

## Eruptive style of the Miyakejima 14 July and 18 August 2000 event: from the point of view of water content

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<http://www.gsj.go.jp/~imiyagi/Works/Event/Miyake2000/>

In order to estimate magma fragmentation depth of the 2000 Miyakejima eruption, we measured matrix glass water content of essential ash fragment ejected on 14 July, 2000. Ion microprobe analysis showed that water content of the matrix glass range from 1 to 1.5 wt. %, suggesting that the ash particles have quenched under relatively high water pressure, e.g., 200 bar. This pressure is comparable to lithostatic load of 600 to 700 m, nearly equal to summit height of the island. We interpret this result as that magma has fragmented in react with ground water at around sea level (or at much greater in depth) in the phreatomagmatic eruption event on 14 July.