Influence of glass plant Bratislava emission on soil and soil magnetic susceptibility

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A b s t r a c t : Recent studies have shown that magnetic susceptibility can be used as a proxy parameter for the detection of higher heavy metals contents in soils. The purpose of this study is to assess the heavy metals contamination in soils around the glass factory utilizing soil kappametry. Field magnetic susceptibility values were compared with the results of chemical analysis of soil samples. The highest values of magnetic susceptibility can be easily identified and correlated with heavy metals contents. The investigation of magnetic susceptibility in soils revealed that its increase was due to emission of air pollutants to the SE of the glass plant. The dependence of the values of soil magnetic susceptibility on soil moisture was shown.

Key words: magnetic susceptibility, soil, heavy metals, glass plant

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