Majindeite $Mg_2Mo_3O_8$

Crystal Data: Hexagonal. *Point Group*: 6*mm*. As grains less than 1 μm.

Physical Properties: *Cleavage*: n.d. *Fracture*: n.d. *Tenacity*: n.d. Hardness = n.d. D(meas.) = n.d. D(calc.) = 5.54

Optical Properties: n.d. *Color*: n.d. *Streak*: n.d. *Luster*: n.d. *Optical Class*: n.d.

Cell Data: Space Group: $P6_3mc$. a = 5.778 c = 9.904 Z = 2

X-ray Powder Pattern: n.d.

Chemistry:	(1)	(2)	(3)
MoO_2	60	80.3	82.64
MgO	10.4	13.3	17.36
FeO	5.01	6.4	
Al_2O_3	1.2		
NiO	0.7		.
Total	77.6	100.0	100.00

(1) Allende meteorite; average of 4 electron microprobe analyses, low total ascribed to small sample size. (2) Allende meteorite, analysis (1) corrected by removal of Al and Ni contamination and normalized; corresponds to $(Mg_{1.57}Fe_{0.43})Mo_{3.00}O_8$. (3) $Mg_2Mo_3O_8$.

Mineral Group: Kamiokite group.

Occurrence: In a CV3 carbonaceous chondrite.

Association: Ni-Fe and Ru-Os-Ir alloys, apatite, Nb-oxide, spinel, diopside, awaruite.

Distribution: From the Allende meteorite (CV3 carbonaceous chondrite).

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Type Material: National Museum of Natural History, Washington, D.C., USA (USNM 7615).

References: (1) Ma, C. and J.R. Beckett (2016) Majindeite, $Mg_2Mo_3O_8$, a new mineral from the Allende meteorite and a witness to post-crystallization oxidation of a Ca-Al-rich refractory inclusion. Amer. Mineral., 101, 1161-1170.