

Crystal Data: Monoclinic. *Point Group:* 2/m. Crystals, platy on {001}, to 0.02 mm; as rosettes.

Physical Properties: *Cleavage:* Perfect on {001}, inferred from structure analysis. *Fracture:* n.d. *Tenacity:* n.d. *Hardness:* Soft. *D(meas.):* n.d. *D(calc.):* 3.062

Optical Properties: Transparent to translucent. *Color:* Yellowish-green to greenish-white. *Streak:* White. *Luster:* Vitreous. *Optical Class:* n.d.

Cell Data: *Space Group:* C2/m. *a* = 8.043(4) *b* = 5.139(2) *c* = 7.115(4) β = 92.13(2)° *Z* = 2

X-ray Powder Pattern: Eldfell volcano, Heimaey Island, Iceland.
2.77 (100), 3.72 (80), 2.72 (60), 2.370 (60), 3.64 (50), 3.43 (50), 2.57 (30)

Chemistry:	(1)	(2)
P ₂ O ₅	1.79	
SO ₃	62.37	59.09
TiO ₂	0.50	
Fe ₂ O ₃	25.36	29.47
Al ₂ O ₃	0.69	
MnO	0.22	
MgO	1.24	
Na ₂ O	9.20	11.44
K ₂ O	0.24	
Total	101.60	100.00

(1) Eldfell volcano, Heimaey Island, Iceland; average of 4 EDS analyses, corresponding to (Na_{0.77}K_{0.01})_{Σ=0.78}(Fe_{0.82}Mg_{0.08}Al_{0.03}Mn_{0.01}Ti_{0.02})_{Σ=0.96}(S_{2.01}P_{0.07})_{Σ=2.08}O_{8.00}. (2) NaFe(SO₄)₂.

Occurrence: As a near surface fumarolic encrustation.

Association: Tamarugite, ralstonite, anhydrite, gypsum, bassanite, hematite, opal, cryptohalite, chessexite, unnamed Na₃Fe(SO₄)₃ phase.

Distribution: Eldfell volcano, Heimaey Island, Iceland.

Name: For the first locality, the Eldfell volcano, Iceland.

Type Material: Icelandic Institute of Natural History, Reykjavík, Iceland, (NI 13556).

References: (1) Balić-Žunić, T., A. Garavelli, P. Acquafredda, E. Leonardsen, and S.P. Jakobsson (2009) Eldfellite, NaFe(SO₄)₂, a new fumarolic mineral from Eldfell volcano, Iceland. *Mineral. Mag.*, 73, 51–57. (2) (2010) *Amer. Mineral.*, 95, 204–205 (abs. ref. 1).