

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

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Crystal Data: Monoclinic, pseudohexagonal. *Point Group:* 2. Crystals, to 5 cm; massive, filling veinlets.

Physical Properties: *Cleavage:* Imperfect. *Fracture:* Conchoidal. Hardness = 3–3.5
D(meas.) = 3.43(1) D(calc.) = 3.46

Optical Properties: Transparent in thin splinters. *Color:* Red-orange, amber-yellow; may show a color change between daylight and artificial light. *Luster:* Vitreous.
Optical Class: Biaxial (+). $\alpha = 1.632(2)$ $\beta = 1.633(2)$ $\gamma = 1.638(2)$ $2V(\text{meas.}) = 40(6)^\circ$
 $2V(\text{calc.}) = 48^\circ$

Cell Data: *Space Group:* $P2_1$. $a = 10.412(4)$ $b = 6.291(3)$ $c = 10.414(4)$
 $\beta = 119.80(5)^\circ$ $Z = 2$

X-ray Powder Pattern: Ebounja, Cameroon; similar to rémondite-(La).
2.589 (100), 3.006 (70), 2.609 (70), 2.132 (70), 2.617 (50), 2.127 (50), 5.17 (40)

Chemistry:

	(1)		(1)
CO ₂	35.24	Dy ₂ O ₃	0.07
Y ₂ O ₃	0.24	Ho ₂ O ₃	0.01
La ₂ O ₃	11.60	Er ₂ O ₃	0.03
Ce ₂ O ₃	14.99	Yb ₂ O ₃	0.03
Pr ₂ O ₃	1.49	Lu ₂ O ₃	< 0.01
Nd ₂ O ₃	3.34	CaO	10.54
Sm ₂ O ₃	0.50	SrO	3.98
Eu ₂ O ₃	0.09	Na ₂ O	17.16
Gd ₂ O ₃	0.24	Total	99.55

(1) Ebounja, Cameroon; by electron microprobe, 18 analyses of one grain, CO₂ by TGA; corresponds to Na_{3.00}(Ca_{1.17}Ce_{0.57}Na_{0.46}La_{0.44}Sr_{0.24}Nd_{0.12}Pr_{0.06}Sm_{0.02}Y_{0.01}Gd_{0.01})_{Σ=3.10}(CO₃)₅.

Occurrence: In a nepheline syenite (Ebounja, Cameroon); associated with an intrusive alkalic gabbro-syenite complex (Mont Saint-Hilaire, Canada).

Association: Burbankite, aegirine, calcite (Ebounja, Cameroon).

Distribution: From Ebounja, near Kribi, Cameroon. Large crystals found at Mont Saint-Hilaire, Quebec, Canada.

Name: To honor Dr. Guy Rémond (1935–), physicist, Bureau de Recherches Géologiques et Minières, Orléans, France, for his work on the physics of minerals, and the predominance of *cerium* over other rare-earth elements in the composition.

Type Material: National School of Mines, Paris, France.

References: (1) Cesbron, F., C. Gilles, P. Pelisson, and J.-C. Saugues (1988) La rémondite-(Ce), un nouveau carbonate de terres rares de la famille de la burbankite. *Compt. Rendus Acad. Sci. Paris*, 307, 915–920 (in French with English abs.). (2) Ginderow, D. (1989) Structure de Na₃M₃(CO₃)₅ (M = terre rare, Ca, Na, Sr), rattaché à la burbankite. *Acta Cryst.*, C45, 185–187 (in French with English abs.). (3) (1990) *Amer. Mineral.*, 75, 433 (abs. ref. 1–2).