Contributions to the study of mineralogy and geochemistry of hortic anthrosols from Bacău glasshouses

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In this paper are presented the preliminary results of studies regarding the mineralogy and geochemistry of hortic anthrosol (profile BC. 1) from Bacău glasshouse (Romania). Have been special followed the aspects concerning to the distribution of occurrence forms of minerals and organic components, and genetic correlations between these in hortic antrosols conditions, respectively. According with the pedogeochemical characteristics, the studied soil is proxy-calcaric hortic anthrosol evolutes on fluviatil deposits with the following composition: Apk – Atpk – Ahok – Bvk1 – Bvk2 – Ck. The pedogeochemical characteristics of Ahok horizon are sensible different in comparison with the others horizons of studied profile, but rather similar with the pedogeochemical characteristics of horizons described in literature as frangipane horizons. Ours data not exclude the possibility that the Ahok horizon from studied profile to be admitted in frangipane horizons category, but it development way in profile, the chemical-mineralogical characteristics and formation conditions are not in agreement with the opinion of other researchers. Characteristics for the studied anthrosol are intense modifications of soil profile, relative large variability of mineralogy and chemism, and salinization processes of superior horizons. From chemical point of view, the hortic anthrosol is characterized by high values of bases saturation, accessible phosphorus and ration between humic and fulvic acids. From mineralogical point of view, the studied hortic anthrosol is characterized by a high heterogeneity degree, both as contents, and as occurrence and distribution forms of mineral and organic components in profile. Predominant quantitatively are clay minerals (39.86-48.75 %, average: 44.40 %), and as variety, the crystalline forms are most abundant (36.17-45.63 %, average: 40.49 %). As regard the clay minerals type, the kaolinite (14.97-25.19 %, average: 21.84 %) and illite 9.58-17.57 %, average: 13.28 %) have dominant weights in comparison with smectite (4.55-8.49 %, average: 6.33 %) and the other mineral components.