

Mineral zoning and inclusion analysis of prograde Garnet Amphibolite schist : implication for the P-T path of Sambagawa belt

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Peak metamorphic conditions of Sambagawa metamorphic belt has been in controversy over recent years. To constrain the peak metamorphic conditions, it is necessary to calculate P-T paths that are continuous throughout the change between prograde and retrograde metamorphism. For the purpose of obtaining such data, we have analyzed Garnet-Amphibolite schist in Oligoclase-biotite zone of Asemigawa region, Sentral Sikoku. The mineral assemblage of the rock is garnet, amphibole, epidote, quartz, calcite, paragonite, oligoclase, ilmenite, rutile. It has been confirmed that Garnets have prograde zoning of bell shaped Mn content, whereas Amphiboles show high Al content of $X_{Al,T1} = 0.31-0.46$ that increases from core to rim. Reaction history will be discussed through thin section observation and close analysis of inclusions. By applying Gibbs method to this new garnet-amphibole system, a new continuous P-T path for basic schist of Sambagawa metamorphic belt would be obtained.