

Genesis and Formation of Amphiboles in Myanmar Raw Jadeite

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Abstract: Amphibole is one of the most common minerals of jadeite-jade from Myanmar where has the most important jadeite-jade deposit in the world. Observed by hand specimen, microscope and electron probe microanalysis, results show that the mineral components forming sequences as magmatic zircon → hydrothermal zircon and earlier stage jadeite → omphacite → calcic amphibole → sodic-calcic, sodic amphibole → albite. The rock has experienced later metamorphism, making minerals like amphibols deformed. After calcic amphiboles formed, later Na-Al-Si fluids reacted with edenites rich in Ca, Mg and Fe, then formed sodic-calcic, sodic amphiboles. With subsequently decrease of temperature, the remaining fluids precipitated albites into interspaces of early minerals. Chemical compositions of mineral, mineral species and texture have important effects on the quality of this sort of raw jadeite. Cr of jadeite and existence of amphiboles cause color changes of this kind of raw jadeite. Contained minerals, size and closeness of particles affect exterior characteristics of jadeite-jade including quality and transparency.

Keywords: raw jadeite; calcic amphibole; composition transition; jadeite-jade quality