Spectroscopic estimation of salinity of fluid inclusions and physicochemical conditions of mantle fluid in natural diamonds

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We developed a method to analyze salinity of fluid inclusions with a size of approximately 30 micrometer using near infrared spectroscopy. Applying this method to data measured at high pressure using a diamond anvil cell, a comparison of band shape was made between laboratory-made fluid under pressure and fluid trapped in natural diamonds. We will discuss physicochemical conditions of mantle-derived fluids.