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# THE STUDY OF OIL-CONTAMINATED THERMOPHILIC SOIL BACTERIA FROM THE SEDIMENTS OF THE SOLID WASTE DUMP OF THE ST. PETERSBURG SUBURBAN DISTRICT

A. S. Zhuravleva[1], E. N. Volkova[1, 2], V. E. Vertebnyy[1], M. V. Spiridonova[2], A. S. Galushko[1]

*[1]Agrophysical Research Institute, 14, Grazhdanskiy pr., Saint-Petersburg, 195220;*
*[2]St. Petersburg State University of Industrial Technologies and Design*
*4, Ivana Chernykh St., Saint-Petersburg, 198095, Russia*

The work is devoted to the study of the microbial community of the solid waste dump in Kudrovo (St. Petersburg region) and the identification of thermophilic hydrocarbon-decomposing bacteria. Two strains of thermophilic bacteria belonging to the genus *Aeribacillus* were isolated by laboratory cultivation methods. Both strains were found to be capable of growing on sodium acetate, petroleum, and hexadecane as the only carbon sources at a temperature of 60°C. The metagenomic analysis showed that the dominant classes in the communities from the dump soil samples were *Betaproteobacteria, Alphaproteobacteria, Actinobacteria.* Representatives of the genus *Thiobacillus* (3.5%) dominated among betaproteobacteria in the soil samples, and representatives of the genera *Nocardioides* (2.4%) and *Iamia* (1.8%) dominated among actinobacteria. In the soil sample from the edge of the dump, the dominant actinobacteria were representatives of the genera *Gaiella* (2.6%) and *Nocardioides* (2.0%).

***Key words:*** oil-contaminated soil, unauthorized dump, thermophilic bacteria, oil destructors, microbiome.