

THORIUM (Th) CONCENTRATIONS IN SOIL OF TUZLA'S URBAN AREA**Stjepić Srkalović Željka¹, Babajić Elvir², Srkalović Dado², Gutić Senad¹, Ahmetbegović Semir¹, Lepirica Alen¹**zeljka.stjepic-srkalovic@untz.ba, elvir.babajic@untz.ba, dado.srkalovic@gmail.com, senad.gutic@untz.ba, semir.ahmetbegovic@untz.ba, alen.lepirica@untz.ba

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The concentrations of the thorium (Th) radioactive element, was determined in 129 samples by a high-sophisticated instrumental method (ICP-MS). The geochemical - pedogeographic soil researches (soil sampling) were made in the urban area of Tuzla (on the area of about 100 km²), in the proper network of 1x1 km, and according to URGE instructions. The thorium concentrations (Th) are in the range from 4.1 to 15.6 ppm, with a median of 8.9 ppm. The concentrations had been compared to the value of the median, because there is still no ordinance of the limited values for radioactive elements in soils. The increased concentrations are mainly related to the western, southwestern, southern and southeastern parts of the researched area. The geological settings (lignite, quartz sands and sandstones) can be genetically correlated with increased thorium concentrations and may be one of the sources of the soil contamination. Another potential source of soil contamination is the thermal power plant "Tuzla", that burns coal, where the ash and slag are deposited in its immediate vicinity. Also, the large number of individual home furnaces, which are using fossil fuels (lignite and brown coal) and are contributing to the soil contamination shouldn't be ignored.

Key words: *radioactive element (Th), soil, increased concentrations, environment, Tuzla.*