

## Estimation of overpressure just before 1929 eruption at Hokkaido Komagatake based on analysis of eruption products

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The overpressure in a magma chamber determines a timescale of dike growth at the beginning of an eruption. In this study, the overpressure just before the 1929 eruption at Hokkaido Komagatake was estimated by kinetics of plagioclase partial dissolution and Rubin's dike growth model (Rubin, 1995). The length scale of partial dissolution of plagioclase phenocryst rim provides timescale of 1.2 day between magma mixing and eruption. The timescale indicates maximum timescale between dike initiation to eruption. For mixed magma to erupt from 3km-depth chamber within the timescale, more than 10 MPa overpressure needs to occur in the chamber. Estimation of overpressure based on analysis of eruptive products is effective for past eruptions without real-time observation.