

Crystal Data: Monoclinic. *Point group:* 2/m. As prismatic crystals to 0.8 mm that display {010} and {110} with typical amphibole striation.

Physical Properties: *Cleavage:* Perfect on {110}. *Tenacity:* Brittle. *Fracture:* Uneven. Hardness = ~6 VHS = 752-824, average 795 (50 g load). D(meas.) = 3.05(5) D(calc.) = 3.112

Optical Properties: Translucent. *Color:* Bright green to emerald-green, pale green in transmitted light. *Streak:* Pale green. *Luster:* Vitreous. *Optical Class:* Biaxial (+) or (-). $\alpha = 1.643(2)$ $\beta = 1.651(2)$ $\gamma = 1.659(2)$ 2V(meas.) = 86°(2) 2V(calc.) = -89.6° *Orientation:* Z ^ c = 23-25°.

Cell Data: *Space Group:* C2/m. $a = 9.8956(1)$ $b = 17.9970(2)$ $c = 5.2970(1)$ $\beta = 105.391(1)^\circ$ Z = 2

X-ray Powder Pattern: Pereval quarry, Irkutsk region, Siberia, Russia. 3.14 (100), 8.43 (40), 2.82 (35), 3.27 (30), 1.445 (25), 2.70 (18), 8.98 (15)

Chemistry:	(1)		(1)
SiO ₂	42.75	MnO	0.01
TiO ₂	0.14	CaO	12.52
Al ₂ O ₃	12.75	Na ₂ O	3.45
Cr ₂ O ₃	0.44	K ₂ O	0.41
V ₂ O ₃	5.92	F	0.61
MgO	19.15	H ₂ O	[1.75]
FeO	0.03	Total	99.91

(1) Pereval quarry, Irkutsk region, Siberia, Russia; average of 528 electron microprobe analyses supplemented by IR spectroscopy, H₂O calculated; corresponds to ^A(Na_{0.90}K_{0.07})^B(Ca_{1.91}Na_{0.05}Mg_{0.04})_{Σ=2.00}^C(Mg_{4.02}V_{0.68}Al_{0.23}Cr_{0.05}Ti_{0.02})_{Σ=5.00}^T(Si_{6.09}Al_{1.91})_{Σ=8.00}O₂₂^W(OH_{1.67}F_{0.33})_{Σ=2.00}.

Mineral Group: Calcium amphibole group; ^B(Ca + ΣM²⁺)/ΣB ≥ 0.75, ^BCa/ΣB ≥ ^BΣM²⁺/ΣB.

Occurrence: Formed during prograde (granulite-facies) metamorphism of Cr-V-bearing calcite-dolomite and siliceous sediments.

Association: Magnesio-coulsonite-magnesochromite, Cr-V-rich spinel, phlogopite, forsterite, Cr-V-bearing diopside, chlorite.

Distribution: From the Pereval marble quarry, near Sludyanka, Irkutsk region, southern Lake Baikal, Siberia, Russia.

Name: As a vanadium-bearing analog of *pargasite*, a monoclinic amphibole with Ca dominant as the B cation.

Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (5035/1, 5035/2, and 5035/3).

References: (1) Reznitsky, L.Z., E.V. Sklyarov, G. Cametti, T. Armbruster, L.F. Suvorova, Z.F. Ushchapovskaya, and I.G. Barash (2017) Vanadio-pargasite NaCa₂Mg₄V[Si₆Al₂]O₂₂(OH)₂ - new mineral of the amphibole group. Zap. Ross. Mineral. Obshch. (Proceedings of Russian Mineralogical Society), 146(6), 62-74 (in Russian). (2) Cametti, G., T. Armbruster, L.Z. Reznitsky, E.V. Sklyarov, and G. Della Ventura (2018) Crystal structure and crystal-chemistry of vanadio-pargasite: a new amphibole from southern Lake Baikal, Siberia, Russia. Eur. J. Mineral., 30(5), 981-987. (3) (2018) Amer. Mineral., 103, 2044-2045 (abs. refs. 1 & 2).