

Crystal Data: Hexagonal. *Point Group:* 6/m. As prismatic crystals dominated by {10 $\bar{1}$ 0}, to 1.5 mm; in radial aggregates.

Physical Properties: *Cleavage:* Imperfect on {0001}. *Fracture:* Conchoidal. *Tenacity:* Brittle. Hardness = 3.5 D(meas.) = 2.89(1) D(calc.) = 2.872

Optical Properties: Transparent. *Color:* Colorless. *Streak:* White. *Luster:* Vitreous. *Optical Class:* Uniaxial (-). $\omega = 1.566(1)$ $\epsilon = 1.531(1)$

Cell Data: *Space Group:* P6₃/m. $a = 8.912(8)$ $c = 3.112(4)$ $Z = 2$

X-ray Powder Pattern: Visyachy area, Sakha-Yakutia Republic, Russia. 2.422 (100), 4.45 (82), 2.573 (65), 2.128 (60), 7.69 (52), 2.551 (49), 2.141 (44)

Chemistry:	(1)	(2)
MgO	65.71	66.16
B ₂ O ₃	18.43	19.05
F	45.45	
H ₂ O	9.73	14.79
-O=F ₂	4.31	
Total	99.79	100.00

(1) Visyachy area, Sakha-Yakutia Republic, Russia; average of 3 electron microprobe analyses, H₂O by Penfeld method, IR confirms OH, corresponding to Mg_{3.03}(B_{0.98}[(OH)_{2.00}F_{1.00}]O_{3.00}).

(2) Mg₃(BO₃)(OH)₃.

Occurrence: As disseminations and veinlets in boron-mineralized calcsilicate marbles.

Association: Calcite, dolomite, Mg-rich ludwigite, kotoite, szaibelyite, clinohumite, magnetite, serpentine, chlorite.

Distribution: Visyachy area, Titovsky deposit, Chersky Range, Dogdo Basin, Sakha-Yakutia Republic, Russia.

Name: For its chemical composition, as a hydroxyl dominant analog of fluorborite.

Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow (91968); Geological Museum of All-Russia Institute of Mineral Resources, Moscow (M-1663).

References: (1) Rudnev, V.V., N.V. Chukanov, G.N. Nechelyustov, and N.A. Yamnova (2007) Hydroxylborite, Mg₃(BO₃)(OH)₃, a new mineral, and the isomorphous fluorborite hydroxylborite series. *Zap. Ross. Mineral. Obshch.*, 136(1), 69–82 (in Russian, English abstract); (2007) *Geology of Ore Deposits*, 49, 710–719 (in English). (2) (2009) *Amer. Mineral.*, 94, 1078 (abs. ref. 1).