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SCG060-05

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## Effects of pressure and salinity on partitioning between magma and aqueous fluids at HTHP

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We will show our new experimental results to understand the effects of pressure and salinity on partitioning between a magma and aqueous fluids at high-temperature and high-pressure conditions using multi anvil apparatus at SPring-8. We will present the followings: (1) we can observe XRF spectra under high-temperature and high-pressure conditions and (2) know the effects of pressure and salinity on trace elemental partitioning between a magma and aqueous fluids, and then conclude (3) that the present data sets are not inconsistent with a previous data set based on quenched experiments by Keppler (1996, Nature). The last point suggests that slab-derived fluids are likely to be saline fluids, which can be able to dissolve significant amounts of trace elements characterizing subduction-zone magmatism.

Keywords: water, magma, high-pressure and high-temperature, elemental partition, synchrotron X-ray, subduction zone