

## **Diamond inclusions in schorl-uvite tourmaline from the Kumdy-Kol garnet-clinopyroxene rocks (Kokchetav massif)**

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Tourmaline is a common accessory mineral of metamorphic rocks<sup>[1]</sup>. Experimental study of tourmaline<sup>[2]</sup> and finding of coesite inclusions in dravitic tourmaline<sup>[3,4]</sup> testify that dravite in subducted crust can be stable up to 4.5 GPa and 700 °C. Recent finding of diamond inclusions in K-rich core of dravitic tourmaline (mauyamaite) further extended the stability field of tourmaline up to 6.3 GPa and 1000 °C<sup>[5]</sup>. Indeed, experimental studies<sup>[6,7]</sup> demonstrate that potassium content in dravitic tourmaline correlates with K concentration in fluid/melt and pressure. Garnet-clinopyroxene rocks from the Kokchetav massif (Northern Kazakhstan) are characterized by highest diamond content as well as the presence of K-rich clinopyroxene, which is well known as reliable UHPM mineral-indicator and presence of ultrapotassic fluid/melt. In this study we report the finding of diamond inclusions in schorl-uvite series of tourmaline from the diamond-bearing clinopyroxene-garnet rocks from the Kumdy-Kol microdiamond deposit and discuss possible scenario of the origin of these tourmalines.

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