

Western New Hampshire Black Tourmalines

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I wanted to share with you some recent analytical results I had done on some western New Hampshire black tourmaline specimens. These analyses were prompted, in part, by your 1988 Rochester Mineral Symposium paper in which you stated, “electron microprobe analysis...determined that the (black tourmaline) occurrences in western New England are sodium and magnesium rich and are thus Dravite.”

Until recently, I did not have a proven New Hampshire Dravite specimen in my collection. Having found an obvious brown tourmaline on a hillside south of Hinsdale, (near the site of a Rhodonite – Spessartine deposit), I sent off a sample for EDS analysis with the hope of adding a confirmed NH Dravite to my collection. The analysis showed moderately high Calcium content in addition to the Mg response, so this specimen may, in fact, be Uvite instead of Dravite. (The thicker beryllium window on the analyzer used moderately attenuates the Sodium response and the strong Mg line may be obscuring some of the Sodium response as well.) Do you have knowledge of any Uvite specimens from New Hampshire? Photo below is of one of these brown Hinsdale tourmalines, not particularly a thing of beauty, but looks a bit better when seen. (Xtal length about 2 cm)



Black tourmaline from Richmond, NH was also analyzed. This specimen came from a pegmatite dike in the vicinity of the Cordierite-Soapstone locality. I collected this in 1974 and am surprised I held on to it for so long. The source pegmatite seemed somewhat unusual and contained the best formed large Biotite crystals I have ever seen from New England, (later analyzed to be Annite-Siderophyllite, slightly closer to Annite). This analysis came back as Dravite with a modest Fe content, (Mg/Fe ratio about 60/40). Photo below is of this Richmond tourmaline. The crystal is crude, but unbroken. (Crystal width is about 5.5 cm)



The third black tourmaline analyzed was from Wheeler Mtn., Winchester, NH, close to the Epidote locality on this hill. A 3 to 4 cubic yard deposit of very fine black tourmalines in a sugar quartz matrix was worked by several members of the Nashua club in the mid 80's. This site is now depleted. These specimens have been labeled "Schorl" since they were added to my collection. A typical 1.5 cm thumbnail specimen is shown below.



The analysis of the Winchester tourmaline showed Mg > than Fe in a ratio of about 65/35.