

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. In grains, to 2 mm, which are aggregates of very fine, commonly curved needles; massive crusts.

Physical Properties: *Cleavage:* Perfect on {110}. *Hardness* = n.d. VHN = 243–433; 40–43 (15 g load). *D(meas.)* = 3.1 *D(calc.)* = 3.029 Slightly magnetic.

Optical Properties: Opaque. *Color:* Steel-gray, becoming iridescent purple or bronze, to dull black with oxidation. *Luster:* Metallic. *Pleochroism:* Strong. *Anisotropism:* Strong.

R₁–R₂: (400) 16.7–30.1, (420) 16.9–30.5, (440) 17.1–30.8, (460) 17.3–30.2, (480) 17.5–29.6, (500) 17.6–29.4, (520) 17.9–29.4, (540) 18.1–29.4, (560) 18.5–29.8, (580) 19.0–30.3, (600) 19.6–31.0, (620) 20.1–31.7, (640) 20.6–32.5, (660) 20.8–33.2, (680) 20.9–33.6, (700) 21.0–33.8

Cell Data: *Space Group:* *Cmcm*. *a* = 9.049(6) *b* = 11.019(7) *c* = 5.431(4) *Z* = 4

X-ray Powder Pattern: Coyote Peak, California, USA.

5.513 (100), 6.98 (62), 3.403 (43), 3.492 (17), 1.778 (14), 2.935 (12), 2.905 (12)

Chemistry:

| | (1) | (2) | (3) |
|-------|------|------|--------|
| K | 16.3 | 15.2 | 15.83 |
| Fe | 45.2 | 46.1 | 45.22 |
| S | 38.0 | 38.5 | 38.95 |
| Total | 99.5 | 99.8 | 100.00 |

(1) Khibiny massif, Russia; by electron microprobe. (2) Coyote Peak, California, USA; by electron microprobe. (3) KFe₂S₃.

Occurrence: Typically an alteration product of pyrrhotite; in differentiated alkalic massifs (Russia); in an alkalic mafic diatreme (Coyote Peak, California, USA); in sodalite syenite xenoliths associated with an intrusive alkalic gabbro-syenite complex (Mont Saint-Hilaire, Canada); in natrocarbonate lavas (Oldoinyo Lengai volcano, Tanzania); in a contact-metamorphosed xenolith (Oslo rift, Norway).

Association: Djerfisherite, chlorbartonite, pyrrhotite, cubanite, potassic feldspar, nepheline, acmite (Russia); pyrrhotite, nepheline, acmite, analcime, alkalic feldspar (Point of Rocks, New Mexico, USA); ussingite, villiaumite, siderenkite, sodalite (Mont Saint-Hilaire, Canada).

Distribution: In Russia, on the Kola Peninsula, from Mts. Rasvumchorr [TL], Koashva, and Yukspor, and in the Kirov apatite mine, Mt. Kukisvumchorr [TL], Khibiny massif; at the Lovozero massif. From the Oslo rift, southern Norway. In the USA, at Coyote Peak, near Orick, Humboldt Co., California, and from Point of Rocks, Colfax Co., New Mexico. From Mont Saint-Hilaire, Quebec, Canada. On Oldoinyo Lengai volcano, Tanzania.

Name: For its occurrence on Mt. Rasvumchorr, Kola Peninsula, Russia.

Type Material: Geology Museum, Kola Branch, Academy of Sciences, Apatity, 3627; Mining Institute, St. Petersburg, 1095/1; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 73142, 73143, 73584, 73975.

References: (1) Sokolova, M.N., M.G. Dobrovol'skaya, N.I. Organova, M.E. Kazalova, and A.L. Dmitrik (1970) A sulfide of iron and potassium — the new mineral rasvumite. *Zap. Vses. Mineral. Obshch.*, 99, 712–720 (in Russian). (2) (1971) *Amer. Mineral.*, 56, 1121–1122 (abs. ref. 1). (3) Czamanske, G.R., R.C. Erd, M.N. Sokolova, M.G. Dobrovol'skaya, and M.T. Dmitrieva (1979) New data on rasvumite and djerfisherite. *Amer. Mineral.*, 64, 776–778. (4) Clark, J.R. and G.E. Brown, Jr. (1980) Crystal structure of rasvumite, KFe₂S₃. *Amer. Mineral.*, 65, 477–482. (5) Criddle, A.J. and C.J. Stanley, Eds. (1993) Quantitative data file for ore minerals, 3rd ed. Chapman & Hall, London, 474.

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