

Research Journal of Pharmaceutical, Biological and Chemical Sciences, 2016, vol.7, N6, pages 1148-1157

Assessment and zoning of the urban area according to the level of heavy metal pollution

Stepanova N., Fomina S., Valeeva E.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Urban area ranking according to the level of heavy metal pollution with identification of four areas in the territory of the city of Kazan was carried out: the 1st - Derbyshki; the 2nd - Teplocontrol; the 3rd - Gorki; the 4th - the Kirovsky district. Pollution of snow cover in the city territory was determined by pollution coefficients calculated with application of Maximum Permissible Concentration (MPC) of chemical substances in ambient waters for household and amenity water use. The entire territory of the city of Kazan is mildly polluted by Mn, as far as other metals (Cd, Pb, Cu, Zn, Co, Ni, Cr) are concerned, the soil pollution category varies with areas. Metal content in the hair of the children living in these areas is an informative additional method to assess the present ecological situation in certain territories.

Keywords

Biological monitoring, Heavy metals, Snow cover, Soil, Urban environment