

Rémondite-(La)**Na₃(La, Ce, Ca)₃(CO₃)₅**

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Crystal Data: Monoclinic, pseudo-hexagonal. *Point Group:* 2. Irregular grains, to 5 μm, in roughly prismatic aggregates.

Physical Properties: *Fracture:* Conchoidal. *Tenacity:* Brittle. *Hardness* = ~3
D(meas.) = 3.5(1) D(calc.) = 3.57

Optical Properties: Translucent. *Color:* Bright yellow-orange, may show a color change between daylight and artificial light; colorless in transmitted light. *Streak:* White.
Luster: Vitreous.

Optical Class: Biaxial (-). α = 1.615(2) β = 1.619(3) γ = 1.622(3) 2V(meas.) = 80(10)°
2V(calc.) = 85(5)°

Cell Data: *Space Group:* [P2₁] [by analogy to rémondite-(Ce)]. a = 10.49(1) b = 6.417(4)
c = 10.50(1) β = 119.8(1)° Z = 2

X-ray Powder Pattern: Mt. Koashva, Kola Peninsula, Russia; similar to rémondite-(Ce).
2.623 (10), 3.036 (9), 2.143 (8), 3.70 (7), 2.041 (6), 1.939 (6), 5.28 (5)

Chemistry:

	(1)		(1)
CO ₂	[32.97]	Sm ₂ O ₃	0.37
ThO ₂	1.34	CaO	5.13
Y ₂ O ₃	0.00	SrO	2.93
La ₂ O ₃	19.75	BaO	0.18
Ce ₂ O ₃	16.67	Na ₂ O	15.48
Pr ₂ O ₃	0.99	K ₂ O	0.58
Nd ₂ O ₃	2.27	<u>Total</u>	<u>98.66</u>

(1) Mt. Koashva, Kola Peninsula, Russia; by electron microprobe, average of 11 analyses, CO₂ calculated for stoichiometry; corresponds to Na_{2.87}(La_{0.80}Ce_{0.68}Ca_{0.61}Na_{0.46}Sr_{0.18}Nd_{0.09}K_{0.08}Pr_{0.04}Th_{0.03}Sm_{0.01}Ba_{0.01})_{Σ=2.99}(CO₃)₅.

Occurrence: Of late hydrothermal origin, very rare in a small pegmatite in a differentiated alkalic massif.

Association: Cancrisilite, microcline, sodalite, villiaumite, natrolite, pectolite, lomonosovite, barytolamprophyllite, catapleiite, natron, thermonatrite, sazykinaite-(Y), niobian rinkite, vitusite-(Ce), fluorcaphite.

Distribution: From Mt. Koashva, Khibiny massif, Kola Peninsula, Russia.

Name: For its relation to *rémondite*-(Ce), and the predominance of *lanthanum* over other rare-earth elements in the composition.

Type Material: A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia.

References: (1) Pekov, I.V., N.V. Chukanov, N.N. Kononkova, A.E. Zadov, and Y.V. Belovitskaya (2000) Remondite-(La), Na₃(La, Ce, Ca)₃(CO₃)₅ – a new mineral of the burbankite family from Khibiny massif, Kola Peninsula. Zap. Vses. Mineral. Obshch., 129(1), 53–60 (in Russian with English abs.). (2) (2001) Amer. Mineral., 86, 377 (abs. ref. 1).