

Weathering of the host rock in the artificial revegetation slope

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Road building usually makes the artificial slope in the mountainous area. The angle of the slope is generally more urgent angle (40-45 degree) than the natural slope. The cutting slope is usually revegetated to prevent of the land slide. This survey area is located in the east side slope of the Maibara station, where is four different districts by the revegetation time in 1994, 1991, 1989 and 1985 in the same condition. The geology of this area is Jurassic chart and siliceous shale.

For each district, the specimens collected from the surface to 0.5m depth part. By X-ray fluorescence analysis of these specimens, the chemical composition of these is almost same. The clay mineral in these rocks is in a gap between quartz grains and in crack under the polarized microscope. By the X-ray powder diffraction, the main minerals are quartz and mica.

The typical peak of 14 angstrom (smectite, vermiculite?) increases as time passes in the X-ray powder diffraction analysis for the under 2 micrometer grain. Biotite in the host rock changes into smectite or vermiculite by weathering condition.