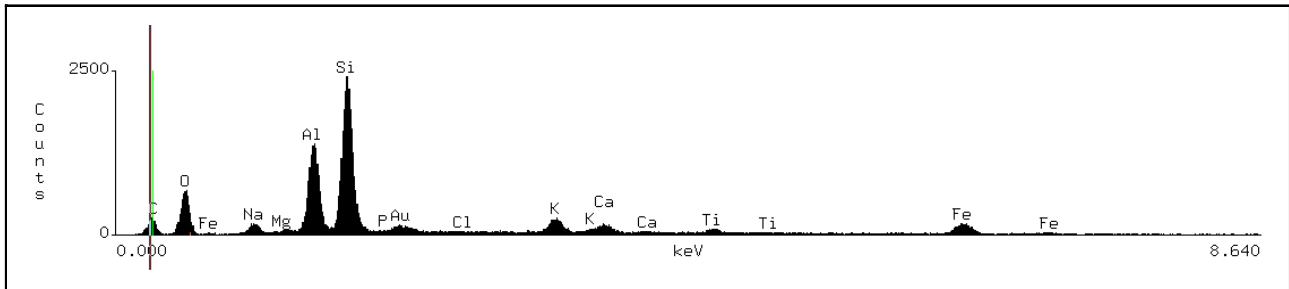


APPENDIX A

CHEMICAL ANALYSIS RESULTS FOR VIRGIN POZZOLANS

Arusha pozzolan position 1:



NRA-1

Accelerating Voltage: 20 KeV
Live Time: 100 seconds

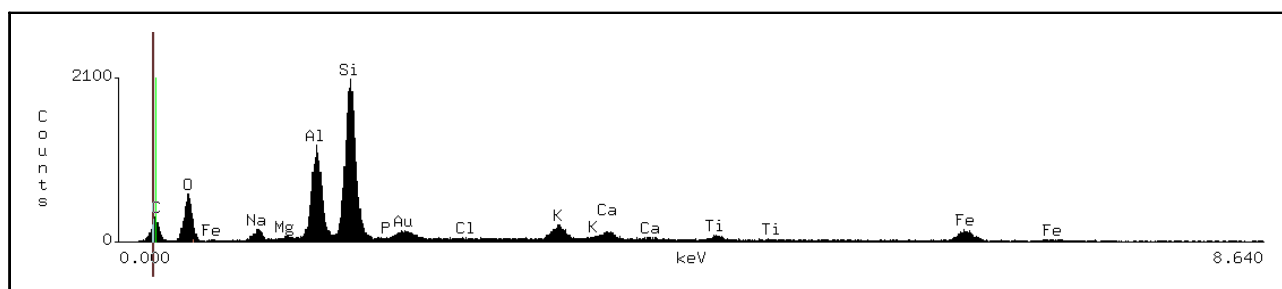
Take Off Angle: 35°
Dead Time: 14.062

Quantitative Analysis

NRA-1

Chi-sqd = 1.24 Livetime = 100.0 Sec.

Element	k-ratio (calc.)	ZAF	Atom %	Element Wt %	Wt % Err. (1-Sigma)
Na-K	0.0200	2.034	5.40	4.06	+/- 0.17
Mg-K	0.0025	1.622	0.51	0.40	+/- 0.12
Al-K	0.1622	1.395	25.67	22.63	+/- 0.29
Si-K	0.3038	1.578	52.24	47.95	+/- 0.46
P -K	0.0000	2.166	0.01	0.01	+/- 0.24
Cl-K	0.0006	1.564	0.08	0.09	+/- 0.11
K -K	0.0474	1.269	4.70	6.01	+/- 0.16
Ca-K	0.0339	1.197	3.10	4.06	+/- 0.29
Ti-K	0.0174	1.212	1.35	2.11	+/- 0.30
Fe-K	0.1125	1.126	6.94	12.67	+/- 0.68
Total			100.00	100.00	

Arusha pozzolan position 2:**NRA-2**

Accelerating Voltage: 20 KeV

Take Off Angle: 35°

Live Time: 100 seconds

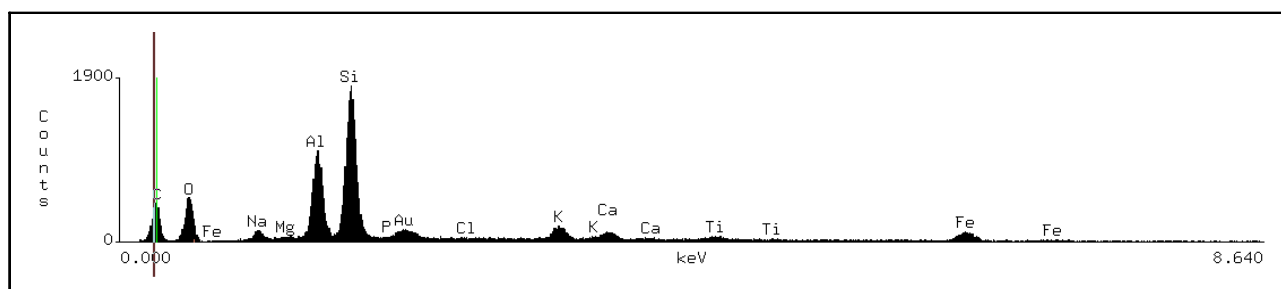
Dead Time: 12.743

Quantitative Analysis

NRA-2

Chi-sqd = 1.30 Livetime = 100.0 Sec.

Element	k-ratio (calc.)	ZAF	Atom %	Element Wt %	Wt % Err. (1-Sigma)
Na-K	0.0201	2.033	5.44	4.08	+/- 0.19
Mg-K	0.0035	1.622	0.71	0.57	+/- 0.13
Al-K	0.1577	1.398	25.02	22.06	+/- 0.32
Si-K	0.3069	1.570	52.51	48.19	+/- 0.50
P -K	0.0003	2.170	0.07	0.07	+/- 0.27
Cl-K	0.0005	1.559	0.07	0.08	+/- 0.12
K -K	0.0518	1.269	5.15	6.58	+/- 0.32
Ca-K	0.0298	1.200	2.73	3.58	+/- 0.17
Ti-K	0.0181	1.212	1.40	2.19	+/- 0.33
Fe-K	0.1120	1.126	6.91	12.61	+/- 0.76
Total			100.00	100.00	

Arusha pozzolan position 3:**NRA-3**

Accelerating Voltage: 20 KeV

Take Off Angle: 35°

Live Time: 100 seconds

Dead Time: 12.979

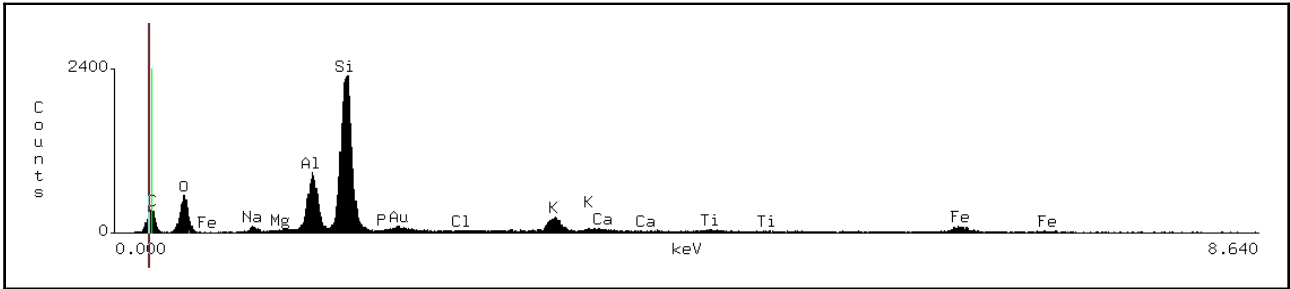
Quantitative Analysis

NRA-3

Chi-sqd = 1.34 Livetime = 100.0 Sec.

Element	k-ratio (calc.)	ZAF	Atom %	Element Wt %	Wt % Err. (1-Sigma)
Na-K	0.0183	2.019	4.92	3.70	+/- 0.21
Mg-K	0.0028	1.604	0.56	0.45	+/- 0.14
Al-K	0.1632	1.384	25.57	22.58	+/- 0.34
Si-K	0.3098	1.570	52.92	48.64	+/- 0.54
P -K	0.0009	2.178	0.20	0.20	+/- 0.31
Cl-K	0.0000	1.538	0.00	0.00	+/- 0.00
K -K	0.0498	1.271	4.95	6.33	+/- 0.35
Ca-K	0.0305	1.201	2.79	3.67	+/- 0.19
Ti-K	0.0170	1.213	1.32	2.06	+/- 0.21
Fe-K	0.1098	1.127	6.77	12.37	+/- 0.49
Total			100.00	100.00	

Mbeya pozzolan position1:



NRM-4

Accelerating Voltage: 20 KeV
 Live Time: 100 seconds

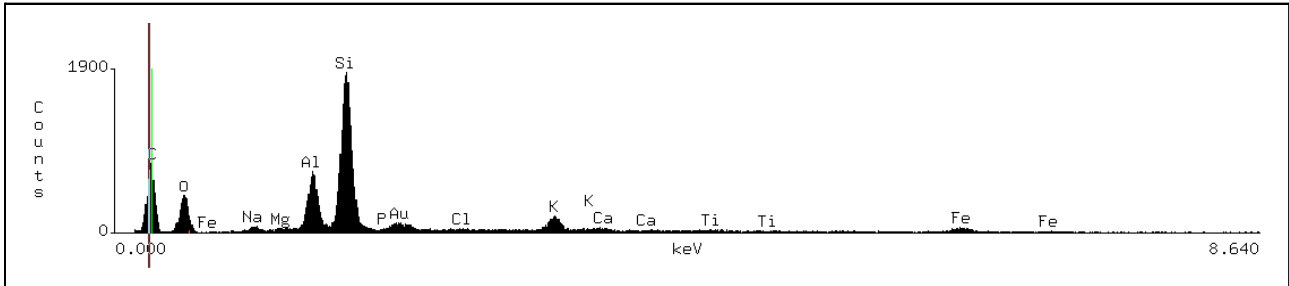
Take Off Angle: 35.928°
 Dead Time: 12.937

Quantitative Analysis

NRM-4

Chi-sqd = 1.24 Livetime = 100.0 Sec.

Element	k-ratio (calc.)	ZAF	Atom %	Element Wt %	Wt % (1-Sigma)	Err.
Na-K	0.0116	1.845	2.81	2.15	+/-	0.17
Mg-K	0.0013	1.457	0.23	0.18	+/-	0.12
Al-K	0.1338	1.276	19.01	17.08	+/-	0.30
Si-K	0.4305	1.404	64.65	60.46	+/-	0.54
P -K	0.0000	2.207	0.00	0.00	+/-	0.00
Cl-K	0.0017	1.597	0.22	0.26	+/-	0.13
K -K	0.0703	1.296	7.00	9.11	+/-	0.37
Ca-K	0.0074	1.235	0.69	0.92	+/-	0.17
Ti-K	0.0100	1.228	0.77	1.22	+/-	0.19
Fe-K	0.0760	1.134	4.63	8.62	+/-	0.79
Total			100.00	100.00		

Mbeya pozzolan position 2:

NRM-5

Accelerating Voltage: 20 KeV

Take Off Angle: 35.928°

Live Time: 100 seconds

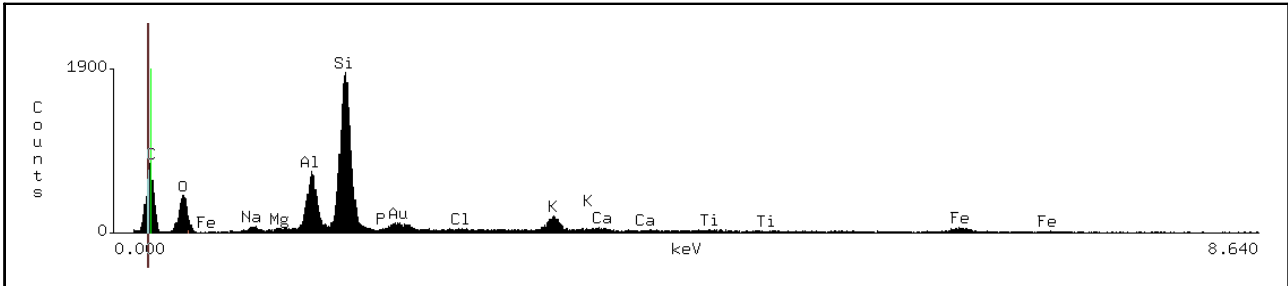
Dead Time: 13.276

Quantitative Analysis

NRM-5

Chi-sqd = 1.31 Livetime = 100.0 Sec.

Element	k-ratio (calc.)	ZAF	Atom %	Element Wt %	Wt % Err. (1-Sigma)
Na-K	0.0127	1.736	2.83	2.20	+/- 0.21
Mg-K	0.0035	1.393	0.60	0.49	+/- 0.15
Al-K	0.1407	1.239	19.09	17.43	+/- 0.36
Si-K	0.4497	1.387	65.66	62.39	+/- 0.65
P -K	0.0005	2.251	0.10	0.11	+/- 0.40
Cl-K	0.0043	1.612	0.58	0.69	+/- 0.19
K -K	0.0675	1.308	6.68	8.83	+/- 0.26
Ca-K	0.0092	1.244	0.84	1.14	+/- 0.21
Ti-K	0.0053	1.237	0.40	0.65	+/- 0.25
Fe-K	0.0532	1.137	3.21	6.06	+/- 0.96
Total			100.00	100.00	

Mbeya pozzolan position 3:

NRM-5

Accelerating Voltage: 20 KeV
Live Time: 100 seconds

Take Off Angle: 35.928°
Dead Time: 13.276

Quantitative Analysis

NRM-5

Chi-sqd = 1.31 Livetime = 100.0 Sec.

Element	k-ratio (calc.)	ZAF	Atom %	Element Wt %	Wt % Err. (1-Sigma)
Na-K	0.0127	1.736	2.83	2.20	+/- 0.21
Mg-K	0.0035	1.393	0.60	0.49	+/- 0.15
Al-K	0.1407	1.239	19.09	17.43	+/- 0.36
Si-K	0.4497	1.387	65.66	62.39	+/- 0.65
P -K	0.0005	2.251	0.10	0.11	+/- 0.40
Cl-K	0.0043	1.612	0.58	0.69	+/- 0.19
K -K	0.0675	1.308	6.68	8.83	+/- 0.26
Ca-K	0.0092	1.244	0.84	1.14	+/- 0.21
Ti-K	0.0053	1.237	0.40	0.65	+/- 0.25
Fe-K	0.0532	1.137	3.21	6.06	+/- 0.96
Total			100.00	100.00	