

**Influence of Ozonation on Leachate Quality from Landfills with Different Degrees of Solid Waste Pre-Treatment** – Magdalena Lebiocka, Agnieszka Montusiewicz, Małgorzata Pawłowska, Janusz Ozonek, Ewa Szkutnik, Marcin Roślan

Summary

Landfilling is the main method of waste disposal in Poland as well as in most countries all over the world. Leachate originating during waste deposition may be a source of ground water pollution. The aim of the paper was to characterize and compare the composition of leachate originating from three landfills in Lublin Province (Poland) and differing in their methods of waste pre-treatment. Ozonation was used in the initial trials to treat landfill leachate. Experiments were carried out to determine whether ozonation using a single dose of 1.8 g O<sub>3</sub>/m<sup>3</sup> has the same effect on the efficiency of organic removal from leachates characterized by different ages and degrees of solid waste pre-treatment. From analyses (BOD<sub>5</sub>, COD, N-NH<sub>4</sub>, heavy metals) it was concluded, that excluding some fractions (glass, paper, plastics, aluminum, fine organic fraction) from the waste mass affects the leachate quality. The studied oxidizing method was found to influence the BOD<sub>5</sub> and COD levels.