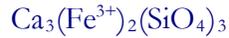


## ANDRADITE



A calcium garnet with  $\text{Fe}^{3+} > \text{Al}$ . It is formed by metamorphism of rocks rich in both Ca and Fe or by iron metasomatism. Northern Peninsula.

**Dickinson County:** Groveland mine near Randville: In lower Vulcan Iron Formation (Cumberlidge and Stone, 1964).

**Keweenaw County: 1.** Ahmeek mine: Tan to pale green finely granular material similar to vein datolite. Identified by X-ray diffraction and electron microprobe analysis as garnet with an andradite:grossular ratio of 3:1 (T. M. Bee, written communication, 1985). Very unusual. **2.** Allouez mine: As small yellow crystals surrounding pods of smoky quartz and calcite in porphyritic rhyolite clasts in conglomerate. Identification confirmed by L. Kearns, James Madison University, 1995 (T. M. Bee, personal communication, 1999).

**Ontonagon County:** Indiana mine: As bright, golden yellow, dodecahedral microcrystals in calcite with epidote and hematite in brecciated basalt (Rosemeyer, 2003c).

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