

A structural and petrological study of "Shibukawa ultramafic body" in the Sanbagawa belt, western Shizuoka, Japan

*Hikaru Shioya^{1,2}, Katsuyoshi Michibayashi¹, Ken-ichi Hirauchi²

1. Graduate School of Environmental Studies, Nagoya University, 2. Institute of Geosciences, Shizuoka University

We studied an ultramafic body, which is named "Shibukawa ultramafic body" in this study, in the Sanbagawa belt located to the western Shizuoka, focusing on their primary mineral olivine to reveal its petrogenesis. Shibukawa ultramafic body is composed of dunites and wehlites, although the body was heavily weathered due to serpentization. Yet, most of samples still contain olivine, spinel and a few amounts of clinopyroxene. The olivine crystal preferred orientations (CPOs) of this body were divided into two types: D type and single maxima type. The CPO intensities were relatively high in the north area, whereas those in the south area were relatively low. Considering the grain size distribution of olivine in the samples, the samples in the south area was weakly deformed as they preserve porphyroclastic olivine grains in the fine-grained matrix. In contrast, grain size reduction due to deformation has been completed in the north area. Olivine CPO patterns and major elements composition of both olivine and spinel indicate that the origin of this ultramafic body could be cumulate such as the Mikabu belt and is different from those of Shikoku mountains in the Sanbagawa belt.

Keywords: Sanbagawa belt, Mikabu belt, Cumulate, Ultramafic, Olivine fabrics, Dunite