SPECIFIC ACTIVITY AND HAZARDS OF GRANITE SAMPLES COLLECTED FROM THE EZİNE/ÇANAKKALE GRANITE PLUTON

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Many natural rocks contain radioactive elements such as $^{40}$K, $^{232}$Th and $^{238}$U. These radioactive elements contribute to the background radiation levels. Around the world, there are some areas that have high background radiation levels due to high concentrations of radioactive minerals such as allanite, monazite, zircon, apatite, sphene, thorite etc. in rocks.

Ezine granite massif is a pluton located on the Biga peninsula, in the western of Ezine, inside 2-3 km of Aegean coasts and surrounding 143 km$^2$. The aim of this study is to determine the natural radioactivity levels in granite samples collected Ezine granite area which is known to contain high radioactivity levels due to its geological structure.

Granite rock samples were collected, in the manner of representing granite massif, from the study area. The concentration of natural radionuclides $^{40}$K, $^{232}$Th and $^{238}$U and the fallout $^{137}$Cs was measured to assess their contents. The results obtained in this study were compared with the international suggested values.

Keywords: Ezine granite massif, natural radioactivity.