High-Mg andesites from Mount Baker and Glacier Peak, Washington: Understanding slab, mantle, and crustal contributions to magma petrogenesis in the northern Cascade arc

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Introduction
High-Mg andesites are rocks that have an unusually high Mg# (molar Mg/(Mg+Fe)) compared to most other types of andesites. They are characterized by Mg-rich minerals such as olivine and clinopyroxene. These lavas are typically associated with arc volcanoes and are formed at convergent plate boundaries.

Mineral Geochemistry
Olivine: major elements and Ni

Clinopyroxene: major and trace elements

Cr-Spinel (Chrome-spinel): major elements

Petrogenesis of Magmatic Components

Petrography

Mount Baker

Glacier Peak

Lightning Creek

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