Siidraite Pb<sub>2</sub>Cu(OH)<sub>2</sub>I<sub>3</sub>

**Crystal Data**: Orthorhombic. *Point Group*: 2/m 2/m . As granular crystals to 0.1 mm; aggregates to 2 mm.

**Physical Properties**: *Cleavage*: None. *Tenacity*: n.d. *Fracture*: n.d. Hardness = 2.5-3.5 (by analogy to bideauxite, marshite, miersite). D(meas.) = n.d. D(calc.) = 6.465-6.505

**Optical Properties**: Translucent. *Color*: Yellow. *Streak*: Yellow. *Luster*: n.d. *Optical Class*: n.d. n(calc.) = 2.18

**Cell Data**: *Space Group*: *Fddd.* a = 16.7082(9) b = 20.846(1) c = 21.016(1) Z = 32

X-ray Powder Pattern: Calculated pattern.

2.746 (100), 3.270 (81), 2.738 (77), 3.312 (76), 3.296 (69), 2.690 (64), 6.539 (60)

## Chemistry:

(1)	(2)
7.22	8.01
51.8	50.01
42.5	42.65
[2.03]	2.02
2.61	<u>.</u>
100.94	100.00
	7.22 51.8 42.5 [2.03] 2.61

(1) Broken Hill, New South Wales, Australia; average of 10 electron microprobe analyses, H<sub>2</sub>O calculated from stoichiometry; corresponds to Pb<sub>2.06</sub>Cu<sub>0.89</sub>(OH)<sub>2</sub>I<sub>2.97</sub>. (2) Pb<sub>2</sub>Cu(OH)<sub>2</sub>I<sub>3</sub>.

**Occurrence**: In upper oxidation zone of a supergene-enriched, galena-Mn-silicate deposit. Likely from the oxidation of cuprite.

Association: Cuprite, marshite, copper, brochantite, anglesite.

**Distribution**: From Broken Hill, New South Wales, Australia.

**Name**: Honors Russian mineralogist and crystallographer Oleg. I. Siidra (b. 1981) for his extensive work on secondary lead oxysalts, in particular, synthetic iodine-rich phases.

Type Material: Natural History Museum, London, England (BM 84642 and BM 2016,1).

**References**: (1) Rumsey, M.S., M.D. Welch, A.K. Kleppe, and J. Spratt (2017) Siidraite, Pb<sub>2</sub>Cu(OH)<sub>2</sub>I<sub>3</sub>, from Broken Hill, New South Wales, Australia: the third halocuprate(I) mineral. Eur. J. Mineral., 29(6), 1027-1030. (2) (2018) Amer. Mineral., 103, 1714 (abs. ref. 1).