

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. Platy crystals, to 1 mm, with dominant {010}, {111}, minor {100}, {001}, in subparallel aggregates.

Physical Properties: *Cleavage:* Good on {010}; poor on {101}. *Fracture:* Conchoidal. *Tenacity:* Brittle. Hardness = "Soft". D(meas.) = 3.13(3) D(calc.) = 3.01(8)

Optical Properties: Transparent. *Color:* Yellow, pale yellow, colorless in thin crystals. *Luster:* Vitreous.

Optical Class: Biaxial (-). *Orientation:* $X = b$; $Y = a$; $Z = c$. *Dispersion:* $r > v$, weak. $\alpha = 1.588(2)$ $\beta = 1.681(1)$ $\gamma = 1.690(1)$ $2V(\text{meas.}) = 32(3)^\circ$ $2V(\text{calc.}) = 34^\circ$

Cell Data: *Space Group:* $Pbca$. $a = 9.089(1)$ $b = 12.244(1)$ $c = 8.926(1)$ $Z = 8$

X-ray Powder Pattern: Evans-Lou quarry, Quebec, Canada. 6.106 (10), 4.501 (9), 3.179 (7), 2.818 (5), 2.525 (4), 2.749 (3), 2.203 (3)

| Chemistry: | (1) |
|--------------------------------|---------|
| CO ₂ | 17.7 |
| B ₂ O ₃ | 14.4 |
| Y ₂ O ₃ | 35.0 |
| Ce ₂ O ₃ | 0.8 |
| Nd ₂ O ₃ | 1.3 |
| Sm ₂ O ₃ | 1.2 |
| Gd ₂ O ₃ | 3.4 |
| Dy ₂ O ₃ | 3.8 |
| Ho ₂ O ₃ | 1.9 |
| CaO | 0.5 |
| H ₂ O | [20.0] |
| Total | [100.0] |

(1) Evans-Lou quarry, Quebec, Canada; by electron microprobe, average of two analyses, H₂O by difference, (CO₃)²⁻, (OH)¹⁻ confirmed by IR; corresponds to (Y_{0.68}Gd_{0.04}Dy_{0.04}Ca_{0.02}Nd_{0.02}Sm_{0.02}Ho_{0.02}Ce_{0.01})_{Σ=0.85}B_{0.84}(C_{0.84}O₃)(OH_{1.24})₄.

Occurrence: A rare secondary mineral in quartz in a zoned granite pegmatite.

Association: Hellandite, kainosite, lokkaite, caysichite, xenotime, titanite, yttrian fluorapatite, yttrian spessartine, fergusonite, metatyuyamunite, metatorbernite, quartz.

Distribution: In the Evans-Lou quarry, near Wakefield Lake, Quebec, Canada.

Name: To honor Louis Moyd (1916–), Canadian mineralogist, Emeritus Curator, National Museum of Natural Sciences, Ottawa, Canada, for his contributions to mineralogy.

Type Material: Canadian Museum of Nature, Ottawa, Canada, 50771, 50772; National Museum of Natural History, Washington, D.C., USA, 162936.

References: (1) Grice, J.D., J. Van Velthuisen, P.J. Dunn, D.E. Newbury, E.S. Etz, and C.H. Nielsen (1986) Moydite (Y, REE)[B(OH)₄](CO₃), a new mineral species from the Evans-Lou pegmatite, Quebec. *Can. Mineral.*, 24, 665–673. (2) (1988) *Amer. Mineral.*, 73, 193–194 (abs. ref. 1). (3) Grice, J.D. and T.S. Ercit (1986) The crystal structure of moydite. *Can. Mineral.*, 24, 675–678.