

Rb-Sr geochronological study of granitic body of Tsagaan Tsahir Uul area, Mongoli

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Rb-Sr geochronological study has been carried out on the granitic body of Tsagaan Tsahir Uul area, Mongolia.

The whole rock Rb-Sr age of granite of this study is 642.66 ± 12.5 Ma with initial $^{87}\text{Sr}/^{86}\text{Sr}$ ratio of 0.7091 ± 0.00014 (MSWD=1.36).

Granites were dated as 515 ± 30 Ma by K-Ar method (Andreas 1970) and 267 ± 5.6 Ma for two mica granite and 385.2 ± 7.8 Ma for biotite granite by K-Ar method (MMAJ & JICA 1998). These ages of previous study might be disturbed by later tectono-magmatic activities of the area.

The initial Sr isotopic ratio of granite suggest that original magma has sedimentary origin.

Rb-Sr geochronological study has been carried out on the granitic body of Tsagaan Tsahir Uul area, Mongolia. The granitic body is a part of Baidrag granitic batholith and in the Tsagaan Tsahir Uul area it is composed of two types of rocks: they are two mica granite and biotite granite. Both two mica and biotite granites are medium to coarse-grained with equigranular holocrystalline texture.

They are composed of mainly plagioclase (Ab72-Ab96), quartz and potassium feldspar (Or85-Or98). Biotite associates as a ferromagnesian mineral with or without muscovite.

Both types of granites show similar geochemical characteristics. They differ in only silica content: it ranges from 71.0wt to 72.0wt for biotite granite, and from 73.0wt to 78.0wt for two mica granite. The granites are medium to high potassium calc-alkaline and peraluminous in composition.

They have similar N-MORB normalized trace element patterns. All the samples are rich in LIL elements, but rather poor in HFS elements. It should be noted that all of the normalized patterns have clear depletion at Nb, which is characteristic of subduction-related magmas. On the tectonic discrimination diagram Nb abundance against Y abundance all samples occupy in the VAG field where common volcanic arc granite dominates.

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