Study on the changable, unchangable and organic Zn content from the soil

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The Zn ion is part of 70 metal-enzymes, it actions as an activator for some enzymes having a physiological role and it also has a tempering role in the polypeptide action. The Zn is at the same time an essential component in establishing the cytoplasm ribosome. The Zn activates the tryptophan synthesis which is an intermediary product for obtaining the auxin (the β- indoleacetic acid). The Zn is involved in the nitrates reduction; in case of Zn deficiency the ribonuclease activity is diminished, it accumulates in nitrates plants, amides, organic acids that cannot be oxidized through the breathing system. The zinc deficiency affects the plants and it can be seen especially in fruit trees, corn, beans, and potatoes. A study on zinc concentrations is required for the above mentioned cultures, especially in the areas where agriculture is an important economical branch. The technique of speciation in the soil treatment was applied in order to monitor the zinc possible manifestations in the soil. After that the spectrophotometric method was applied with the purpose of dosing the changeable, unchangeable, organic Zn content from the soil. The present study was performed on garden soil from Galati County, the Covurlui valley. It was discovered that the zinc from the soil can be found in the 3-22ppm domain. The acid, neutral or basic character is tightly connected to the changeable Zn. The zinc in the soil can be found in small quantity under 1 ppm and it is represented by the zinc salts (ZnS, ZnCO3) which are soluble in an acid environment. The analyzed soil has the pH 7-7,4. The changeable zinc has a 5,12-6,45 ppm concentration. The unchangeable zinc has a 9 ppm concentration. In the organic part of the soil, the zinc found as metal-complexes being in 8,6 ppm concentration. The retention of Zn under unchangeable form in clay, with a neutral pH related to the chelate groups and complexes with the organic matter which can be a cause for the plants zinc deficiency.