



## **Mineral composition of conventionally and organically grown tea**

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Tea (*Camellia sinensis*) is one of the main perennial crops with high importance for the Georgian agricultural sector. Georgia was the main tea producing region in the Soviet Union with a big tradition of tea cultivation. Tea production in Georgia was dramatically reduced after the collapse of the Soviet Union and nowadays it occupies the thirty-second place among the main tea producing countries in the world.

Tea is produced in five regions in Georgia: Abkhazeti, Guria, Samegrelo, Imereti and Atchara, where soil-climatic conditions are favorable to produce high quality tea. At the same time tea is one of the highly consumed nonalcoholic drinks together with coffee and Georgia imports considerable amount of tea as local production is insufficient to meet requirement of the local market.

Daily consumption of tea can play an important role in the intake of number of macro and micro elements contained in tea leaves, especially if several several cups of tea are consumed, which is common in many countries and also in Georgia. Therefore, it is essential to study a mineral composition of tea to estimate a possible daily intake of macro and micro elements.

Current, research was conducted in Georgia to assess mineral composition of various tea available on the market, produced locally or imported, with a special focus on organic tea in order to compare it with conventional ones. The study covered in total 30 different teas, the most of which were conventional.

Tea mineral composition was studied in extracts of tea leaves with boiling water, as the main recipe of tea preparation. In total 18 elements were determined including toxic elements such as As, Cd, Pb. Based on the results organically produced teas showed better chemical composition in terms of lower content of toxic elements, which is one more proof of benefits of better soil management practices established under organic productions.