Heamanite-(Ce) $(K_{0.5}Ce_{0.5})TiO_3$

Crystal Data: Cubic. *Point Group*: $4/m\,\bar{3}\,2/m$. As crystals with an average maximum dimension of ~80 μm.

Physical Properties: (By analogy to loparite-(Ce) *Cleavage*: On {100}. *Tenacity*: Brittle. *Fracture*: Conchoidal. Hardness = 5.5 D(meas.) = n.d. D(calc.) = 4.73(1)

Optical Properties: Translucent. *Color*: Brown. *Streak*: n.d. *Luster*: Adamantine. *Optical Class*: *n*(calc.) = 2.28

Cell Data: *Space Group: Pm*$\bar{3}$ *m*. *a* = 3.9129(9) Z = 1

X-Ray Diffraction Pattern: Gahcho Kué mine (5034 pipe), Northwest Territories, Canada. 2.764 (100), 1.596 (42), 1.954 (31), 1.382 (20), 1.045 (19), 1.236 (15), 1.128 (8)

Chemistry:

	(1)	(2)		(1)	(2)
CaO	10.70		ThO_2	0.36	
K_2O	7.38	12.70	PbO	0.15	
Na_2O	0.16		TiO_2	45.77	43.06
Ce_2O_3	13.77	44.24	Cr_2O_3	0.32	
La_2O_3	8.22		Al_2O_3	0.10	
Pr_2O_3	0.84		Fe_2O_3	0.09	
Nd_2O_3	1.59		Nb_2O_5	0.87	
SrO	6.69		UO_3	0.01	.
BaO	2.96		Total	99.98	100.00

(1) Gahcho Kué mine (5034 pipe), Northwest Territories, Canada; average electron microprobe and Raman spectroscopic analyses; corresponds to $[(K_{0.268}Na_{0.009})_{\Sigma=0.277}(Ce_{0.143}La_{0.086}Pr_{0.009}Nd_{0.016})_{\Sigma=0.254}(Ca_{0.326}Sr_{0.110}Ba_{0.033}Pb_{0.001})_{\Sigma=0.470}Th_{0.002}]_{\Sigma=1.003}(Ti_{0.979}Nb_{0.011}Cr_{0.007}Al_{0.003}Fe_{0.002})_{\Sigma=1.002}O_3$.
(2) $(K_{0.5}Ce_{0.5})TiO_3$.

Mineral Group: Perovskite group.

Occurrence: As inclusions in a diamond, likely derived from the upper mantle.

Association: Diamond, rutile, calcite.

Distribution: From the Gahcho Kué mine (5034 kimberlite pipe), Northwest Territories, Canada.

Name: Honors Larry *Heaman* (b. 1955), Distinguished University Professor, University of Alberta, Canada, for contributions to radiometric dating applied to diamond-bearing kimberlites, mantle-derived eclogites, and lamprophyre dikes. The suffix indicates the dominant rare earth element.

Type Material: Royal Ontario Museum, Toronto, Ontario, Canada (M59970).

References: (1) Anzolini, C., W.K. Siva-Jothy, A.J. Locock, F. Nestola, T.Balić-Žunić, M. Alvaro, I.L. Chinn, T. Stachel, and D.G. Pearson (2022) Heamanite-(Ce), $(K_{0.5}Ce_{0.5})TiO_3$, a new perovskite supergroup mineral found in diamond from Gahcho Kué, Canada. Amer. Mineral., 107, 1635-1642.