

## **Infrared and Mössbauer study of Brazilian tourmalines from different geological environments**

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### **ABSTRACT**

Infrared (IR) spectra in the OH stretching region and Mössbauer spectra (MS) have been acquired for natural tourmalines from magmatic and hydrothermal deposits in the state of Minas Gerais, Brazil. In the magmatic environment, samples of tourmaline were collected from granitic pegmatites and granitoids. In the former, the elbaite-schorl series is prevalent, while in the latter the schorl species is dominant. Tourmalines from hydrothermal gold deposits are typically intermediate members of the dravite-schorl series, whereas the uvite and Fe-bearing uvite species are present in tourmaline samples from a magnesite deposit. Different behaviors are discussed in terms of local lattice environment, geological history, fluid/rock interaction or magma evolution, and degree of crystallinity.