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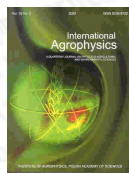
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Chromium and its forms in soils in the proximity of the old tannery waste lagoon

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abstract Chromium is a heavy metal whose presence in soil, water and atmosphere can cause hazard to the natural environment. The valences of chromium are sharply related to the redox potential. Precise Eh-pH conditions determine the valence of chromium. Present under adequate Eh-pH conditions, one form of chromium can change into another. The purpose of this paper is to determine chromium concentration and the possible changes of its forms in soil samples from the proximity of old tannery waste lagoon. The relationship between the presence in soils of triand hexavalent chromium in water and acidic extracts and Eh and pH in soil paste was examined. In the investigated area total chromium concentration in soil samples reaches value as high as 24 340 mg kg⁻¹. For different soil samples Eh values in soil paste changed from 0.38 to 0.55 V and pH from 3.7 to 6.25 which is characteristic for trivalent Cr.

keywords chromium, soil, tannery wastes, Eh, pH

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