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Nature of Beypazari granitoids: Ankara /Turkey

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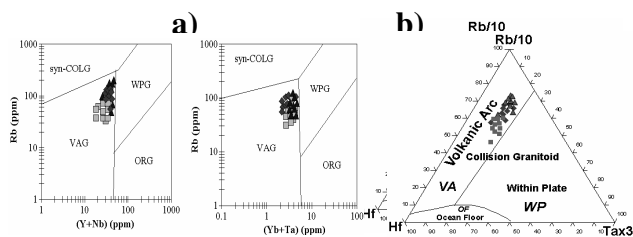
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Beypazari granitoid represents 3 different granitoid exposures within the Sakarya Continent. These granitoids mainly have alkali feldspar granite, granite, granodiorite, quartz monzonite and monzonite compositions. They have gradual contact with the sub units and are calcalkaline in nature. They are enriched in Light-REE and LILE with respect to High-REE and HFS elements. Tectonic discrimination diagrams of Beypazari granitoid suggest a product of plate convergence, which belong to Volcanic Arc Granitoid (VAG).

Beypazari Granitoids (BG) locates to Northwest Anatolia of Sakarya continent and are Upper Cretaceous intruding to LP metamorphic rocks of Eskişehir region. Field geology, petrography and whole rock geochemistry of BG have studied to object the nature of these units in the region.

Petrography Nature of Beypazari Granitoid

BG are changing in composition from alkali feldspar granite, quartz monzonite to monzonite and namely as Oymaagac Granitoid, Tahir Granitoid and Yalnızcam Granitoid. BG have mega crystals of amphibole minerals and have magma segregation, magma mixing mingling (MME) and xenolithic enclaves in nature. BG are calc-alkaline and Magma segregation and MME are calc-alkaline and tholeiitic in nature. The ORG normalized elemental patterns for BG have enriched by LILE with respect to HFSE. Trace element discrimination diagrams suggest VAG on both of Rb versus Y+Nb and Yb+Ta [1], Rb/10-Hf-Tax3 and Rb/30-Hf-Tax3 triangular diagrams of [2] (Figure 1b).



Tectonic discrimination diagrams of BG

Geology, Petrography and geochemistry of BG reveal that all the subunits were generated in relation to the plate convergence and most probably belonging to VAG. The sources of BG are a mixture of Mantle and continental crust components and represent H type granite.

References

- [1] Pearce, J.A., Harris, N.B.W. and Tindle, A.G. (1984) Trace element disc. Diag. *J. P.* v. **25**, 956-983.
- [2] Harris, N.B., Pearce, J.A. and Tindle, A.G. 1986 *Geoch. charac. of coll. zone: Collision tec. Geol. Soc.*, **19**, 67-81.

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Grains zircons U-Pb ages of the Nanwenhe Later-Silurian granite, SE Yunnan, China

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Preliminary study on geochemistry of the Nanwenhe Later-Silurian granite had been reported by Liu et.al. (2002). Grains zircons U-Pb ages have been gained in recently.

The zircons are light fuchsia to moderate brown. The ratios of L/W range from 2:1 to 5:1, mainly from 2:1 to 3:1.

The U-Pb isotopes ratios of 16 grains from 5 samples have been measured at the Tianjin Institute of geology and resource, CGS.

Ten grains on or around the concordant curve give the average age, about 410Ma, which consistent with Rb-Sr isochronal age (~425Ma), indicated crystal ages of the Nanwenhe Later-Silurian granite.

Three grains contain inherit zircons suggested the source rocks should be old than 1.0Ga, and the age consistent with the Greenville Orogeny.

And other 3 grains from the strong deformation samples suggested a thermal-disturbing event around 100Ma, which corresponded with the Laojunshan Yanshanian granite.

SHRIMP dating of zircons should be done in the nearly future to clarify nature of the Nanwenhe granite.

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