

Electron Microprobe Data

Ruff ID: **R050477**

Mineral: **Vonsenite**

Locality: North Hill, Riverside, California, USA

Weight Percents

Analysis	#1	#2	#3	#4	#5	#10	#11	#12	#13	#15	#17	#18	#20	Average	StDev
MgO	12.68	12.79	12.71	12.84	13.03	12.58	12.82	12.74	12.83	12.64	12.61	12.85	12.63	12.75	0.13
FeO*	42.37	41.91	41.65	42.55	42.27	42.44	42.55	42.73	42.25	42.01	41.56	42.36	42.00	42.20	0.36
Fe ₂ O ₃ *	30.03	29.70	29.52	30.16	29.96	30.08	30.16	30.29	29.94	29.77	29.46	30.02	29.76	29.91	0.25
Totals	85.09	84.41	83.87	85.55	85.26	85.10	85.53	85.76	85.02	84.42	83.63	85.23	84.39	84.86	0.66
B ₂ O ₃ *	14.91	15.59	16.13	14.45	14.74	14.90	14.47	14.24	14.98	15.58	16.37	14.77	15.61	15.14	0.66

* = calculated values

Cation numbers normalized to 5 Oxygens

	ACN	StDev	NCN	CNISF**
Mg	0.74	0.74	0.73	0.74
Fe ²⁺ *	1.26	1.26	1.27	1.26
Fe ³⁺ *	1.10	1.04	1.00	1.06
B*	0.90	0.96	1.00	0.94
Cation	4.00	4.00	4.00	4.00

* = calculated values Fe₂O₃/(FeO+MgO) = 0.544 ; B₂O₃ estimated by difference

Ideal Chemistry: Fe²⁺₂Fe³⁺BO₅

Calculated Chemistry: (Fe²⁺_{0.63}Mg_{0.37})₂Fe³⁺(BO₃)

trace amounts of Ca, Mo, Pb

Microprobe Calibration Data

	Xtal	El	Line	Pk(s)	Bkg(s)	Bkg(+)	Bkg(-)	Standards
Instrument: Cameca SX50	TAP	Mg	Ka	20	10	350	-400	diopside
Sample Voltage: 15 kV	PET	Ca	Ka	20	10	500	-500	diopside
Acceleration Current: 10 nA	PET	Mo	Ka	20	10	300	-500	wulfenite
Beam Size: 10 microns	LIF	Fe	Ka	20	10	300	-250	fayalite
Date of Analysis: 05/05/2006	LIF	Pb	La	20	10	350	300	wulfenite

ACN: Average Number of Cations

NCN: Normalized Cation Numbers = ACN*4/4

StDev: Standard Deviation

CNISF** = cation numbers in structural formulae, normalized for each structural site and charge balanced