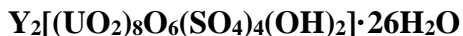


**Sejkoraite-(Y)**

**Crystal Data:** Triclinic. *Point Group:*  $\bar{1}$ . As crystalline aggregates to 1 mm.

**Physical Properties:** *Cleavage:* Perfect on {100}. *Fracture:* Uneven. *Tenacity:* Very brittle. Hardness = ~2 D(meas.) = n.d. D(calc.) = 4.04

**Optical Properties:** Transparent to translucent. *Color:* Yellow-orange to orange. *Streak:* Pale yellow-to-yellow. *Luster:* Strong vitreous.

*Optical Class:* Biaxial (-).  $\alpha' = 1.62(2)$   $\beta' = 1.662(3)$   $\gamma' = 1.73(1)$   $2V(\text{calc.}) = 79^\circ$

**Cell Data:** *Space Group:*  $P\bar{1}$ .  $a = 14.0743(6)$   $b = 17.4174(7)$   $c = 17.7062(8)$   $\alpha = 75.933(4)^\circ$   $\beta = 128.001(5)^\circ$   $\gamma = 74.419(4)^\circ$   $Z = 2$

**X-ray Powder Pattern:** Červená vein, Jáchymov ore district, Western Bohemia, Czech Republic. 9.28 (100), 4.64 (39), 3.451 (13), 3.385 (10), 2.984 (10), 3.292 (9), 3.904 (7)

<b>Chemistry:</b>	(1)	(2)
Y <sub>2</sub> O <sub>3</sub>	5.20	9.94
Sm <sub>2</sub> O <sub>3</sub>	0.03	
Gd <sub>2</sub> O <sub>3</sub>	0.61	
Dy <sub>2</sub> O <sub>3</sub>	0.97	
Er <sub>2</sub> O <sub>3</sub>	0.38	
Yb <sub>2</sub> O <sub>3</sub>	0.27	
SO <sub>3</sub>	9.40	9.40
UO <sub>3</sub>	72.28	67.17
H <sub>2</sub> O	[14.17]	13.49
Total	103.39	100.00

(1) Červená vein, Jáchymov ore district, Western Bohemia, Czech Republic; average of 8 electron microprobe analyses supplemented by Raman spectroscopy, H<sub>2</sub>O calculated from structure analysis; corresponds to  $(\text{Y}_{1.49}\text{Dy}_{0.17}\text{Gd}_{0.11}\text{Er}_{0.07}\text{Yb}_{0.05}\text{Sm}_{0.02})_{\Sigma=1.90}\text{H}^{+0.54}[(\text{UO}_2)_{8.19}\text{O}_7(\text{OH})(\text{SO}_4)_{3.81}](\text{H}_2\text{O})_{26}$ .  
(2)  $\text{Y}_3(\text{OH})_2[(\text{UO}_2)_8\text{O}_7\text{OH}(\text{SO}_4)_4](\text{H}_2\text{O})_{24}$ .

**Mineral Group:** Zippeite group.

**Occurrence:** Coating surfaces of relic primary minerals: uraninite, chalcopyrite, and tennantite, altered in an acidic oxidizing environment.

**Association:** Pseudojohannite, rabejacite, uranopilite, zippeite, gypsum.

**Distribution:** From the Červená vein, Jáchymov (St. Joachimsthal) ore district, Western Bohemia, Czech Republic.

**Name:** Honors Jiří *Sejkora*, National Museum, Prague, Czech Republic, for his contributions to the study of uranyl-containing phases. The suffix indicates the dominant rare earth element.

**Type Material:** Natural History Museum, National Museum, Prague, Czech Republic (P1p6/2009).

**References:** (1) Plášil, J., M. Dušek, M. Novák, J. Čejka, I. Císařová, and R. Škoda (2011) Sejkoraite-(Y), a new member of the zippeite group containing trivalent cations from Jáchymov (St. Joachimsthal), Czech Republic: Description and crystal structure refinement. *Amer. Mineral.*, 96, 983-991.