

Electron Microprobe Data

Rruff ID: **R050601** Mineral: **Sillimanite**

Locality: Mogok, Burma

Weight Percents

Analysis	61	63	65	66	67	68	69	70	71	72	73	74	75	76	77	80	Average	StDev
SiO ₂	36.40	36.29	36.42	36.27	36.43	36.35	36.48	36.40	36.32	36.53	36.43	36.23	36.65	36.56	36.21	36.46	36.40	0.122
Al ₂ O ₃	62.43	62.44	62.32	62.51	62.51	62.69	62.54	62.92	62.54	62.82	62.74	62.78	62.61	62.67	62.56	62.60	62.61	0.159
Fe ₂ O ₃	0.28	0.26	0.32	0.29	0.32	0.27	0.28	0.34	0.28	0.27	0.34	0.32	0.32	0.26	0.31	0.29	0.30	0.026
Total	99.11	99.00	99.06	99.08	99.26	99.32	99.30	99.66	99.15	99.62	99.50	99.33	99.59	99.50	99.08	99.34	99.31	0.217

Cation Numbers on the Basis of 5 Oxygens

																	ACN	StDev	NCN
Si	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.99	0.99	0.99	0.99	0.99	0.00	0.99
Al	2.00	2.00	2.00	2.01	2.00	2.01	2.00	2.01	2.01	2.01	2.01	2.01	2.00	2.00	2.01	2.00	2.01	0.00	2.00
Fe ³⁺	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01
Cations	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	3.00

Ideal Chemistry: Al₂SiO₅

Calculated Chemistry: Al_{2.00}(Si_{0.99}Fe³⁺_{0.01})O₅

Instrument: Cameca SX50

Sample Voltage: 15 kV

Acceleration Current: 20 nA

Beam Size: Spot

Date of Analysis: 03/11/06

Microprobe Calibration Data

Xtal	El	Line	Pk(s)	Bkg(s)	Bkg(+)	Bkg(-)	Standards
TAP	Al	Ka	20	10	600	-600	Kyanite
TAP	Si	Ka	20	10	600	-600	Kyanite
LIF	Fe	Ka	20	10	500	-250	Fayalite

ACN: Average Number of Cations

NCN: Normalized Cation Numbers = ACN*3/3.003

StDev: Standard Deviation