Strain chracteristics and mineral compositions of fine-grained substance in fault zone - Yanagase,Gosukebashi,and Nojima faults-

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The X-ray and mechanical analyses for clays in the fault gouge were carried out in order to understand their genesis. The gouge was sampled from the outcrop of three active faults (Yanagase, Gosukebashi, and Nojima faults). Sample for the X-ray powder diffraction analysis was divided into five groups to investigate the grain-size effects. The broadening of the diffraction lines provides information on lattice strain and the average crystalline size. From the experimental results, the strain of illite in the fault gouge is distinguishable, and lattice strains of the gouge minerals seem to be preserving the historical fault movement.