

Crystal Data: Monoclinic. *Point Group:* $2/m$. May be anhedral, showing rough {120} faces, elongated along [001], to 2 cm, in subparallel aggregates; granular.

Physical Properties: *Cleavage:* Parting \perp [001]. *Fracture:* Splintery. *Tenacity:* Brittle. Hardness = 4–5 $D(\text{meas.}) = 3.80$ $D(\text{calc.}) = 4.09$

Optical Properties: Nearly opaque. *Color:* Black; pale gray in reflected light, with reddish yellow to brownish red internal reflections. *Streak:* Dark brown. *Luster:* Weakly submetallic. *Optical Class:* Biaxial. *Pleochroism:* Weak. *Anisotropism:* Distinct, pale brownish gray. *Birefractance:* Weak.

R_1 – R_2 : (400) 12.86–15.20, (420) 11.90–14.00, (440) 11.15–13.05, (460) 10.90–12.75, (480) 10.75–12.46, (500) 10.57–12.33, (520) 10.41–12.33, (540) 10.48–12.26, (560) 10.52–12.25, (580) 10.68–12.29, (600) 10.69–12.31, (620) 10.75–12.30, (640) 10.77–12.35, (660) 10.80–12.42, (680) 10.72–12.33, (700) 10.54–12.15

Cell Data: *Space Group:* $P2_1/a$. $a = 11.844(3)$ $b = 12.662(3)$ $c = 9.989(3)$
 $\beta = 105.93(2)^\circ$ $Z = 16$

X-ray Powder Pattern: Clementine II pegmatite, Namibia.
2.971 (100), 2.810 (85), 2.857 (58), 3.259 (50), 3.412 (38), 5.54 (37), 3.621 (35)

Chemistry:

	(1)
P_2O_5	31.16
TiO_2	0.02
Al_2O_3	0.01
Fe_2O_3	41.56
FeO	1.56
MnO	23.12
ZnO	0.22
MgO	0.50
CaO	0.13
Na_2O	0.13
K_2O	0.05
Total	[98.46]

(1) Clementine II pegmatite, Namibia; by electron microprobe, original total given as 98.42%, $\text{FeO}:\text{Fe}_2\text{O}_3$ by Mössbauer spectroscopy; corresponds to $\text{Fe}_{1.00}^{3+}(\text{Mn}_{0.73}\text{Fe}_{0.16}^{3+}\text{Fe}_{0.05}^{2+}\text{Mg}_{0.03}\text{Na}_{0.01})_{\Sigma=0.98}\text{O}(\text{P}_{0.98}\text{O}_4)$.

Occurrence: An uncommon alteration product of earlier phosphates in zoned complex granite pegmatites.

Association: Eosphorite, arrojadite, kryzhanovskite, ferrisicklerite, alluaudite, quartz (Clementine II pegmatite, Namibia); ferrisicklerite, heterosite (Albères, France).

Distribution: In Namibia, near Karibib, from the Clementine II pegmatite, Okatjimukuju Farm, and at the Helikon pegmatite; from the Cameroon pegmatite, Usakos. In the Albères massif, Pyrénées-Orientales, France. From Cap Creus, east of Figueras, Gerona Province, Spain.

Name: To honor Professor Josef Staněk (1928–), Masarykov University, Brno, Czech Republic, specialist in pegmatite phosphate mineralogy.

Type Material: University of Stuttgart, Stuttgart, Germany; National School of Mines, Paris, France, 45634.

References: (1) Keller, P., F. Fontan, F. Velasco Roldan, and J.C. Melgarejo (1997) Staněkite, $\text{Fe}^{3+}(\text{Mn}, \text{Fe}^{2+}, \text{Mg})\text{O}(\text{PO}_4)\text{O}$: a new phosphate mineral in pegmatites at Karibib (Namibia) and French Pyrénées (France). *Eur. J. Mineral.*, 9, 475–482. (2) (1998) *Amer. Mineral.*, 83, 187 (abs. ref. 1).

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