Wakefieldite-(Y) YVO_4

Crystal Data: Tetragonal. *Point Group:* $4/m\ 2/m\ 2/m$. Prismatic crystals, to 0.1 μm, with basal or pyramidal terminations, in pulverulent masses.

Physical Properties: Hardness = ∼5 D(meas.) = n.d. D(calc.) = 4.25

Optical Properties: Semitransparent. *Color:* Canary-yellow, pale tan.
Optical Class: Uniaxial (+) (synthetic). $\omega = 2.00(1)$ $\epsilon = 2.14(1)$

Cell Data: *Space Group:* $I4_1/amd$ (synthetic). $a = 7.105(3)$ $c = 6.20(1)$ $Z = 4$

X-ray Powder Pattern: Evans-Lou quarry, Canada.
3.56 (100), 1.824 (75), 2.66 (50), 2.51 (30), 2.21 (25), 1.774 (20), 4.74 (17)

Chemistry: (1) Evans-Lou quarry, Canada; identity of wakefieldite-(Y) depends on Y and V determined as major elements, and correspondence of its X-ray pattern with synthetic YVO_4.

Occurrence: In quartz in a zoned granite pegmatite (Evans-Lou quarry, Canada).

Association: Hellandite, quartz, kainosite-(Y), montmorillonite (Evans-Lou quarry, Canada).

Distribution: In the Evans-Lou quarry, near Wakefield Lake, Quebec, Canada. From the White Tank Mountains, Maricopa Co., Arizona, USA.

Name: For Wakefield Lake, nearby the Evans-Lou quarry, Canada, and the dominant rare earth, *yttrium*.

Type Material: Geological Survey of Canada, Ottawa, 12165; University of Ottawa, Ottawa; Royal Ontario Museum, Toronto, Canada, M30382.

References: (1) Miles, N.M., D.D. Hogarth, and D.S. Russell (1971) Wakefieldite, yttrium vanadate, a new mineral from Quebec. Amer. Mineral., 56, 395–410.