

Crystal Data: Monoclinic; partially metamict. *Point Group:* 2/m. Crystals are elongated, in crystalline aggregates, to 1.5 cm; fine granular, massive.

Physical Properties: *Cleavage:* On {100} and {001}. *Hardness* = ~5 *D*(meas.) = 4.72–5.02 (after heating to 900 °C); 5.20 *D*(calc.) = 5.26 *Radioactive.*

Optical Properties: Semitransparent. *Color:* Grayish brown to reddish brown on rims, pale yellow, brownish green; brown-gray in thin section. *Luster:* Dull, greasy.

Optical Class: Biaxial (+). $\alpha = 1.691$ $\beta = 1.696$ – 1.73 $\gamma = 1.725$ $2V$ (meas.) = 44°

Cell Data: *Space Group:* $P2_1/n$. $a = 6.726(6)$ $b = 6.933(5)$ $c = 6.447(12)$
 $\beta = 103^\circ 53(16)'$ $Z = 2$

X-ray Powder Pattern: Brabant Farm, Namibia; close to monazite.
3.06 (100), 2.85 (75), 3.26 (70), 4.15 (30), 1.947 (30), 3.46 (25), 2.14 (25)

Chemistry:	(1)	(2)	(3)		(1)	(2)	(3)
UO ₃		0.29		(Ce, Y) ₂ O ₃		3.05	
P ₂ O ₅	27.68	28.78	30.72	Fe ₂ O ₃	0.05	0.66	
SiO ₂	2.27	1.60		MnO	0.32		
UO ₂		1.23		MgO	0.56	trace	
TiO ₂		0.12		CaO	11.94	13.33	12.14
ThO ₂	52.65	51.12	57.14	H ₂ O	3.07		
Al ₂ O ₃	0.74			Total	99.28	100.18	100.00

(1) Brabant Farm, Namibia; after deduction of H₂O from admixed brockite, corresponds to (Ca_{1.00}Mg_{0.06}Mn_{0.02})_{Σ=1.08}(Th_{0.94}Al_{0.07})_{Σ=1.01}[(P_{0.92}Si_{0.09})_{Σ=1.01}O₄]₂. (2) Xinjiang Uygur Autonomous Region, China; corresponds to Ca_{1.04}(Th_{0.86}RE_{0.08}U_{0.02})_{Σ=0.96}[(PO₄)_{1.78}(SiO₄)_{0.12}]_{Σ=1.90}. (3) CaTh(PO₄)₂.

Mineral Group: Monazite group.

Occurrence: In a zoned granite pegmatite (Brabant Farm, Namibia); in a rare-metal-bearing pegmatite (Xinjiang Uygur Autonomous Region, China); an accessory mineral in peraluminous granites (Eibenstock, Germany).

Association: Hematite, brockite, thorite, uraninite, muscovite (Brabant Farm, Namibia); hafnian zircon, spodumene, manganocolumbite, albite (Xinjiang Uygur Autonomous Region, China); cheralite, huttonite (Kuttankuli, India).

Distribution: In the Van der Made pegmatite, Brabant Farm, west of Itiro, Karibib district, Namibia. In China, at an undisclosed locality in the Xinjiang Uygur Autonomous Region. From Kuttankuli (Kuttakuzhi), about 42 km east-southeast of Trivandrum, Kerala State, India. Along Cordell Creek, Dugger Community, Guadalupe Co., Texas, USA. In the Eibenstock pluton, in the Erzgebirge, Germany.

Name: For the Brabant Farm, Namibia, location of the pegmatite where the mineral was first found.

Type Material: Institute for Mineralogy and Crystallography, Berlin Technical University, Berlin, Germany.

References: (1) Rose, D. (1980) Brabantite, CaTh[PO₄]₂, a new mineral of the monazite group. *Neues Jahrb. Mineral., Monatsh.*, 247–257. (2) Wang Xianjue (1978) A new mineral – lingaitukuang [= brabantite]. *Kexue Tongbao*, 23, 743–745 (in Chinese). (3) (1981) *Amer. Mineral.*, 66, 878–879 (abs. refs. 1 and 2). (4) Förster, H.-J. (1998) The chemical composition of REE-Y-U-rich accessory minerals in peraluminous granites of the Erzgebirge-Fichtelgebirge region, Germany, Part I: the monazite-(Ce)-brabantite solid solution series. *Amer. Mineral.*, 83, 259–272.

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