Crystal Data: Triclinic. *Point Group*: $\bar{1}$. As highly elongated (on [001]) prisms with equant cross-sections, to 2000 μm, in sprays and parallel aggregates.

Physical Properties: *Cleavage*: Very good on {100}. *Tenacity*: Brittle. *Fracture*: Splintery. Hardness = ~ 5 D(meas.) = n.d. D(calc.) = 3.523 Water soluble and hydroscopic.

Optical Properties: Transparent to translucent. *Color*: Colorless, creamy white. *Streak*: White. *Luster*: Vitreous.
Optical Class: Biaxial (+). α = 1.686(2) β = 1.690(2) γ = 1.702(5) 2V(meas.) = 57(1)°
2V(calc.) = 60° *Orientation*:

	a	*b*	*c*
X	100.5°	92.0°	2.1°
Y	100.8°	2.1°	88.0°
Z	164.9°	89.1°	89.9°

Cell Data: *Space Group*: $P\bar{1}$. a = 9.575(6) b = 5.685(4) c = 7.279(5) α = 89.985(6)° β = 100.933(4)° γ = 101.300(5)° Z = 1

X-ray Powder Pattern: Agua de Pau (also named Fogo volcano), São Miguel Island, the Azores. 2.954 (100), 3.069 (42), 2.486 (24), 3.960 (23), 2.626 (21), 1.820 (20), 2.195 (17)

Chemistry:	(1)		(1)
Ta_2O_5	0.24	Nd_2O_3	0.72
Nb_2O_5	3.73	Ce_2O_3	0.62
ZrO_2	1.72	La_2O_3	0.18
TiO_2	7.48	Y_2O_3	16.74
SiO_2	29.81	FeO	0.64
Lu_2O_3	0.29	MnO	2.74
Yb_2O_3	0.87	CaO	13.89
Er_2O_3	1.17	Na_2O	10.80
Dy_2O_3	1.78	F	6.74
Gd_2O_3	1.74	$-O=F_2$	2.84
Sm_2O_3	0.41	Total	99.47

(1) Agua de Pau (also named Fogo volcano), São Miguel Island, the Azores; average of 10 electron microprobe analyses supplemented by FTIR spectroscopy; corresponds to $(Na_{2.74}Mn_{0.15})_{\Sigma=2.89}Ca_2[Y_{1.21}(La_{0.01}Ce_{0.03}Nd_{0.03}Sm_{0.02}Gd_{0.08}Dy_{0.08}Er_{0.05}Yb_{0.04}Lu_{0.01})_{\Sigma=0.35}Mn_{0.16}Zr_{0.11}Na_{0.09}Fe^{2+}_{0.07}Ca_{0.01}]_{\Sigma=2}(Ti_{0.76}Nb_{0.23}Ta_{0.01})_{\Sigma=1.00}(Si_{4.03}O_{14})O_{1.12}F_{2.88}$.

Occurrence: In miarolitic cavities in a syenite xenolith in trachytic ejecta from a stratavolcano.

Association: Sanidine, astrophyllite, fluornatropyrochlore, ferrokentbrooksite, quartz, ferrokatophorite.

Distribution: From the flanks of Agua de Pau (also named Fogo volcano), São Miguel Island, the Azores.

Name: For the Fogo volcano, São Miguel Island, the Azores, where the first specimens were collected.

Type Material: Museo Regionale di Scienze Naturali diTorino, Torino, Italy (M/U 16800 and M/U 16801); the Royal Ontario Museum, Toronto, Ontario, Canada (M56826); and Muséum National d'Histoire Naturelle of Paris, France (MIN2015-003).

References: (1) Cámara, F., E. Sokolova, Y.A. Abdu, F.C. Hawthorne, T. Charrier, V. Dorcet, and J.-F. Carpentier (2017) Fogoite-(Y), $Na_3Ca_2Y_2Ti(Si_2O_7)_2OF_3$, a Group I TS-block mineral from the Lagoa do Fogo, the Fogo volcano, São Miguel Island, the Azores: Description and crystal structure. Mineral. Mag., 81(2), 369-381. (2) (2018) Amer. Mineral., 103, 660-661 (abs. ref. 1).