Chemical Characteristics of Urban Soils of Vasileostrovsky Ostrov and Elagin Ostrov,
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Abstract

Chemical characteristics of urban soils of Vasileostrovsky Ostrov and Elagin Ostrov of St Petersburg, Russia were investigated to evaluate the level of chemical contents. Soil samples were collected from the two study areas and analysed for their chemical properties by complexometric titration using a very large molecule of EDTA. Soil organic carbon, pH, total exchangeable bases, total calcium and magnesium, sulfate and ammonium contents of soils were investigated, Correlation analysis was used to study the relationship between the selected chemical soil properties. The result indicated that soil pH ranged from 4.7 to 8.1. The values of Eh were within the range of 335–489 mv. Total amount of calcium (Ca+2) and magnesium (Mg+2) varied within the range of 2.4–28.1 meq/100 g soil, whilst the content of soil carbon matter ranged from 0.8% to 8.2%. Total exchangeable bases (TEB) varied within 3.3–49.8 meg/100 g soil. The concentration of sulfate ions, SO4 2-, was substantially low. Generally, the result showed marked variations of chemical parameters of soils analysed, which indicated the heterogeneous nature of urban soils. The study suggests the use of chemical method of soils analysis as a monitoring tool for urban soils management.