

## Unspiked K-Ar dating for Akita-Yakeyama Volcano, Japan

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Akita-Yakeyama Volcano is an active volcano located at the northwestern part of Sengan volcanic region, NE Japan. The volcanism of Akita Yakeyama is divided into three stages: the Older, Middle and Younger Stages. Although some whole-rock K–Ar ages have been reported in 1980's, most of the ages were interpreted as unreliable because of alteration. We conducted unspiked K–Ar dating for groundmass fractions of two samples from drill core on the southern flank, and four samples from lavas of the Older and Middle Stages.

All obtained ages are concordant with stratigraphy. One of the drill core samples yielded  $810 \pm 20$  ka ( $2\sigma$ ) that is considered Pre-Yakeyama products. Another core sample showed  $333 \pm 5$  ka, a similar age of the lavas of the Older Stage which yielded  $410 \pm 40$  and  $524 \pm 17$  ka. The samples of the Middle Stage yielded  $101 \pm 3$  ka. For the lavas from the side of Sorinotaki waterfall, obtained K–Ar age of  $81 \pm 6$  ka is younger than that of previously reported whole-rock K–Ar age of ca. 0.25 Ma, and was reorganized as Middle Stage's lava. From these results, the onset of the Older stage was ca. 500 ka, and the activity peaks of the Older and the Middle Stages are ca. 400 ka and 100 ka, respectively.