

Electron Microprobe Data

Ruff ID: **R05050609** Mineral: **Polydymite**

Locality: Dry Nickel mine, Bindura, South Rhodesia, Rhodesia

Weight Percents

Analysis	#2	#3	#5	#6	#7	#8	#9	#10	#12	#13	#14	#15	#16	#17	#18	#19	#20	Average	StDev
Fe	2.53	2.70	2.63	2.52	2.64	2.47	2.71	2.73	2.67	2.62	2.64	2.54	2.46	2.61	2.77	2.50	2.60	2.61	0.09
Ni	53.78	53.68	53.25	54.57	52.86	54.10	53.62	53.55	54.54	54.01	53.06	53.88	54.51	53.68	53.15	53.87	53.22	53.66	0.55
S	41.76	41.49	41.61	42.08	41.88	41.96	41.96	42.09	42.13	42.31	41.51	41.73	42.03	41.82	42.08	41.73	41.40	41.81	0.31
Totals	98.07	97.88	97.48	99.17	97.42	98.53	98.31	98.38	99.35	99.02	97.25	98.14	99.00	98.14	97.99	98.11	97.22	98.10	0.76

Cation numbers normalized to 4 S

	#2	#3	#5	#6	#7	#8	#9	#10	#12	#13	#14	#15	#16	#17	#18	#19	#20	ACN	StDev	NCN*
Fe	0.14	0.15	0.15	0.14	0.15	0.14	0.15	0.15	0.15	0.14	0.15	0.14	0.13	0.14	0.15	0.14	0.14	0.14	0.01	0.15
Ni ²⁺	0.82	0.83	0.80	0.84	0.76	0.82	0.79	0.78	0.83	0.79	0.79	0.82	0.83	0.81	0.76	0.82	0.81	0.81	0.02	0.85
Ni ³⁺	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00
Totals	2.95	2.98	2.94	2.97	2.91	2.95	2.94	2.93	2.98	2.94	2.94	2.96	2.97	2.95	2.91	2.96	2.95	2.95	0.02	3.00

Ideal Chemistry: NiNi₂S₄

Calculated Chemistry: (Ni_{0.85}Fe_{0.15})Ni_{2.00}S_{4.00}

Instrument: Cameca SX50
 Sample Voltage: 15 kV
 Acceleration Current: 20 nA
 Beam Size: spot
 Date of Analysis: 4/8/2005

Microprobe Calibration Data

Xtal	El	Line	Pk(s)	Bkg(s)	Bkg(+)	Bkg(-)	Standards
LIF	Fe	Ka	20	10	500	-500	chalcopy
LIF	Ni	Ka	20	10	500	-500	pentlnd
LIF	Zn	Ka	20	10	500	-500	ZnS
PET	S	Ka	20	10	500	-500	chalcopy
LIF	Cu	Ka	20	10	500	-500	chalcopy

ACN: Average Number of Cations

NCN*: Normalized Cation Numbers = ACN*3/2.95

StDev: Standard Deviation