Abstract
The soil from Copou greenhouse – Iasi is a mixic-proxicalcaric-hipohortic entianthrosol (profile IS.1), associated with proxicalcaric–hortic-anthrosol (profile IS.2). Characteristic for this anthrosol is the formation at depth of 12–48 cm of Ahok horizons, proto-frangipanes or frangipanes, which determined the differential evolution of pedogeochemical processes in soil profiles (geochemical segregation phenomena). The studied soils fall within the class of medium and fine textured, the dominant particles size fractions (with very close weight) being sand and clay. The migration and accumulation tendency of fine particles size fractions at Ahok(x)2 horizon level represent one of the conditions for frangipane horizons formation and developing of geochemical segregation phenomena. For upper horizons of profiles are characteristics neutral conditions – weak alkaline and moderately oxidizing, and for bottom horizons are characteristic neutral conditions – weak acid and moderately reducing. Following the total soluble salts content (variation limits: 152.92–688.02, average: 382.87 mg / 100 g soil), the upper horizons are highly salinized (Apk1) and moderately salinized (Apk2, Ahok(x)1 and Ahok(x)2), and the bottom horizons are weak salinized. The total phosphorus content varied between 94.57–768.05 μg P_2O_5/g soil, with an average of span by 53.95 % from total phosphorus. The inorganic phosphorus represents 46.03 % from total phosphorus, and the organic phosphorus is 53.95 % from total phosphorus. The phosphorus extractable in acetate – lactate, non-occluded phosphorus, varied between 90.09–740.09 μg P_2O_5/g soil, with an average of span by 366.50 μg P_2O_5/g soil (which represents 94.73 % from total phosphorus).

Key words: hortic anthrosols from protected area, pedogeochemistry, pedogeochemical segregation