

# Electron Microprobe Data

Rruff ID: **R050626** Mineral: **Andalusite**

**Locality:** Minas Gerais, Brazil

## Weight Percents

Analysis	#81	#82	#83	#84	#85	#86	#87	#88	#89	#90	#91	#92	#93	#94	#95	#96	#97	#98	#99	#100	Average	StDev
SiO <sub>2</sub>	36.81	36.88	36.83	36.92	36.90	36.58	36.82	36.78	36.45	36.98	36.31	36.57	36.65	36.50	36.48	36.85	36.76	36.66	36.74	36.92	36.72	0.186
Al <sub>2</sub> O <sub>3</sub>	62.69	62.96	63.04	63.00	62.99	62.94	63.06	62.86	62.40	62.89	62.80	62.81	62.72	62.88	63.03	63.05	62.82	62.93	63.29	62.98	62.91	0.181
Fe <sub>2</sub> O <sub>3</sub>	0.36	0.29	0.35	0.24	0.28	0.32	0.23	0.34	0.37	0.31	0.22	0.35	0.35	0.43	0.35	0.28	0.30	0.34	0.26	0.34	0.32	0.053
MgO	0.12	0.09	0.10	0.07	0.09	0.09	0.07	0.09	0.14	0.08	0.06	0.12	0.13	0.12	0.09	0.10	0.08	0.09	0.08	0.09	0.10	0.021
Total	100.08	100.24	100.36	100.27	100.29	99.96	100.25	100.08	99.40	100.32	99.38	99.89	99.89	99.96	99.96	100.35	100.03	100.06	100.40	100.38	100.08	0.290

## 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	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.00	0.99
Al	1.99	2.00	2.00	2.00	2.00	2.01	2.00	2.00	2.00	2.00	2.01	2.00	2.00	2.00	2.01	2.00	2.00	2.00	2.01	2.00	2.00	0.00	2.00
Fe <sup>3+</sup>	0.01	0.01	0.01	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.00	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	3.00	3.00	3.00	3.00	0.00	3.00

Ideal Chemistry: Al<sub>2</sub>SiO<sub>5</sub>

Calculated Chemistry: Al<sub>2.00</sub>(Si<sub>0.99</sub>Fe<sup>3+</sup><sub>0.01</sub>)O<sub>5</sub>

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
TAP	Mg	Ka	20	10	500	-500	Diopside
LIF	Fe	Ka	20	10	500	-250	Fayalite

ACN: Average Number of Cations

NCN: Normalized Cation Numbers = ACN\*3/3.003

StDev: Standard Deviation