

Crystal Data: Monoclinic. *Point Group:* 2/m. As scale-shaped crystals to 1 mm or in radial aggregates of prismatic crystals elongated along [001], to ~100 μm, that display {010} and {001}. *Twining:* Along (100), ubiquitous.

Physical Properties: *Cleavage:* On {010}. *Tenacity:* Brittle. *Fracture:* Uneven. Hardness = ~3 D(meas.) = > 4.25 D(calc.) = 4.71

Optical Properties: Transparent. *Color:* Lemon-yellow. *Streak:* Pale yellow. *Luster:* Vitreous. *Optical Class:* Biaxial (-). *n*(min.) = 1.740(1) *n*(max.) = 1.750(1) *Pleochroism:* Weak, X = pale yellow, Y = yellow.

Cell Data: *Space Group:* P2₁/c. *a* = 9.295(6) *b* = 15.53(2) *c* = 13.718(8) *β* = 112.39(4)° *Z* = 4

X-ray Powder Pattern: La Creusaz uranium deposit, Valais, Switzerland. 7.76 (100), 3.14 (80), 3.43 (70), 5.77 (60), 3.87 (60), 2.038 (40), 4.42 (30)

Chemistry:	(1)	(2)		(1)	(2)
P ₂ O ₅	10.16	9.36	La ₂ O ₃	1.34	3.20
SiO ₂	0.48	3.41	Ce ₂ O ₃	3.76	4.64
Al ₂ O ₃	0.42	3.62	Pr ₂ O ₃	0.73	0.63
UO ₃	68.87	62.44	Nd ₂ O ₃	2.79	1.62
CaO	0.74	1.02	Sm ₂ O ₃	0.67	0.27
BaO	0.07	0.28	Dy ₂ O ₃	0.06	0.04
PbO	1.61	0.27	H ₂ O	[9.20]	[8.60]
FeO	0.03	0.15	Total	101.42	99.63
Y ₂ O ₃	0.49	0.08			

(1) La Creusaz uranium deposit, Valais, Switzerland; average of 8 electron microprobe analyses, H₂O calculated. (2) Number 2 uranium Workings, Radium Ridge, Northern Flinders Ranges, South Australia; average of 5 electron microprobe analyses, Si and Al from admixed kaolinite were deducted, H₂O calculated.

Occurrence: A secondary mineral from the alteration under oxidative conditions of REE- and U⁴⁺-bearing primary minerals: allanite-(Ce), monazite-(Ce), ±uraninite at Les Marécottes; monazite-(Ce), ishikawaite-samarskite, and an unknown primary U-mineral at Radium Ridge.

Association: Uranophane, nováčěkite-metanováčěkite, jarosite, françoisite-(Nd), metatorbernite, metazeunerite, arsenuranospathite, uranospathite, hyalite (La Creusaz); metatorbernite, barite, a kaolinite-group mineral, cesarolite(?) (Radium Ridge).

Distribution: From the La Creusaz uranium deposit, near Les Marécottes, Valais, Switzerland, and at the Number 2 Uranium Workings, Radium Ridge, near Mt. Painter, Arkaroola area, Northern Flinders Ranges, South Australia.

Name: Indicates the Ce-analog of *françoisite*-(Nd).

Type Material: Musée géologique cantonal, Lausanne, Switzerland (MGL58321 - La Creusaz, Les Marécottes, Switzerland and MGL79288 - Number 2 Workings, Radium Ridge, South Australia).

References: (1) Meisser, N., J. Brugger, S. Ansermet, P. Thélin, and F. Bussy (2010) Françoisite-(Ce), a new mineral species from La Creusaz uranium deposit (Valais, Switzerland) and from Radium Ridge (Flinders Ranges, South Australia): Description and genesis. *Amer. Mineral.*, 95, 1527-1532.