

# **Preliminary Result of Clay Minerals Analysis of Chi-Chi Earthquake Fault Gouge, Wu-Feng, Central Taiwan**

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## **Abstract**

We analyzed the clay mineral component of Chi-Chi earthquake fault gouge from Wu-Feng, Central Taiwan, with a goal of assaying the distribution of clay minerals in different particle size and investigating the faulting effect on fault gouges. The preliminary result exhibits that the major clay minerals are illite, smectite and mix-layer illite-smectite. The wall rock of the gouge is the Chinshui Shale which is predominantly composed of illite, kaolinite and chlorite in clay compositions but no smectite. There is no chlorite and kaolinite in fault gouge, indicates the temperature was higher than 800°C when the fault acting. The montmorillonite and mix-layer illite-montmorillonite, thus, were produced by weathering after fault gouge formation. In future work, we'll separate the clays in different particle size to determine their mineral species.