Meixnerite $Mg_6Al_2(OH)_{18}\cdot 4H_2O$

Crystal Data: Hexagonal. *Point Group:* $\overline{3}\ 2/m$. Tabular crystals, to 1 mm.

Physical Properties: *Cleavage:* {0001}, perfect. Hardness = ∼2 D(meas.) = 1.9(1) D(calc.) = 1.95

Optical Properties: Transparent. *Color:* Colorless.
Optical Class: Uniaxial (–). $\omega = 1.517$ ϵ = n.d.

Cell Data: *Space Group:* $R\overline{3}m$. $a = 3.0463(15)$ $c = 22.93(2)$ Z = 3/8

X-ray Powder Pattern: Ybbs-Persenberg, Austria; d's calculated. (ICDD 34-478).
1.94 (100), 1.52 (75), 3.82 (72), 2.287 (70), 2.57 (64), 1.494 (57), 7.64 (55)

Chemistry:

	(1)	(2)
Al_2O_3	15.0	17.64
Fe_2O_3	0.55	
MgO	36.5	41.84
H_2O	[47.95]	40.52
Total	[100.00]	100.00

(1) Ybbs-Persenberg, Austria; by electron microprobe, total Fe as Fe_2O_3, H_2O by difference.
(2) $Mg_6Al_2(OH)_{18}\cdot 4H_2O$.

Occurrence: A secondary mineral in serpentinite.

Association: Talc, aragonite.

Distribution: From Ybbs-Persenberg, Ispertal, Austria.

Name: To honor Professor Heinrich Hermann Meixner (1908–1981), Austrian mineralogist, University of Salzburg, Salzburg, Austria.

Type Material: University of Salzburg, Salzburg, Austria; University of Göttingen, Göttingen, Germany; The Natural History Museum, London, England, 1980,687; Harvard University, Cambridge, Massachusetts, USA, 117008.

References: (1) Koritnig, S. and P. Süsse (1975) Meixnerite, $Mg_6Al_2(OH)_{18}\cdot 4H_2O$, ein neues Magnesium-Aluminium-Hydroxid-Mineral. Tschermaks Mineral. Petrog. Mitt., 22, 79–87 (in German with English abs.). (2) (1976) Amer. Mineral., 61, 176 (abs. ref. 1).