

## **Content of copper in soils of Kakheti viticulture zone**

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### **Annotation**

One of the important tasks of analytical chemistry, geochemistry and ecochemistry is to determine the regularity of copper content and its spread in natural objects. The importance of this issue has been especially high in the past years regarding the pollution of the environment.

The main source of copper in the viticulture regions of Georgia is Bordeaux mixture, which is used for chemical spraying of vine.

Our purpose was to define the total copper content and its water-soluble forms in the soils of Kakheti viticulture regions in order to determine their distribution regularity and to make ecochemical assessment of the environment.

Kakheti viticulture zone soils are of neutral-weak alkaline reaction (pH 7.5-7.9). In such area copper ions generate stable immobile hydroxy-complexes and are fixed in the soil. Total copper content in the surveyed samples varies within a range of 35-193 mg/kg and equals 104 mg/kg in average that several times exceeds its Clark (20 mg/kg) and background content in Kakheti soils. It is established that water-soluble copper content in the surveyed samples is small, and varies within 0.8-1.4 mg/kg that is less than maximum permissible concentration (3 mg/kg).