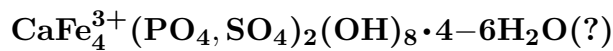


Delvauxite



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Crystal Data: Amorphous. *Point Group:* n.d. In nodules, surficially botryoidal to reniform, or crusts.

Physical Properties: *Fracture:* Conchoidal. Hardness = ~ 3.5 D(meas.) = 2.377–2.530 D(calc.) = n.d.

Optical Properties: Opaque to translucent. *Color:* Yellowish brown, brownish black, dark to medium reddish brown, reddish. *Streak:* Pale brown. *Luster:* Waxy to opaline. *Optical Class:* Isotropic. $n = 1.57\text{--}1.73$

Cell Data: *Space Group:* n.d. Z = n.d.

X-ray Powder Pattern: Amorphous to X-rays.

Chemistry:

	(1)	(2)
SO ₃	2.03	0.33
CO ₂	0.27	0.24
SiO ₂	1.64	2.34
P ₂ O ₅	21.35	20.65
Al ₂ O ₃	0.46	2.00
Fe ₂ O ₃	42.91	43.56
MgO	0.08	0.03
CaO	7.36	7.97
H ₂ O	23.31	22.43
Total	99.41	99.55

(1) Berneau, Belgium; corresponds to $(\text{Ca}, \text{Mg})_{1.00}(\text{Fe}^{3+}, \text{Al})_{4.10}(\text{PO}_4, \text{SO}_4, \text{CO}_3)_{2.74}(\text{OH})_8 \cdot 5.71\text{H}_2\text{O}$. (2) Leoben, Austria; corresponds to $(\text{Ca}, \text{Mg})_{1.00}(\text{Fe}^{3+}, \text{Al})_{4.10}(\text{PO}_4, \text{SO}_4, \text{CO}_3)_{2.18}(\text{OH})_8 \cdot 4.72\text{H}_2\text{O}$.

Occurrence: In gossan (Nenačovice, Czech Republic).

Association: Diadochite, vivianite, pitticite, melanterite, “limonite”.

Distribution: From Berneau, Richelle, and Argenteau, all near Visé, Belgium. At Tollinggraben, Leoben, Styria, Austria. From Nenačovice and Trubín, Czech Republic. At Železník (Vashegy), Slovakia. From Fouchères, Aube, France. In several mines of the Kurumsak and Balasauskandyk districts, northwestern Kara-Tau Mountains, Kazakhstan. From the St. John’s quarry, near Kapunda, Mount Lofty Ranges, South Australia. Possibly from a number of other places, but modern confirmation is required.

Name: In honor of J.S.P.J. Delvaux de Feuffe (1782–1863), Belgian chemist, who first analyzed the mineral.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana’s system of mineralogy, (7th edition), v. II, 935–936 [delvauxite]; 915 [borickite (bořickýite), part = delvauxite]; 915–916 [foucherite, part = delvauxite]. (2) Čech, F. and P. Povondra (1979) A re-examination of bořickýite [= delvauxite]. *Tschermaks Mineral. Petrog. Mitt.*, 26, 79–86.