

Kalka, J., Ośliślok, A., Surmacz-Górska, J., Fudala-Książek, S. Assessing the Genotoxicity of Landfill Leachates with the Aid of the Micronucleus Bioassay. *Ochrona Srodowiska* 2008, Vol. 30, No. 4, pp. 15–17.

Abstract: The cytogenetic biotest was used to examine the genotoxicity of landfill leachates by analyzing the changes in the frequency of micronuclei formation in the cells of *Vicia faba* root-tips. The leachate samples collected for the purpose of the study came from two landfills differing in age, both situated in the Upper Silesian Industrial District (Gliwice, Zabrze). The results of the study have disclosed a significant relationship between the frequency of micronuclei formation, chromosome aberration and concentrations of the leachates, expressed in terms of organic carbon content. The micronucleus bioassay was found to be a valuable tool for monitoring the genotoxicity of environmental samples. The results obtained can be of significance in the light of the European Commission debates on updating the list of priority substances that are to be identified and monitored in the aquatic environment under the regulations of Directive 200/60/EU.

Keywords: Landfill leachates, genotoxicity, micronucleus bioassay, *Vicia faba* root-tips.