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WATER FOR ALL

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BOOK OF ABSTRACTS

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EVALUATION OF LEACHATE POLLUTION INDEX OF URBAN MUNICIPAL LANDFILL SITE IN NOVI SAD, SERBIA

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Leachate samples were collected during the one year monitoring campaign, on municipal solid waste landfill in Novi Sad, Serbia. Determination of T, pH, EC, DO, BOD_5, COD, NO_2-N, NO_3-N, NH_4-N, Tot N, Tot P, B, SO_4^{2-}, $KMnO_4$, and cations of metals (Ca, Mg, Na, K, B, Cr, Ni, Zn, Fe, Cd, Pb and Al) was performed in order to evaluate the leachate pollution index (LPI) (Kumar and Alapat 2005). Due to the obtained values, only 7 parameters (pH, total dissolved solids, BOD5, COD, iron, zinc, and lead) were used for the purpose of calculation of LPI, which resulted in the reduced value of total pollution index. The obtained LPI value was 6,87 and was lower than value obtained within the previous study from the similar landfill site in Croatia (8,53) (Matešić et al., 2016). In addition the obtained LPI value is lower than 35 which indicates the low potential of contamination, as well as the relatively constant quality status of the leachate on landfill site in Novi Sad. The future monitoring programs should include all 18 prescribed parameters for LPI evaluation in order to obtain the overall value of the contamination index.

Keywords: leachate, municipal solid waste landfill, LPI

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