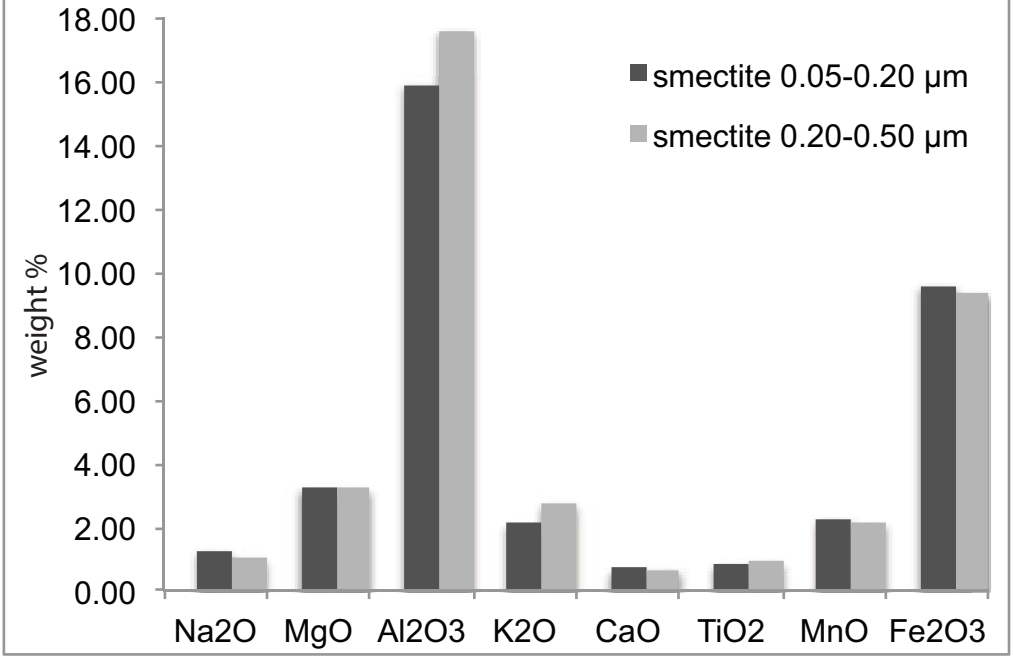
ID	Na2O	MgO	Al2O3	K2O	CaO	TiO2	MnO	Fe2O3
0.05-0.20	1.27	3.26	15.9	2.14	0.699	0.871	2.29	9.61
0.20-0.50	1.04	3.24	17.6	2.77	0.696	0.921	2.15	9.38



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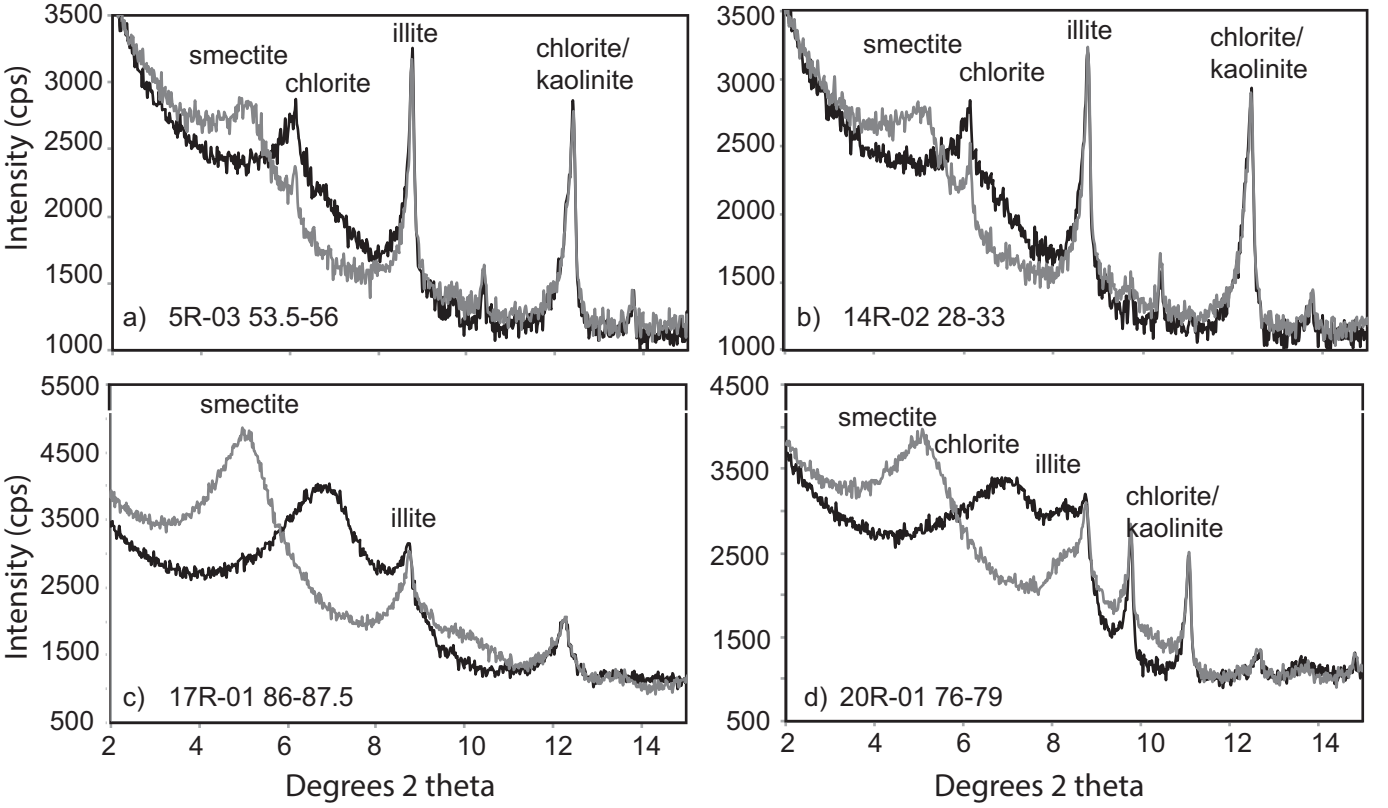
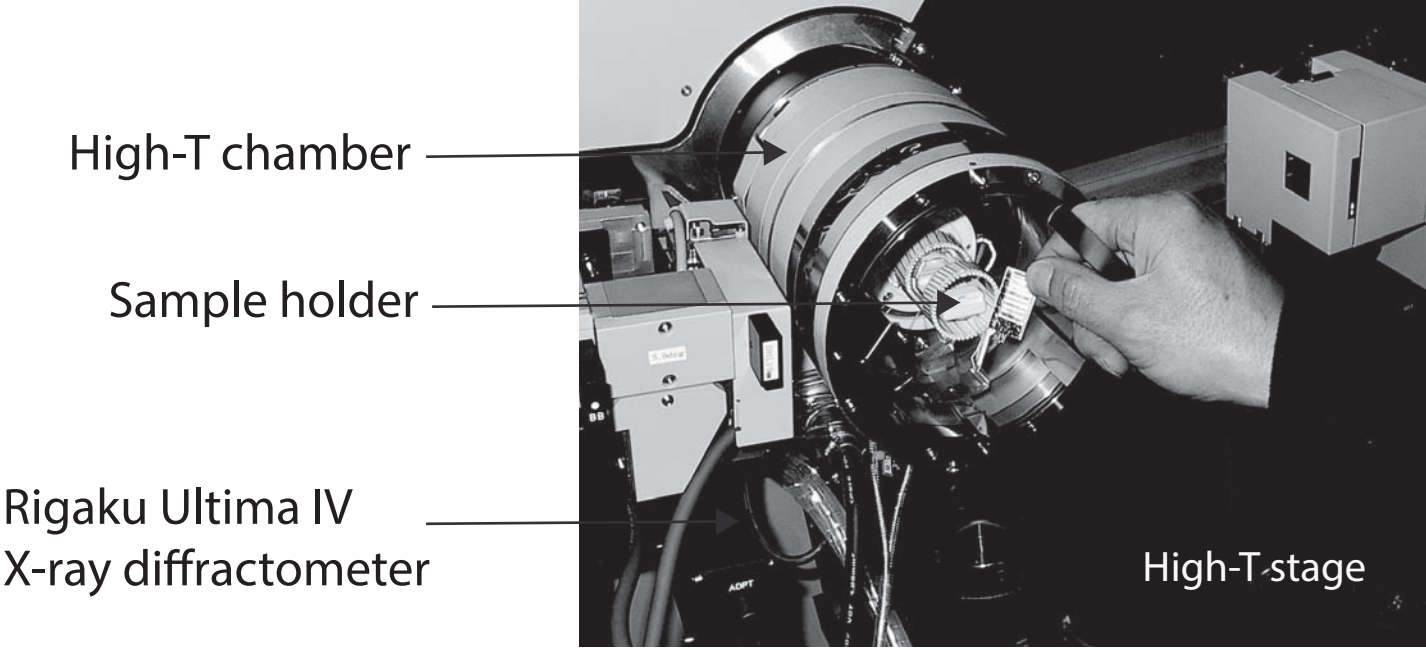
Supplementary material: The geochemistry of smectite of different grain-sizes was analyzed using Inductive Coupled Plasma-Optical Emission Spectrometry (ICP-OES).



X-ray diffraction patterns of the clay-size fraction (< 2micron) at different depth around the plate-boundary fault zone.



High-temperature chamber connected to a Rigaku Ultima IV X-ray difractometer