Sejkoraite-(Y) $Y_2[(UO_2)_8O_6(SO_4)_4(OH)_2]\cdot 26H_2O$

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(calc.) = 79°

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

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)

Chemistry:

	(1)	(2)
Y_2O_3	5.20	9.94
Sm_2O_3	0.03	
Gd_2O_3	0.61	
Dy_2O_3	0.97	
Er_2O_3	0.38	
Yb_2O_3	0.27	
SO_3	9.40	9.40
UO_3	72.28	67.17
H_2O	[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_2O calculated from structure analysis; corresponds to $(Y_{1.49}Dy_{0.17}Gd_{0.11}Er_{0.07}Yb_{0.05}Sm_{0.02})_{\Sigma=1.90}H^+_{0.54}[(UO_2)_{8.19}O_7(OH)(SO_4)_{3.81}](H_2O)_{26}$.
(2) $Y_3(OH)_2[(UO_2)_8O_7OH(SO_4)_4](H_2O)_{24}$.

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.