

## Rimkorolgitite

## (Mg, Mn<sup>2+</sup>)<sub>5</sub>(Ba, Sr)(PO<sub>4</sub>)<sub>4</sub>·8H<sub>2</sub>O

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**Crystal Data:** Orthorhombic. *Point Group:*  $2/m\ 2/m\ 2/m$  or  $mm2$ . Crystals are short prismatic, elongated along [010], pseudo-hexagonal, to 0.07 mm, showing {001}, {010}, {101}; may be fibrous, and in crusts.

**Physical Properties:** *Cleavage:* Perfect on {001}. *Tenacity:* Brittle. *Hardness:* = 3  
D(meas.) = 2.67(2) D(calc.) = [2.62]

**Optical Properties:** Transparent to translucent. *Color:* Yellow-brown, light pink, flesh-red to reddish brown. *Streak:* White. *Luster:* Vitreous, silky in aggregates.  
*Optical Class:* Biaxial (+). *Orientation:*  $X = c$ ;  $Y = a$ ;  $Z = b$ .  $\alpha = 1.552(2)$   $\beta = 1.552(2)$   
 $\gamma = 1.558(2)$   $2V(\text{meas.}) = 23(5)^\circ$

**Cell Data:** *Space Group:*  $Pcmm$ ,  $Pcm2_1$ , or  $Pc2m$ .  $a = 12.829(4)$   $b = 8.335(2)$   
 $c = 18.312(3)$   $Z = 4$

**X-ray Powder Pattern:** Zheleznyi iron mine, Russia.  
10.51 (100), 3.081 (78), 2.969 (44), 3.054 (41), 3.520 (34), 2.839 (34), 3.874 (32)

### Chemistry:

	(1)
P <sub>2</sub> O <sub>5</sub>	36.25
MnO	1.55
MgO	26.55
CaO	0.1
SrO	1.8
BaO	16.95
H <sub>2</sub> O	17.5
Total	100.70

(1) Zheleznyi iron mine, Russia; by electron microprobe, average of two analyses, total Mn as MnO, H<sub>2</sub>O by the Penfield method; corresponds to (Mg<sub>5.05</sub>Mn<sub>0.17</sub>)<sub>Σ=5.22</sub>(Ba<sub>0.85</sub>Sr<sub>0.13</sub>Ca<sub>0.01</sub>)<sub>Σ=0.99</sub>(P<sub>0.98</sub>O<sub>4</sub>)<sub>4</sub>·7.45H<sub>2</sub>O.

**Occurrence:** In cavities in dolomitic carbonatites cutting jacupirangite and forsterite-magnetite iron ores in a differentiated alkalic massif.

**Association:** Collinsite, bobierite, carbonate-fluorapatite, strontio whitlockite, pyrite.

**Distribution:** From the Zheleznyi iron mine, Kovdor massif, Kola Peninsula, Russia.

**Name:** Honoring Professor Ol'ga Mikhailonova Rimskaya-Korsakova [RIMskaya-KORSakova, OLGa] (1914–1987), mineralogist, St. Petersburg University, St. Petersburg, Russia, who researched the Kovdor massif.

**Type Material:** St. Petersburg University, St. Petersburg; Mining Institute, St. Petersburg, Russia, 2035/1.

**References:** (1) Britvin, S.N., Y.A. Pakhomovskii, A.N. Bogdanova, A.P. Khomyakov, and N.I. Krasnova (1995) Rimkorolgitite (Mg, Mn)<sub>5</sub>(Ba, Sr, Ca)(PO<sub>4</sub>)<sub>4</sub>·8H<sub>2</sub>O – a new mineral from the Kovdor iron deposit, Kola Peninsula. Zap. Vses. Mineral. Obshch., 124(1), 90–95 (in Russian).  
(2) (1996) Amer. Mineral., 81, 517–518 (abs. ref. 1).