

Crystal Data: Monoclinic. *Point Group:* 2/m. As rare crystals with a monoclinic habit to 100 μm and crusts to several square centimeters.

Physical Properties: *Cleavage:* Excellent on {110}. *Fracture:* Uneven. *Tenacity:* Brittle. Hardness ≈ 3 D(meas.) = 2.57(2) D(calc.) = 2.49

Optical Properties: Transparent. *Color:* Carmine red (crystals); "bordeaux" (crusts). *Streak:* Orange. *Luster:* Adamantine. *Optical Class:* Biaxial. $n(\text{min.}) = 1.797$ $n(\text{max.}) = 1.856$ *Pleochroism:* Strong, $X = \text{yellow-orange}$, $Z = \text{ruby-red}$.

Cell Data: *Space Group:* C2/c. $a = 13.171(2)$ $b = 10.1280(10)$ $c = 6.9830(10)$ $\beta = 111.572(2)^\circ$ $Z = 4$

X-ray Powder Pattern: Fianel mine, Ferrara Valley, Canton Graubünden, Switzerland. 7.82 (100), 3.029 (70), 4.51 (30), 3.91 (30), 5.69 (20), 5.06 (20), 3.98 (10)

Chemistry:	(1)
V ₂ O ₅	53.80
As ₂ O ₅	0.44
MnO	20.85
SrO	0.14
<u>H₂O</u>	<u>[24.77]</u>
Total	100.00

(1) Fianel mine, Ferrara Valley, Canton Graubünden, Switzerland; average of 8 electron microprobe analyses, recalculated to 100%, H₂O calculated from stoichiometry; corresponding to $(\text{Mn}_{0.988}\text{Sr}_{0.004})_{\Sigma=0.992}(\text{V}_{1.989}\text{As}_{0.013})_{\Sigma=2.002}\text{O}_6 \cdot 4\text{H}_2\text{O}$.

Occurrence: Of synsedimentary to diagenetic origin, in thin fractures, in a metamorphosed exhalative Fe-Mn deposit in carbonate rocks.

Association: Fianelite, Fe oxyhydroxides, silica (Fianel mine); kegginite, gypsum, mesaite, sherwoodite (Packrat mine).

Distribution: From the Fianel mine, near Ausserferrera, Ferrara Valley, Canton Graubünden, Switzerland [TL]. At the Packrat mine, near Gateway, Mesa County and the Burro mine, San Miguel County, Colorado, USA.

Name: Honors Stefan *Ansermet* (b. 1964), Swiss mineralogist for contributions to the descriptive mineralogy and photography of Alpine mineralogical wealth.

Type Material: The Geology Museum, Lausanne, Switzerland (MGL #68936).

References: (1) Brugger, J., P. Berlepsch, N. Meisser, and T. Armbruster (2003) Ansermetite, $\text{MnV}_2\text{O}_6 \cdot 4\text{H}_2\text{O}$, a new mineral species with V^{5+} in five-fold coordination from Val Ferrera, eastern Swiss Alps. *Can. Mineral.*, 41, 1423-1431. (2) (2004) *Amer. Mineral.*, 89(10), 1575 (abs. ref. 1). (3) Kampf, A.R., J.M. Hughes, B.P. Nash, and J. Marty (2017) Kegginite, $\text{Pb}_3\text{Ca}_3[\text{AsV}_{12}\text{O}_{40}(\text{VO})] \cdot 20\text{H}_2\text{O}$, a new mineral with a novel e-isomer of the Keggin anion. *Amer. Mineral.*, 102(2), 461-465 [ansermetite locality]. (4) Kampf, A.R., J. Plášil, B.P. Nash and J. Marty (2019) Ammoniomathesiusite, a new uranyl sulfate-vanadate mineral from the Burro mine, San Miguel County, Colorado, USA. *Mineral. Mag.*, 83, 115-121 [ansermetite locality].