

**Betpakdalite-FeFe**

**Crystal Data:** Monoclinic. *Point Group:* 2/m.

**Physical Properties:** *Cleavage:* n.d. *Tenacity:* n.d. *Fracture:* n.d. *Hardness:* = n.d.  
D(meas.) = n.d. D(calc.) = n.d.

**Optical Properties:** [Translucent.] *Color:* n.d. *Streak:* n.d. *Luster:* n.d.  
*Optical Class:* [Biaxial.]  $\alpha$  = n.d.  $\beta$  = n.d.  $\gamma$  = n.d.  $2V$ (meas.) = n.d.  $2V$ (calc.) = n.d.  
*Pleochroism:* n.d. *Orientation:* n.d.

**Cell Data:** *Space Group:* C2/m.  $a = 19.51(1)$   $b = 11.131(5)$   $c = 15.37(1)$   $\beta = 130.93(5)^\circ$   $Z = 2$

**X-ray Powder Pattern:** Mt Moliagul, Victoria, Australia.  
9.079 (100), 3.051 (24), 7.329 (19), 2.791 (17), 3.679 (15), 3.160 (15), 2.662 (12)

**Chemistry:** Not published.

**Mineral Group:** Betpakdalite supergroup, betpakdalite group.

**Occurrence:** n.d.

**Association:** n.d.

**Distribution:** At Mt. Moliagul, ~200 km northwest of Melbourne and 58 km west of Bendigo, Victoria, Australia.

**Name:** For the Bet-Pak-Dal Desert, Kazakhstan. Two suffixes correspond to the dominant cations in the two different types of non-framework cation sites.

**Type Material:** Natural History Museum of Los Angeles County, Los Angeles, California, USA (66560) and the Museums Victoria, Melbourne, Australia (M53809).

**References:** (1) Mills, S.J., A.R. Kampf, P. Sutton, and W.D. Birch (2017) Betpakdalite-FeFe, IMA 2017-011. CNMNC Newsletter No. 37, Mineral. Mag., 81, 740-741. (2) Kampf, A.R., S.J. Mills, M.S. Rumsey, M. Dini, W.D. Birch, J. Spratt, J.J. Pluth, I.M. Steele, R.A. Jenkins, and W.W. Pinch (2012) The heteropolymolybdate family: structural relations, nomenclature scheme and new species. Mineral. Mag., 76(5), 1175-1207.