

NITROGEN REMOVAL FROM LANDFILL LEACHATE BY NITRIFICATION AND DENITRIFICATION

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Landfill leachate biodegradation by a native culture and mixed microbial culture of nitrifiers and denitrifiers under aerobic/anoxic conditions in batch assays were studied. The native culture has shown no ability for removal of carbon and nitrogen compounds from landfill leachate. By the mixed microbial culture complete landfill leachate nitrification was performed. The nitrificated landfill leachate was completely denitrificated by the mixed microbial culture with addition of sodium acetate as an external carbon source with C/N ratio of 2. Organic compounds from landfill leachate could not serve as a carbon source for denitrification. Also, organic compounds from landfill leachate are not inhibitors of the mixed microbial culture of nitrifiers and denitrifiers.