

**Crystal Data:** Hexagonal. *Point Group:*  $\bar{3} 2/m$ . As rhombohedral, pseudocubic or tabular crystals to 0.2 mm, displaying {001} and {101}.

**Physical Properties:** *Cleavage:* Fair on {001}. *Fracture:* Uneven. *Tenacity:* Brittle. *Hardness* = 3.5 [By analogy to alunite supergroup minerals.] *D(meas.)* = 4.15(5) *D(calc.)* = 4.159

**Optical Properties:** Transparent to translucent. *Color:* Orange-red to pink. *Streak:* Very pale pink. *Luster:* Vitreous.

*Optical Class:* Uniaxial (+).  $\omega = 1.740(5)$   $\varepsilon = 1.750(5)$

**Cell Data:** *Space Group:*  $R\bar{3}m$ .  $a = 7.0316(7)$   $c = 16.5151(8)$   $Z = 3$

**X-ray Powder Pattern:** Grubependity Lake cirque, Prepolar Ural, Komi Republic, Russia. 2.982 (100), 3.538 (55), 1.914 (38), 2.211 (28), 5.755 (27), 1.767 (24), 2.179 (19)

Chemistry:	(1)	(2)	(1)	(2)	
CaO	0.29		Nd <sub>2</sub> O <sub>3</sub>	3.50	
SrO	1.65		Sm <sub>2</sub> O <sub>3</sub>	0.00	
Al <sub>2</sub> O <sub>3</sub>	25.38	25.50	MoO <sub>3</sub>	0.12	
Fe <sub>2</sub> O <sub>3</sub>	0.77		P <sub>2</sub> O <sub>5</sub>	2.54	
La <sub>2</sub> O <sub>3</sub>	15.42	27.16	As <sub>2</sub> O <sub>5</sub>	35.06	38.32
Ce <sub>2</sub> O <sub>3</sub>	5.01		H <sub>2</sub> O	[9.09]	9.01
Pr <sub>2</sub> O <sub>3</sub>	1.17		Total	100.00	100.00
			REE <sub>2</sub> O <sub>3</sub>	25.10	

(1) Grubependity Lake cirque, Komi Republic, Russia; average of 10 electron microprobe analyses, H<sub>2</sub>O calculated for charge balance; corresponds to (La<sub>0.56</sub>Ce<sub>0.18</sub>Nd<sub>0.12</sub>Pr<sub>0.04</sub>Sr<sub>0.09</sub>Ca<sub>0.03</sub>) $\Sigma=1.02$  (Al<sub>2.94</sub>Fe<sub>0.06</sub>) $\Sigma=3.00$ (As<sub>1.80</sub>P<sub>0.21</sub>) $\Sigma=2.01$ H<sub>5.95</sub>O<sub>14</sub>. (2) LaAl<sub>3</sub>(AsO<sub>4</sub>)<sub>2</sub>(OH)<sub>6</sub>.

**Mineral Group:** Dussertite group in the alunite supergroup.

**Occurrence:** As zones within crystals of florencite-(Ce) and zoned crystals with “arsenoflorencite-(Nd)” and crandallite, in Mn-rich nodules in metasediments.

**Association:** Zircon, quartz, hematite, ardenite-(As), andalusite, sillimanite, anorthite, sericite, clinocllore, chernovite-(Y), monazite-gasparite group minerals.

**Distribution:** From the Grubependity Lake cirque, Maldynyrd range, upper Kozhim River basin, Prepolar Ural, Komi Republic, Russia; and from the Holičky, Stráž and Osečná deposits, North Bohemian Uranium District, Liberec Region, Bohemia, Czech Republic.

**Name:** For the La-dominant analog of arsenoflorencite-(Ce).

**Type Material:** Mineral Sciences Department, Natural History Museum of Los Angeles County, Los Angeles, California, USA (#62567) and the A.E. Fersman Mineralogical Museum, Russian Academy of Science, Moscow, Russia (#3891/1).

**References:** (1) Mills, S.J., P.M. Kartashov, A.R. Kampf, and M. Raudsepp (2010) Arsenoflorencite-(La), a new mineral from the Komi Republic, Russian Federation: description and crystal structure. *Eur. J. Mineral.*, 22(4), 613-621. (2) (2011) *Amer. Mineral.*, 96, 938-939 (abs. ref. 1).