

Crystal Data: Tetragonal. *Point Group:* 422. Commonly tabular {001}; also pyramidal with faces striated parallel to their intersections with {001}, to 1 mm. Massive, granular, and radiating fibrous. *Twining:* On {203} and {106}.

Physical Properties: *Fracture:* Uneven. *Tenacity:* Brittle. Hardness = 5 VHN = 623–724 (100 g load). D(meas.) = 8.00 D(calc.) = 8.02

Optical Properties: Opaque. *Color:* Platinum-gray with reddish tint, tarnishes coppery red; in polished section, pinkish gray. *Streak:* Blackish gray. *Luster:* Metallic. *Anisotropism:* Weak. R₁–R₂: (400) 44.2–44.8, (420) 45.1–45.4, (440) 46.0–45.9, (460) 46.9–46.4, (480) 47.6–46.8, (500) 48.1–47.1, (520) 48.7–47.6, (540) 49.4–48.2, (560) 50.2–49.1, (580) 51.4–50.2, (600) 52.7–51.5, (620) 53.9–52.9, (640) 55.1–54.1, (660) 56.1–55.4, (680) 57.0–56.4, (700) 57.8–57.4

Cell Data: *Space Group:* P4₁2₁2. a = 6.872(4) c = 21.821(1) Z = 4

X-ray Powder Pattern: Eisleben, Germany.

2.01 (100), 1.713 (100), 2.69 (90), 1.212 (60), 1.449 (50), 1.108 (50), 1.083 (50)

Chemistry:	(1)	(2)	(3)	(4)
Ni	49.96	50.03	51.7	51.85
Co	0.20	0.84	0.3	
Fe	0.84	trace		
Cu	0.69	0.13		
As	45.88	45.90	48.5	48.15
Sb			0.1	
S	0.97	0.18		
rem.	0.68	1.66		
Total	99.22	98.74	100.6	100.00

(1) Sudbury, Canada; remainder is H₂O 0.36%, gangue 0.32%. (2) Eisleben, Germany; remainder is gangue 1.66%. (3) Elk Lake, Canada; by electron microprobe. (4) Ni₁₁As₈.

Occurrence: In hydrothermal veins with other nickel arsenides and sulfides.

Association: Nickeline, nickel-skutterudite, chalcopyrite (Eisleben, Germany); millerite, uvarovite, pyroxene, calcite (Orford, Canada).

Distribution: In Germany, from Eisleben, Saxony-Anhalt [TL], at Mansfeld, Thuringia, and from Bieber, near Hanau, Hesse. From Schladming, Styria, Austria. In Romania, at Bădeanca, from Băița, and in the East Făgăraș Mountains. In Spain, from Los Jarales, Málaga Province; and at Vimbodi, Tarragona Province. At the Littleham Cove area, Budleigh Salterton, Devon, England. From Bou Azzer, Morocco. In the Talmessi mine, near Anarak, Iran. In Canada, at several mines in the Cobalt district, and at the Moose Horn mine, Elk Lake, Timiskaming district, Ontario; in Quebec, at the Orford nickel mine, Brompton Lake, and at the Jeffrey mine, Asbestos. In the USA, at the Gem mine, northwest of Silver Cliff, Fremont Co., Colorado; in the Mohawk mine, Keweenaw Co., Michigan; and in the Mackinaw mine, Monte Cristo, Snohomish Co., Washington. Now known from a few other minor localities.

Name: To honor Wilhelm Maucher (1879–1930), metallurgical chemist and mineral dealer of Munich, Germany.

References: (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 192–194. (2) Fleet, M.E. (1973) The crystal structure of maucherite (Ni₁₁As₈). Amer. Mineral., 58, 203–210. (3) Ramdohr, P. (1969) The ore minerals and their intergrowths, (3rd edition), 400–402. (4) Berry, L.G. and R.M. Thompson (1962) X-ray powder data for the ore minerals. Geol. Soc. Amer. Mem. 85, 42–43. (5) Criddle, A.J. and C.J. Stanley, Eds. (1993) Quantitative data file for ore minerals, 3rd ed. Chapman & Hall, London, 359.

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