

**Postite****Mg(H<sub>2</sub>O)<sub>6</sub>Al<sub>2</sub>(OH)<sub>2</sub>(H<sub>2</sub>O)<sub>8</sub>(V<sub>10</sub>O<sub>28</sub>)·13H<sub>2</sub>O**

**Crystal Data:** Orthorhombic. *Point Group:* 2/m 2/m 2/m. As needle-like prisms with pyramidal terminations, to 1 mm; typically in divergent and “jackstraw” masses.

**Physical Properties:** *Cleavage:* Perfect || [001] likely on {100} and {010}, good on {001}.  
*Fracture:* Splintery. *Tenacity:* Brittle. *Hardness* = 2 *D(meas.)* = n.d. *D(calc.)* = 2.226

**Optical Properties:** Transparent. *Color:* Golden yellow. *Streak:* Yellow.

*Luster:* Subadamantine.

*Optical Class:* Biaxial (+).  $\alpha = 1.727(3)$   $\beta = 1.733(3)$ ,  $\gamma = 1.745(3)$   $2V(\text{calc.}) = 71^\circ$

*Orientation:*  $X = c$ ,  $Y = b$ ,  $Z = a$ .

**Cell Data:** *Space Group:* Pccn.  $a = 16.3357(6)$   $b = 24.2434(17)$   $c = 11.7343(4)$   $Z = 4$

**X-ray Powder Pattern:** San Juan County, Utah, USA.

8.937 (100), 12.190 (90), 3.771 (24), 8.248 (22), 2.9831 (19), 1.9907 (17), 6.801 (14)

<b>Chemistry:</b>	(1)
Na <sub>2</sub> O	0.15
K <sub>2</sub> O	0.03
MgO	3.04
CaO	0.16
SrO	0.10
Al <sub>2</sub> O <sub>3</sub>	7.71
V <sub>2</sub> O <sub>5</sub>	71.00
<u>H<sub>2</sub>O</u>	<u>17.81</u>
Total	100.00

(1) San Juan County, Utah, USA; average of 10 electron microprobe analyses, partially dehydrated crystals, H<sub>2</sub>O calculated from stoichiometry; corresponding to (Mg<sub>0.97</sub>Na<sub>0.06</sub>Ca<sub>0.04</sub>Sr<sub>0.01</sub>K<sub>0.01</sub>) $\Sigma=1.09$  Al<sub>1.94</sub>[(OH)<sub>1.92</sub>(H<sub>2</sub>O)<sub>0.08</sub>] $\Sigma=2.00$ (V<sub>10</sub>O<sub>28</sub>)·27H<sub>2</sub>O.

**Mineral Group:** Pascolite family.

**Occurrence:** From the oxidation of montroseite-corvusite assemblages in a moist environment in Colorado-type sandstone-hosted uranium deposits.

**Association:** Corvusite, montroseite.

**Distribution:** From the Vanadium Queen mine, La Sal Creek Canyon, and the Blue Cap mine, Lyon Canyon Creek, San Juan County, Utah, USA.

**Name:** Honors Jeffrey E. Post (b. 1954), Curator-in-Charge of the National Gem and Mineral Collection, U.S. National Museum of Natural History (Smithsonian Institution), for his contributions to mineralogy, crystallography and geochemistry, and particularly to the scientific understanding of manganese oxide minerals.

**Type Material:** Natural History Museum of Los Angeles County, Los Angeles, California, USA (# 63564 -Vanadium Queen mine, # 63563 - Blue Cap mine).

**References:** (1) Kampf, A.R., J.M. Hughes, J. Marty, and B. Nash (2012) Postite, Mg(H<sub>2</sub>O)<sub>6</sub>Al<sub>2</sub>(OH)<sub>2</sub>(H<sub>2</sub>O)<sub>8</sub>(V<sub>10</sub>O<sub>28</sub>)·13H<sub>2</sub>O, a new mineral species from the La Sal mining district, Utah: crystal structure and descriptive mineralogy. *Can. Mineral.*, 50(1), 45-53. (2) (2014) *Amer. Mineral.*, 99, 2156-2157 (abs. ref. 1).