Thorium Resources of Georgia: Black Sea Coastal Magnetite sand and its medical properties

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Nowadays, the radioactive element Thorium (^{232}Th) is considered to be one of the main alternative nuclear energy resources which is of vital importance for the future of our civilization.

There are detected 4 thorium ore occurrences in Georgia: 1. The southern slope of the Greater Caucasus, in the quartz-plagioclase veins (51 – 3882 g/t); 2. Transcaucasus Dzirula massif hydrothermally altered quartz-diorite gneisses (117-266 g/t); 3. Magnetite ore bodies of Vakijvari orefield (185 – 1600 g/t) [1]; 4. The Black Sea Guria region coast three significant anomalies: Nasakhlebi-1 (Th-185 g/t), Nasakhlebi-2 (Th-237 g/t), Chkhikva (Th-428 g/t) [2]. Based on the data correlation of the world other thorium deposits, the Georgian thorium ore occurrences should be treated as potential sections [3].

The research is being carried out on the Black Sea Guria region coast to detect high concentrations of Thorium and presence of REEs as traces in the magnetite sand we suppose to be. Futher results of geochemical analyzes (IMS-230 method) will be obtained before the conference.

The Coastal magnetite sands have many useful properties for the health, especially cardiovascular, musculoskeletal and nervous system. It is possible that the healing properties of the sand is caused by its weak radioactivity, which is elevated by thorium concentration [4].

[1,4] A. Okrostsvaridze *et al*. (2011) *Bul. of the Georg. Nat. Acad. of Sciences*, **5,2** pp. 76-82. [2] Z. Chkhikvishvili *et al.* (1992) **173** p. [3] V. G.Bradley *et al.* (2009) *U.S. Geological Survey. Circular* **1336, 21** p.