

## **ON THE ISOTOPIC AGES OF CAVUSBASI GRANITOID IN ISTANBUL, TURKEY**

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The Cavusbasi granitoid of about 5 km-diameter, which is located in western part of Istanbul in Turkey, occurred within the Ordovician-Silurian sequence comprising conglomerate, sandstone and quartzite formations and possibly overlying oceanic crust. It intruded into the mentioned sequence thoroughly and therefore caused pyro-metamorphism. Previous mineralogical (including modal analysis) and silicate analysis investigations revealed that the granitoid suggesting quartz-diorite average composition is composed mostly of plagioclase (An<sub>32-39</sub>; andesine), hornblende and biotite associated with lesser amount of quartz, albite and perthite. Partial zoning and strong cataclastic texture are dominantly observed on the plagioclase and also some quartz crystals exhibit wavy extinction. For the isotopic age determination of Cavusbasi intrusion, before all else, biotite minerals have been concentrated by heavy liquid from the undeformed samples. K-Ar method was then used to fulfil this aim and minimum age was found to be 87 ± 3 m.a. while Satir (1975) had reported 65 ± 10 m.a. using random biotite minerals of the same granitoid based on Rb-Sr method. Current data indicates that the intrusion had taken place at least in Late Cretaceous (Senonian) but the previous one is related to its tectonic deformation by the effect of Laramian orogeny. In addition to cataclastic texture, the presence of melanocratic dykes cutting the granitoid in some locations (particularly southeastern part of the intrusion) is strong evidence to support this idea.