The impact of heavy metals pollution on the buffering and ionic exchange capacity of soils

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Starting to the assumption that CEC and pH-BC are dynamic properties, determined by a complex physic-chemical processes which occurs between solid phases, colloids and solutions from soils, we have show that exist a direct correlation between inter-phases distribution character of heavy metals in polluted soils and variability of CEC and pH-BC. For studied soils types, the heavy metals (ba, Cd, Pb) determined a significant diminution of CEC (between 6-50 %) and pH-BC (between 2-18 %), with a variability degree dependent on the heavy metal nature and on physic-chemical and mineralogical characteristics of soils. The experimental results show that the influence of heavy metals is differential manifested on CEC towards Na+, K+, Ca2+, Mg2+ and H+, which is reflected in the variability of T, SB and in special V values. Must be underlined that the heavy metals solution with concentrations between 0.1-0.5 mg heavy metal / L determined similar variation on these parameters.