done twice: in the autumn-winter season and in the spring-summer season. Ozone was determined with the method described in Polish Standard PN-04007-2:1994 (iodine-starch spectrophotometric method), whereas nitrogen oxides with the use of tube indicators.

The results showed nitrogen oxides did not pose a hazard either in office rooms in which office equipment operated with low intensity (single pages printed) or in rooms where copies for other office workers' use were made (rooms with big photocopiers intensively operating). Moreover, even in rooms with photocopiers, where office equipment operated with high intensity, the level of ozone did not exceed 0.15 mg/m^3 (Polish MAC value for industry and for office buildings, too). Thus, substances emitted during the operation of office equipment – ozone and nitrogen oxides – cannot have caused the discomfort experienced in the office rooms that were studied.