

Bulk rock chemistry of volcanic ejecta of the 2002 eruption, Izu-Torishima Island (2).

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Torishima is an active volcanic island located on the Izu Arc, 570 km south of Tokyo at Honshu island. The eruptive activity of Torishima volcano is divided into three stages; the stratovolcano stage, the caldera-forming stage and the central cone stage, respectively. Volcanic rocks of the central cone stage are classified into two groups; Komochi-yama basalts and Io-yama basaltic andesites, respectively. Eruptions of Io-yama has occurred in 1939 and 2002. Three fresh scorias were collected near the 2002 crater of the Io-yama volcano. These 2002 Io-yama scorias contain 53.8 - 54.4 wt.% SiO₂. The 2002 Io-yama scorias and the previous eruptive materials at the central cones of Torishima, without dacitic pumices of the caldera-forming stage, show a line with gentle slope in Sr/Ca - Ba/Ca systematics. The 2002 Io-yama scorias are plotted between the Komochi-yama basalts and the 1939 Io-yama lavas, suggesting that the 2002 Io-yama scorias were produced by mixing between new basaltic magma such as Komochi-yama basalts and 1939 magma beneath the Io-Yama volcano.