

Amorphization of clay minerals and crystallinity

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FWHM of the basal peak of clay minerals is used as an index of crystallinity. On the other hand, clay minerals are easily transformed into amorphous material by mechanical grinding. FWHM value might be increased during amorphization.

We conducted pulverization experiments of some clay minerals (kaolinite, sericite, saponite) using planetary ball mill. The FWHM values slightly increased by pulverization, however, the difference were not so large. SEM observation showed that the shape of the grains was not so much changed during pulverization even after the basal peak diminished. We consider the process of amorphization by these observations.

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