SDMS # 2146409

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5519

SFUND RECORDS CTR
2146409

Response of RJ Lee Group to EPA Region 9 (Meer) Letter dated March 9, 2006

Regarding Evaluation of EPA's Analytical Data from the El Dorado Hills Asbestos Evaluation Project

Exhibit C *1.2.4h*

Lab/Cor SAED patterns inconsistent with actinolite

Date: July 2006

Prepared by:
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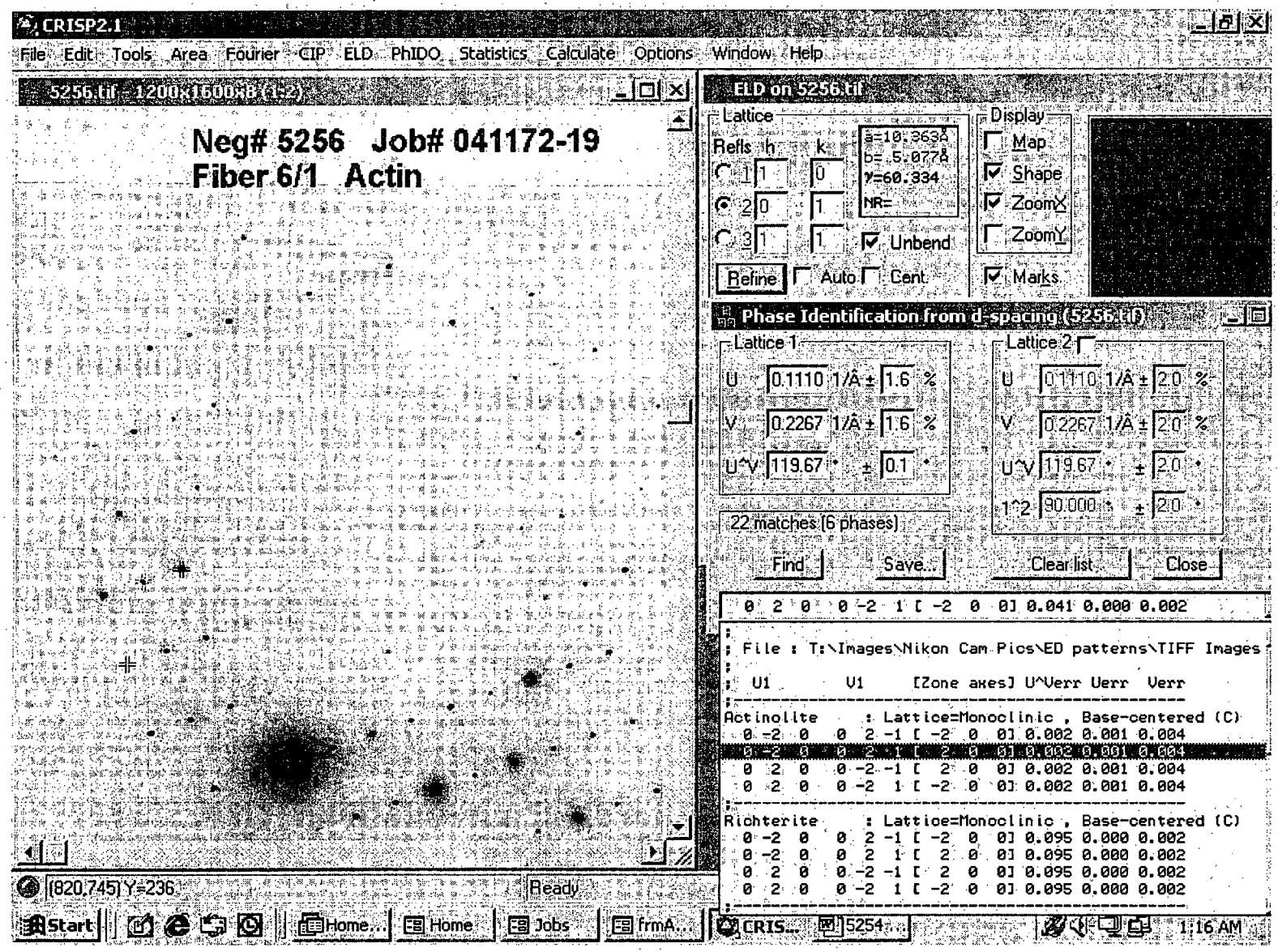
ACTINOLITE
[100]



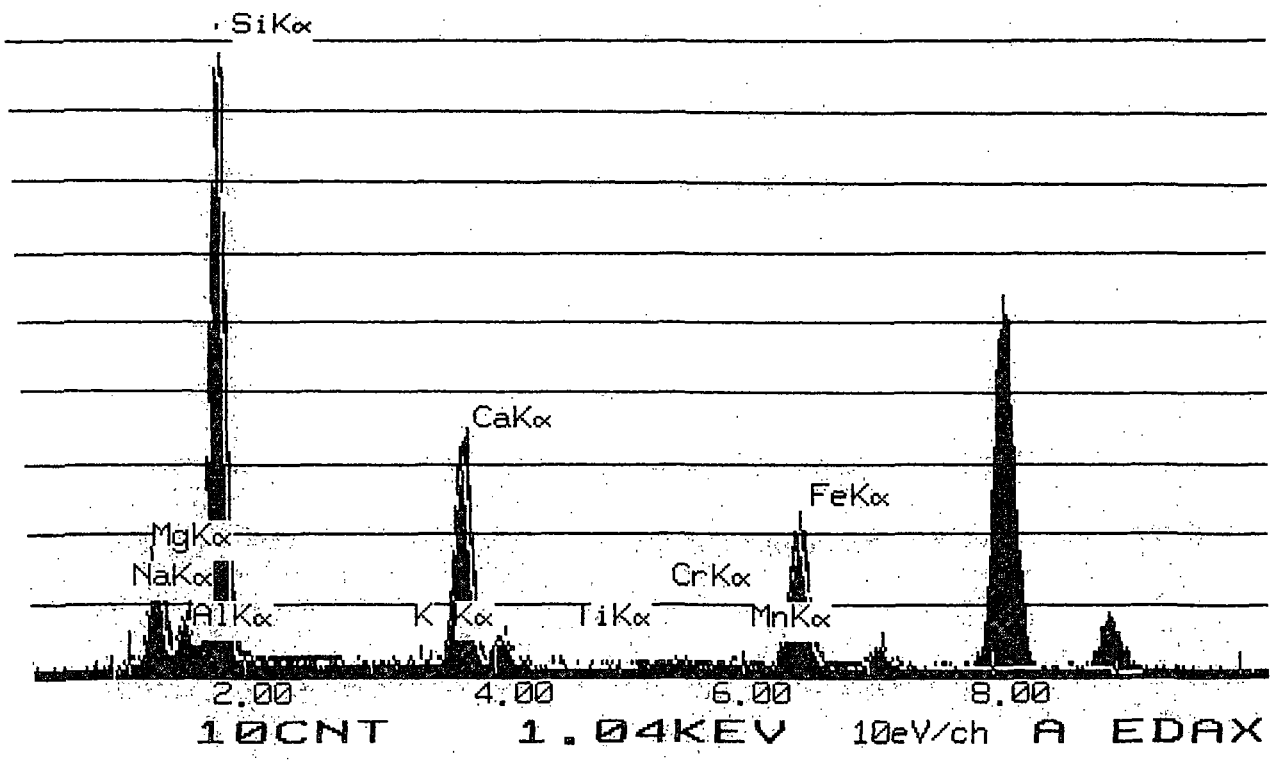
C-1.2.4 h

INTE-% :
LABEL = 041172-19 6/1 15175
11-OCT-72 18:05:04
45.048 LIVE SECONDS

ELEM	CPS	WT % ELEM	WT % OXIDE
MGK	30.812	9.427	15.630
ALK	10.012	1.840	3.476
SIK	147.532	25.386	54.309
CAK	59.381	9.742	13.631
MNK	0.355	0.084	0.109
FEK	41.223	8.984	12.845
TOTAL			100.000

USED PEIF: USER

10-OCT-04 18:06:06 SUPER QUANT
RATE= 521CPS TIME= 45LSEC
FS= 725/ 725 PRST= 200LSEC
A =041172-19 6/1 15175



	Wt Percent		ions	T site	Leftover	C site	Leftover	B site	Leftover	A site	Leftover
SiO2	54.309	Si+4	7.6345	7.6345							
Al2O3	3.476	Al+3	0.5759	0.3655	0.2104						
TiO2	0	Ti+4	0.0000	0.0000	0.0000						
Cr2O3	0	Cr+3	0.0000			0.0000	0.0000				
Fe(total)O	12.845	Fe+3	0.0408			0.0408	0.0000				
MgO	15.63	Mg+2	3.2756			3.2756	0.0000				
MnO	0.109	Fe+2	1.4646			1.4646	0.0000				
CaO	13.631	Mn+2	0.0130			0.0087	0.0043				
Na2O	0	Ca+2	2.0529					1.9957	0.0572		
K2O	0	Na+	0.0000					0.0000	0.0000	0.0000	0.0000
		K+	0.0000							0.0000	0.0000
Total	100		Excess	T site	0.2104	C site	0.0043	B site	0.0571804	A site	0
			Total	8		5.0000		1.9957		0.0000	0.0000
			%Fill	100		100		99.7839			

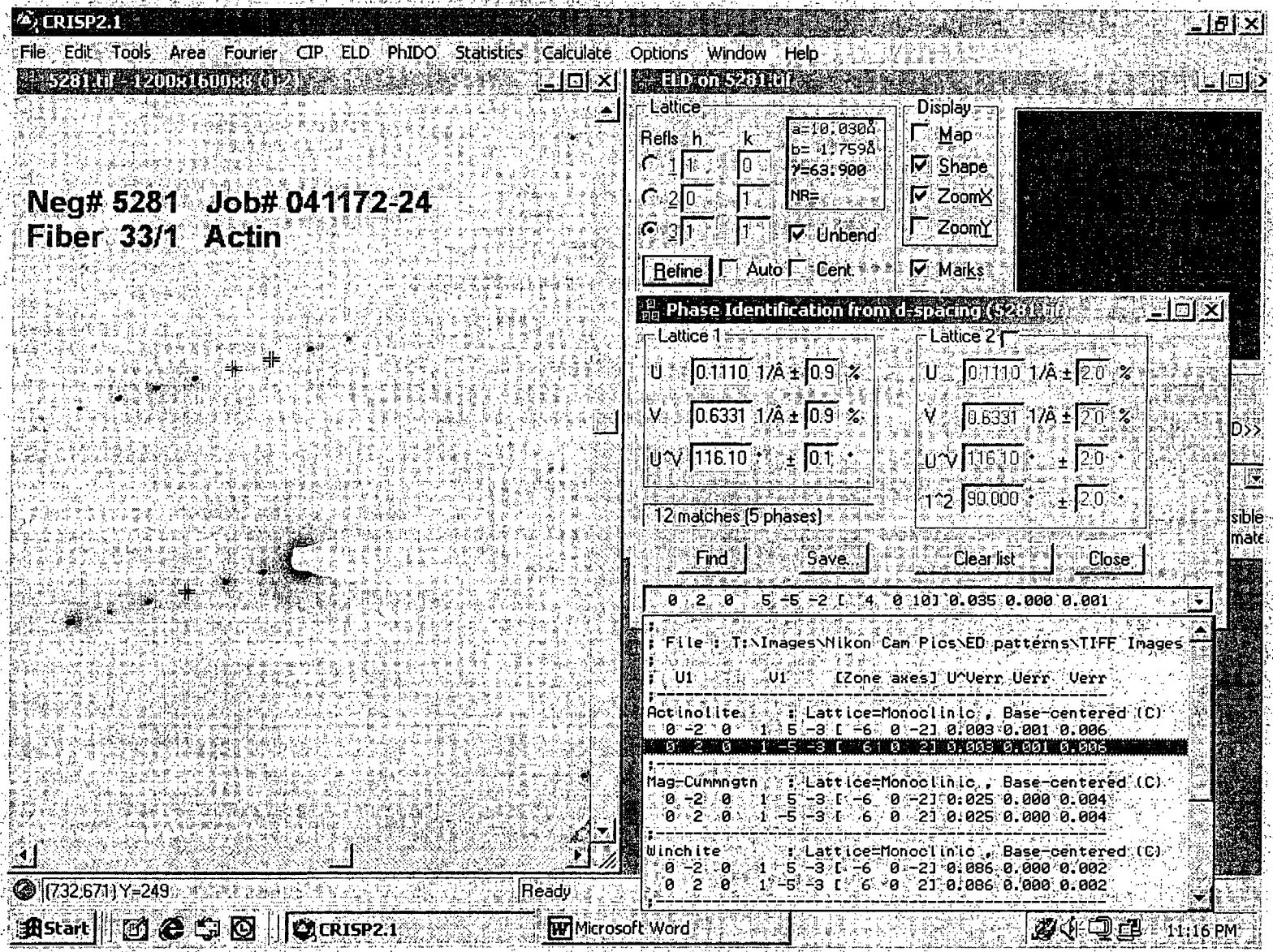
Prefix	none
Name	actinolite
Modifier	none
Group	Calcic Amphibole

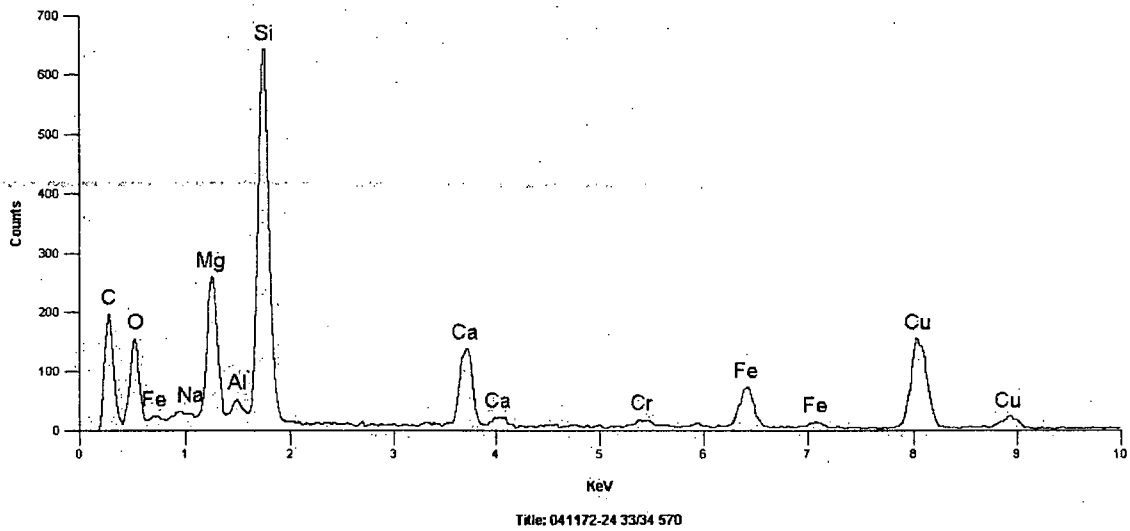
Sample # 041172-19-15175

Values		Satisfied Conditions
(Ca,Na)@B	2.00	(Ca,Na)@B >= 1 and Na@B < 0.5
Na@B	0.00	Ca@B >= 1.5 and (Na,K)@A < 0.5
Ca@B	2.00	(Mg/(Mg+Fe2))>= 0.5
(Na,K)@A	0.00	Si > 7.5
Mg/(Mg+Fe2)	0.69	(Mg/(Mg+Fe2))< 0.9
Si	7.63	

Mineral Analysis Program (Version 5.0)

ACTINOLITE
[3 0 1]





Quantitative Analysis Results - Standardless Analysis :
Spectrum7 041172-24 33/34 570 Jan 1, 1997
EDS Parameters - 18KV, Takeoff Angle: 28.2°, Fit Index: 173.23
Correction: CLIFF LORIMER, Cycles: 1

Element	Atoms%	Compound	Weight%	Error(±)	Norm%
Mg	32.38	MgO	44.32	0.17	24.05
Al	1.43	Al2O3	2.48	0.04	1.35
Si	51.77	SiO2	105.62	0.25	57.31
K	0.23	K2O	0.37	0.03	0.20
Ca	8.63	CaO	16.44	0.09	8.92
Fe	5.55	Fe2O3	15.05	0.14	8.17
<Total>	100.00		184.28		100.00

See following page for correct quants

	Wt Percent		ions	T site	Leftover	C site	Leftover	B site	Leftover	A site	Leftover
SiO2	61.25	Si+4	8.0000	8.0000							
Al2O3	4.04	Al+3	0.6520	0.0000	0.6520						
TiO2	0	Ti+4	0.0000	0.0000	0.0000						
Cr2O3	0	Cr+3	0.0000			0.0000	0.0000				
Fe(total)O	6.42	Fe+3	0.0172			0.0172	0.0000				
MgO	17.09	Mg+2	3.4415			3.4415	0.0000				
MnO	0	Fe+2	0.7329			0.7329	0.0000				
CaO	10.98	Mn+2	0.0000			0.0000	0.0000				
Na2O	0	Ca+2	1.5999					1.5999	0.0000		
K2O	0.21	Na+	0.0000					0.0000	0.0000	0.0000	0.0000
		K+	0.0539							0.0539	0.0000
Total	99.99		Excess	T site	0.6520	C site	0.0000	B site	0	A site	0
			Total	8		4.8436		1.5999		0.0539	0.0000
			%Fill	100		96.8711		79.9933			

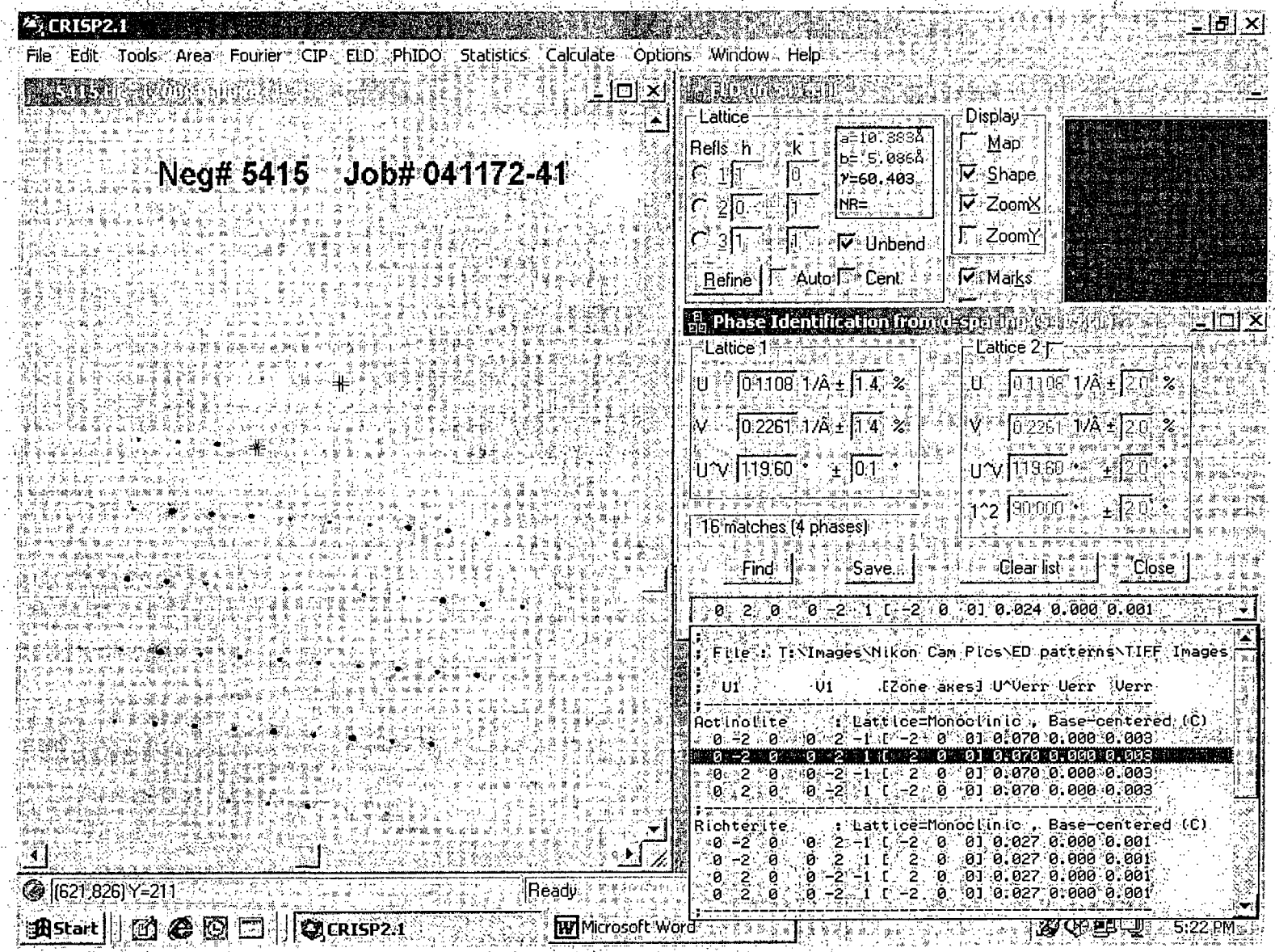
Prefix	none
Name	actinolite
Modifier	none
Group	Calcic Amphibole

Sample # 041172-24-33

Values		Satisfied Conditions
(Ca,Na)@B	1.60	(Ca,Na)@B >= 1 and Na@B < 0.5
Na@B	0.00	Ca@B >= 1.5 and (Na,K)@A < 0.5
Ca@B	1.60	(Mg/(Mg+Fe2))>= 0.5
(Na,K)@A	0.05	Si > 7.5
Mg/(Mg+Fe2)	0.82	(Mg/(Mg+Fe2))< 0.9
Si	8.00	

Mineral Analysis Program (Version 5.0)

ACTINOLITE
[100]



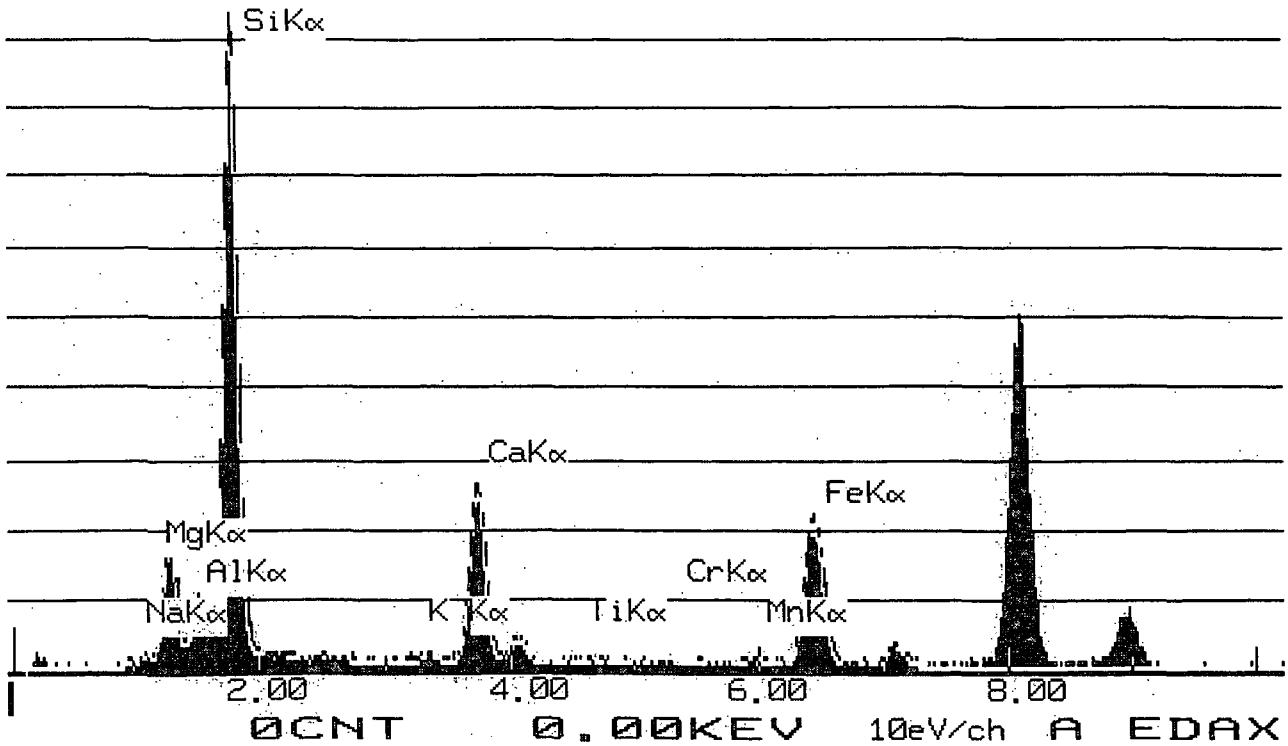
INTE-% :
LABEL = 041172-41 SP 15506
05-DEC-72 18:47:47
40.265 LIVE SECONDS

ELEM	CPS	WT % ELEM	WT % OXIDE
NAK	1.614	0.622	0.838
MGK	44.703	8.130	13.481
ALK	23.643	2.583	4.880
SIK	244.229	24.982	53.445
K K	4.371	0.743	0.895
CAK	82.304	8.026	11.231
TIK	1.018	0.140	0.234
CRK	0.422	0.057	0.084
MNK	2.806	0.395	0.510
FEK	77.759	10.074	14.403

TOTAL			100.000

USED PEIF: USER

04-DEC-04 18:48:26 SUPER QUANT
RATE= 11CPS TIME= 40LSEC
FS= 1039/ 1039 PRST= 200LSEC
A =041172-41 SP 15506



	Wt Percent		ions	T site	Leftover	C site	Leftover	B site	Leftover	A site	Leftover
SiO2	53.445	Si+4	7.5702	7.5702							
Al2O3	4.88	Al+3	0.8146	0.4298	**0.3848**						
TiO2	0.234	Ti+4	0.0249	0.0000	**0.0249**						
Cr2O3	0.084	Cr+3	0.0094			0.0094	0.0000				
Fe(total)O	14.403	Fe+3	0.1535			0.1535	0.0000				
MgO	13.481	Mg+2	2.8467			2.8467	**0.0000**				
MnO	0.51	Fe+2	1.5353			1.5353	**0.0000**				
CaO	11.231	Mn+2	0.0612			0.0453	**0.0159**				
Na2O	0.838	Ca+2	1.7043					1.7043	0.0000		
K2O	0.895	Na+	0.2301					0.2301	**0.0000**	0.0000	0.0000
		K+	0.1617							0.1617	0.0000
Total	**100.001**		**Excess**	T site	**0.4097**	C site	**0.0159**	B site	**0**	A site	**0**
			Total	**8**		**5.0000**		**1.9344**		**0.1617**	**0.0000**
			%Fill	**100**		**100**		**96.72**			

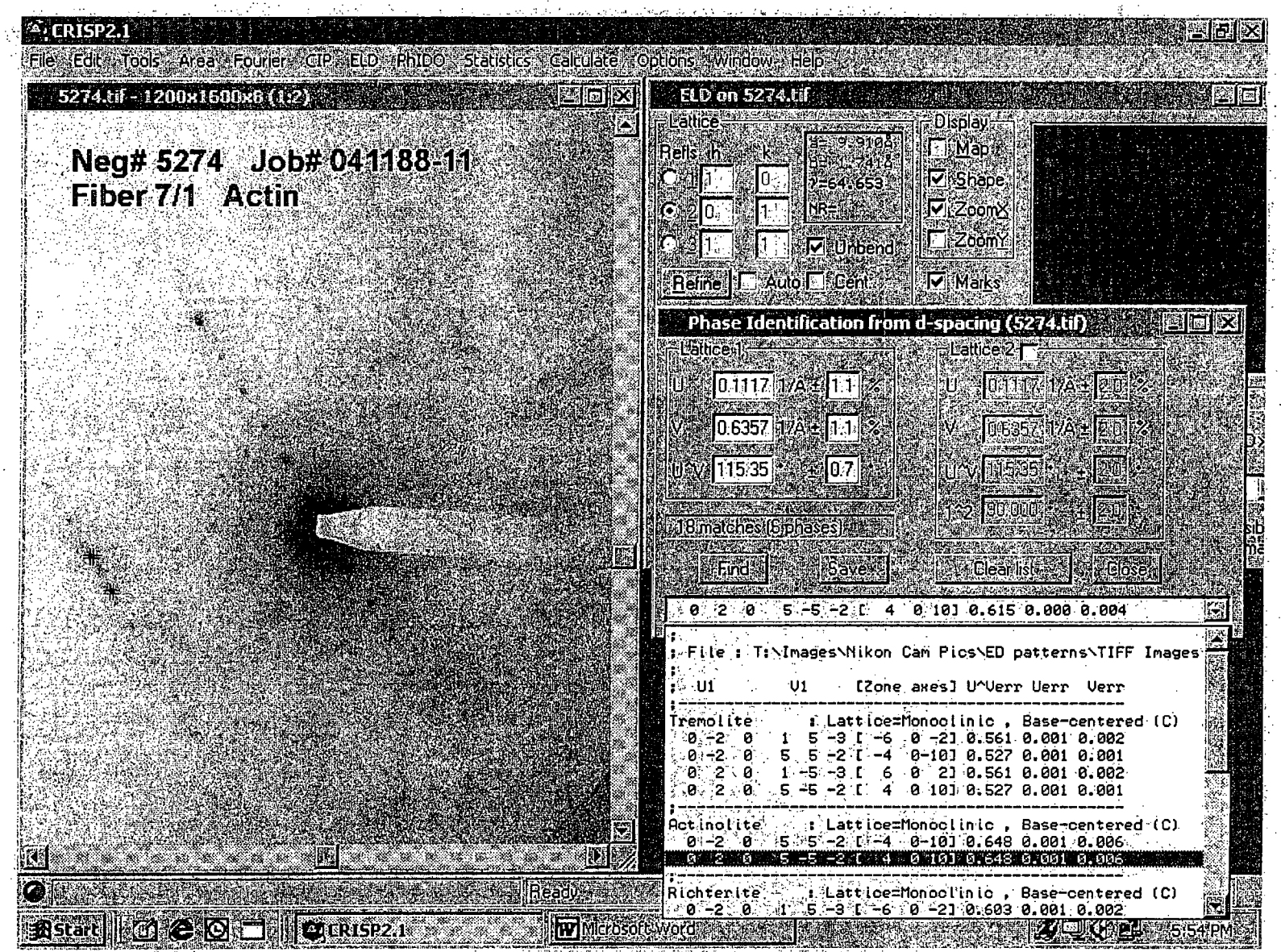
Prefix none
Name actinolite
Modifier none
Group Calcic Amphibole

Sample # **041172-41-15506**

Values		Satisfied Conditions
(Ca,Na)@B	1.93	(Ca,Na)@B >= 1 and Na@B < 0.5
Na@B	0.23	Ca@B >= 1.5 and (Na,K)@A < 0.5
Ca@B	1.70	(Mg/(Mg+Fe2))>= 0.5
(Na,K)@A	0.16	Si > 7.5
Mg/(Mg+Fe2)	0.65	(Mg/(Mg+Fe2))< 0.9
Si	7.57	

Mineral Analysis Program (Version 5.0)

ACTINOLITE
[205]

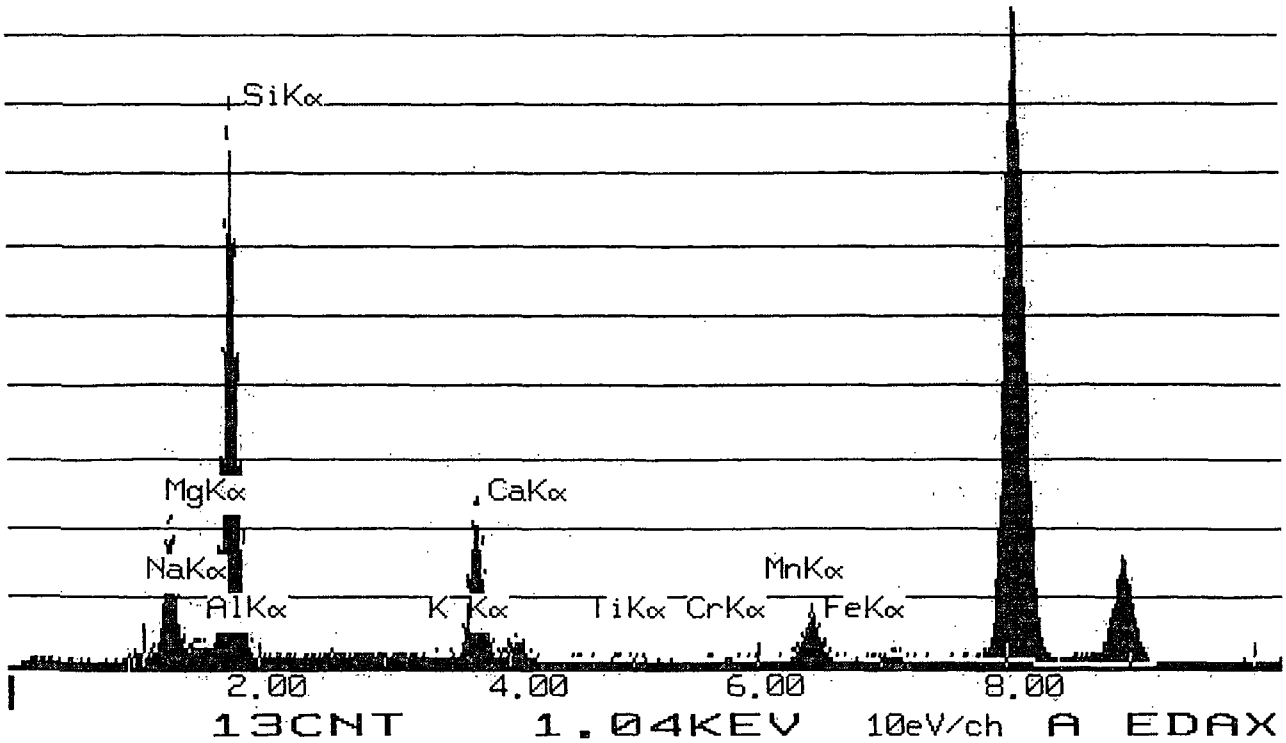


INTE-% :
LABEL = 041188-11 8/1 15194
14-OCT-72 05:13:28
99.152 LIVE SECONDS

ELEM	CPS	WT % ELEM	WT % OXIDE
MGK	28.108	11.718	19.429
ALK	2.652	0.664	1.255
SIK	122.045	28.615	61.217
K K	0.514	0.200	0.241
CAK	39.253	8.775	12.277
FEK	13.141	3.902	5.580
TOTAL			100.000

USED PEIF: USER

13-OCT-04 05:14:05 SUPER QUANT
RATE= 5375CPS TIME= 99LSEC
FS= 1424/ 1424 PRST= 200LSEC
A =041188-11 8/1 15194



	Wt Percent		Ions	T site	Leftover	C site	Leftover	B site	Leftover	A site	Leftover
SiO2	61.217	Si+4	8.0000	8.0000							
Al2O3	1.255	Al+3	0.2183	0.0000	**0.2183**						
TiO2	0	Ti+4	0.0000	0.0000	**0.0000**						
Cr2O3	0	Cr+3	0.0000			0.0000	0.0000				
Fe(total)O	5.58	Fe+3	0.0185			0.0185	0.0000				
MgO	19.429	Mg+2	3.9330			3.9330	**0.0000**				
MnO	0	Fe+2	0.6476			0.6476	**0.0000**				
CaO	12.277	Mn+2	0.0000			0.0000	**0.0000**				
Na2O	0	Ca+2	1.7994					1.7994	0.0000		
K2O	0.241	Na+	0.0000					0.0000	**0.0000**	0.0000	0.0000
		K+	0.0630							0.0630	0.0000
Total	**99.999**		**Excess**	T site	**0.2183**	C site	**0.0000**	B site	**0**	A site	**0**
			Total	**8**		**4.8175**		**1.7994**		**0.0630**	**0.0000**
			%Fill	**100**		**96.3493**		**89.9694**			

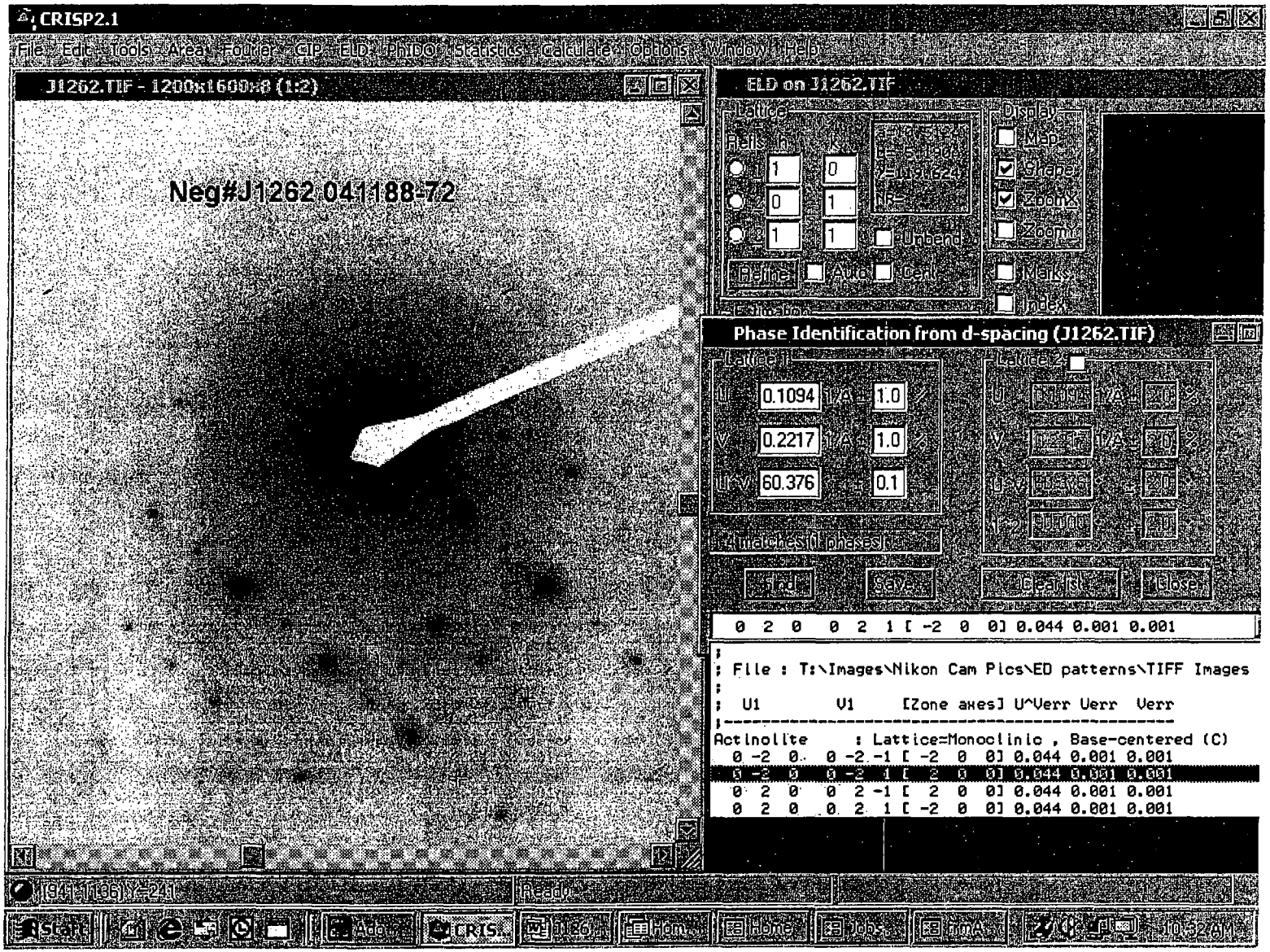
Prefix none
Name actinolite
Modifier none
Group Calcic Amphibole

Sample # **041188-11-7-1**

Values		Satisfied Conditions
(Ca,Na)@B	1.80	(Ca,Na)@B >= 1 and Na@B < 0.5
Na@B	0.00	Ca@B >= 1.5 and (Na,K)@A < 0.5
Ca@B	1.80	(Mg/(Mg+Fe2))>= 0.5
(Na,K)@A	0.06	Si > 7.5
Mg/(Mg+Fe2)	0.86	(Mg/(Mg+Fe2))< 0.9
Si	8.00	

Mineral Analysis Program (Version 5.0)

ACTINOLITE
041188-72 Neg#J1262
[1 0 0]



AQMTF: QUANTIFY
Standardless Analysis

Chi-sqd = 7.88

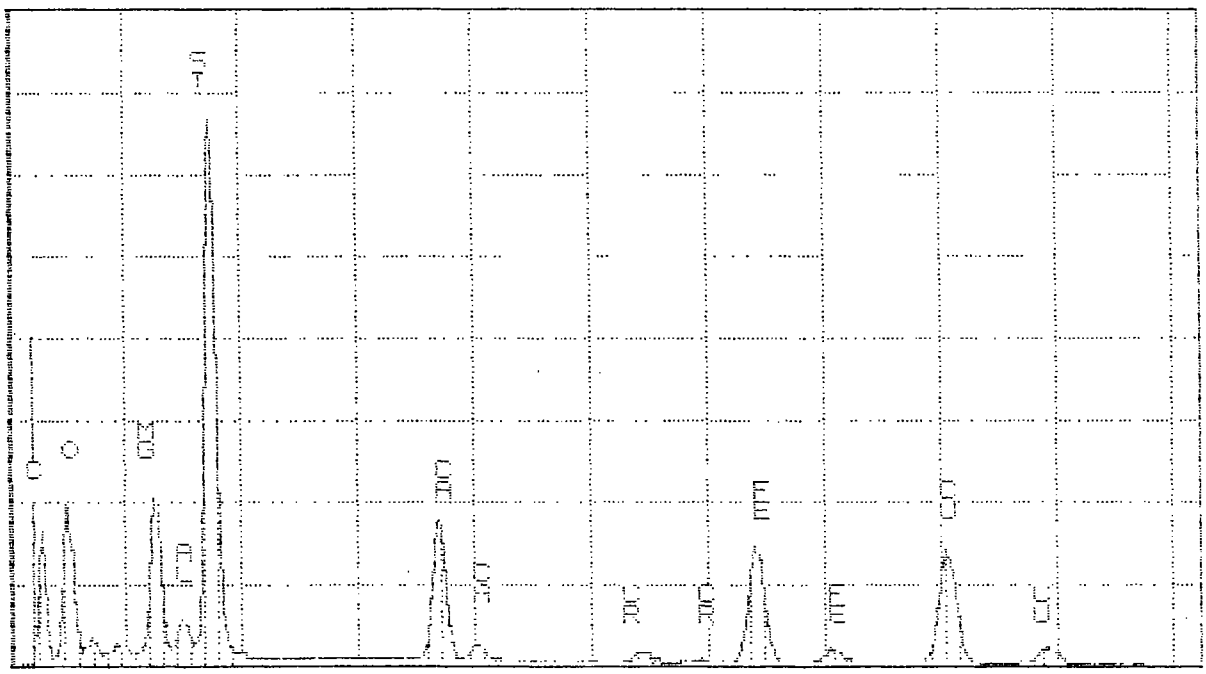
Element	Net Counts
Si-K	39178 +/- 394
Mg-K	10933 +/- 354
Al-K	3404 +/- 434
Ca-K	13404 +/- 273
Fe-K	13089 +/- 217
Na-K	568 +/- 186
K -K	276 +/- 116

REF.S ELM:SIK ELS:MAK ELM:ALK ELS:CAK ELS:FEK ELM:NAK
ELS:K K

041188-72 SH939

EL-LINE	PEAK	K-FACTOR	CEL/CREF	ATOM%	EL WT%	WT%	FORMULA
SI-K	39178	1.000	1.000	20.44	25.78	55.23	SIO2
MG-K	10933	1.000	0.274	6.66	7.19	11.99	MGO
AL-K	3404	0.750	0.065	1.38	1.69	3.17	AL2O3
CA-K	13404	0.949	0.375	4.65	8.38	11.73	CAO
FE-K	13089	1.399	0.468	4.78	12.06	17.22	FE2O3
NA-K	568	0.549	0.008	0.20	0.21	0.42	NA2O
K-K	276	1.059	0.007	0.11	0.19	0.23	K2O
O			1.727	61.78	44.59		

TN-5500 University of Washington / JRO MON 03-JAN-95 19:18
Cursor: 0.000keV = 0 ROI (M) 0.000: 0.000



0.000 B- 5 VFS = 4046 10 240
70 041188-72 SH939

	Wt Percent		Ions	T site	Leftover	C site	Leftover	B site	Leftover	A site	Leftover
SiO2	55.23	Si+4	7.8627	7.8627							
Al2O3	3.17	Al+3	0.5318	0.1373	**0.3945**						
TiO2	0	Ti+4	0.0000	0.0000	**0.0000**						
Cr2O3	0	Cr+3	0.0000			0.0000	0.0000				
Fe(total)O	17.22	Fe+3	0.0369			0.0369	0.0000				
MgO	11.99	Mg+2	2.5447			2.5447	**0.0000**				
MnO	0	Fe+2	2.0089			2.0089	**0.0000**				
CaO	11.73	Mn+2	0.0000			0.0000	**0.0000**				
Na2O	0.42	Ca+2	1.7890					1.7890	0.0000		
K2O	0.23	Na+	0.1159					0.1159	**0.0000**	0.0000	0.0000
		K+	0.0418							0.0418	0.0000
Total	**99.99**		**Excess**	T site	**0.3945**	C site	**0.0000**	B site	**0**	A site	**0**
			Total	**8**		**4.9851**		**1.9049**		**0.0418**	**0.0000**
			%Fill	**100**		**99.7013**		**95.2472**			

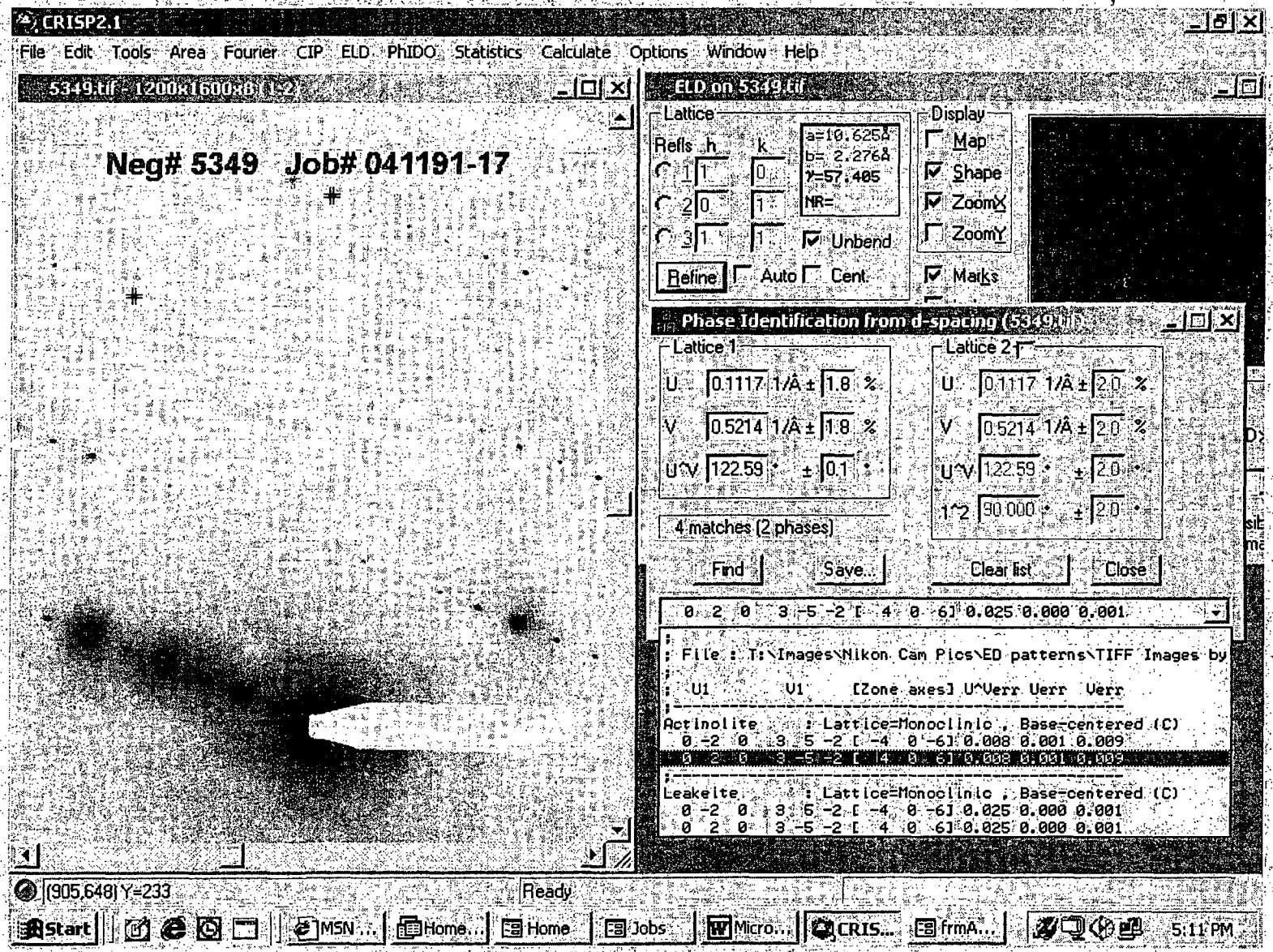
Prefix none
Name actinolite
Modifier none
Group Calcic Amphibole

Sample # 041188-72-939

Values		Satisfied Conditions
(Ca,Na)@B	1.90	(Ca,Na)@B >= 1 and Na@B < 0.5
Na@B	0.12	Ca@B >= 1.5 and (Na,K)@A < 0.5
Ca@B	1.79	(Mg/(Mg+Fe2))>= 0.5
(Na,K)@A	0.04	Si > 7.5
Mg/(Mg+Fe2)	0.56	(Mg/(Mg+Fe2))< 0.9
Si	7.86	

Mineral Analysis Program (Version 5.0)

ACTINOLITE
[2 0 3]

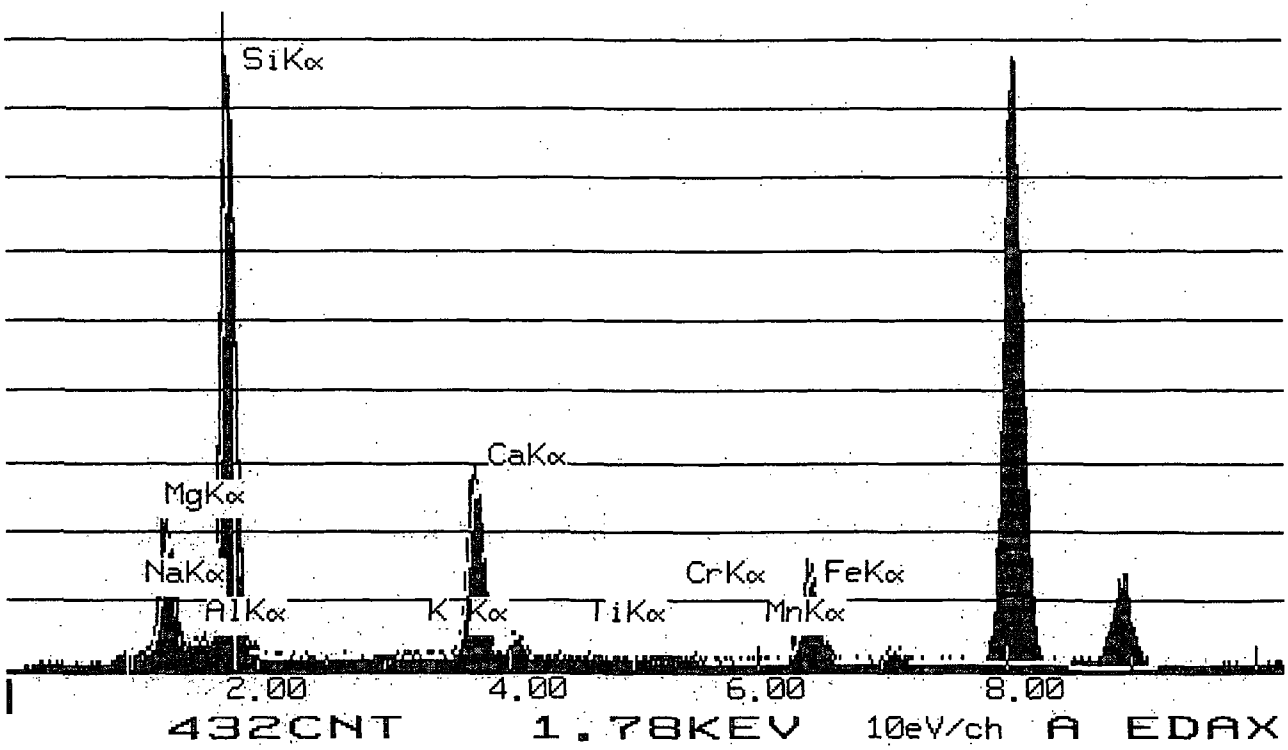


INTE-% :
LABEL = 041191-17 SP 15252
04-JAN-73 16:45:27
78.975 LIVE SECONDS

ELEM	CPS	WT % ELEM	WT % OXIDE
MGK	21.906	9.722	16.121
ALK	2.292	0.611	1.155
SIK	110.099	27.483	58.795
CAK	41.216	9.809	13.725
FEK	22.577	7.138	10.205
TOTAL			100.000

USED PEIF: USER

03-JAN-05 16:45:47 SUPER QUANT
RATE= 5872CPS TIME= 79LSEC
FS= 1019/ 1019 PRST= 200LSEC
A =041191-17 SP 15252



	Wt Percent		ions	T site	Leftover	C site	Leftover	B site	Leftover	A site	Leftover
SiO2	58.795	Si+4	8.0000	8.0000							
Al2O3	1.155	Al+3	0.1994	0.0000	0.1994						
TiO2	0	Ti+4	0.0000	0.0000	0.0000						
Cr2O3	0	Cr+3	0.0000			0.0000	0.0000				
Fe(total)O	10.205	Fe+3	0.0182			0.0182	0.0000				
MgO	16.121	Mg+2	3.3414			3.3414	0.0000				
MnO	0	Fe+2	1.1808			1.1808	0.0000				
CaO	13.725	Mn+2	0.0000			0.0000	0.0000				
Na2O	0	Ca+2	2.0475					2.0000	0.0475		
K2O	0	Na+	0.0000					0.0000	0.0000	0.0000	0.0000
		K+	0.0000							0.0000	0.0000
Total	100.001		Excess	T site	0.1994	C site	0.0000	B site	0.0475143	A site	0
			Total	8		4.7398		2.0000		0.0000	0.0000
			%Fill	100		94.796		100			

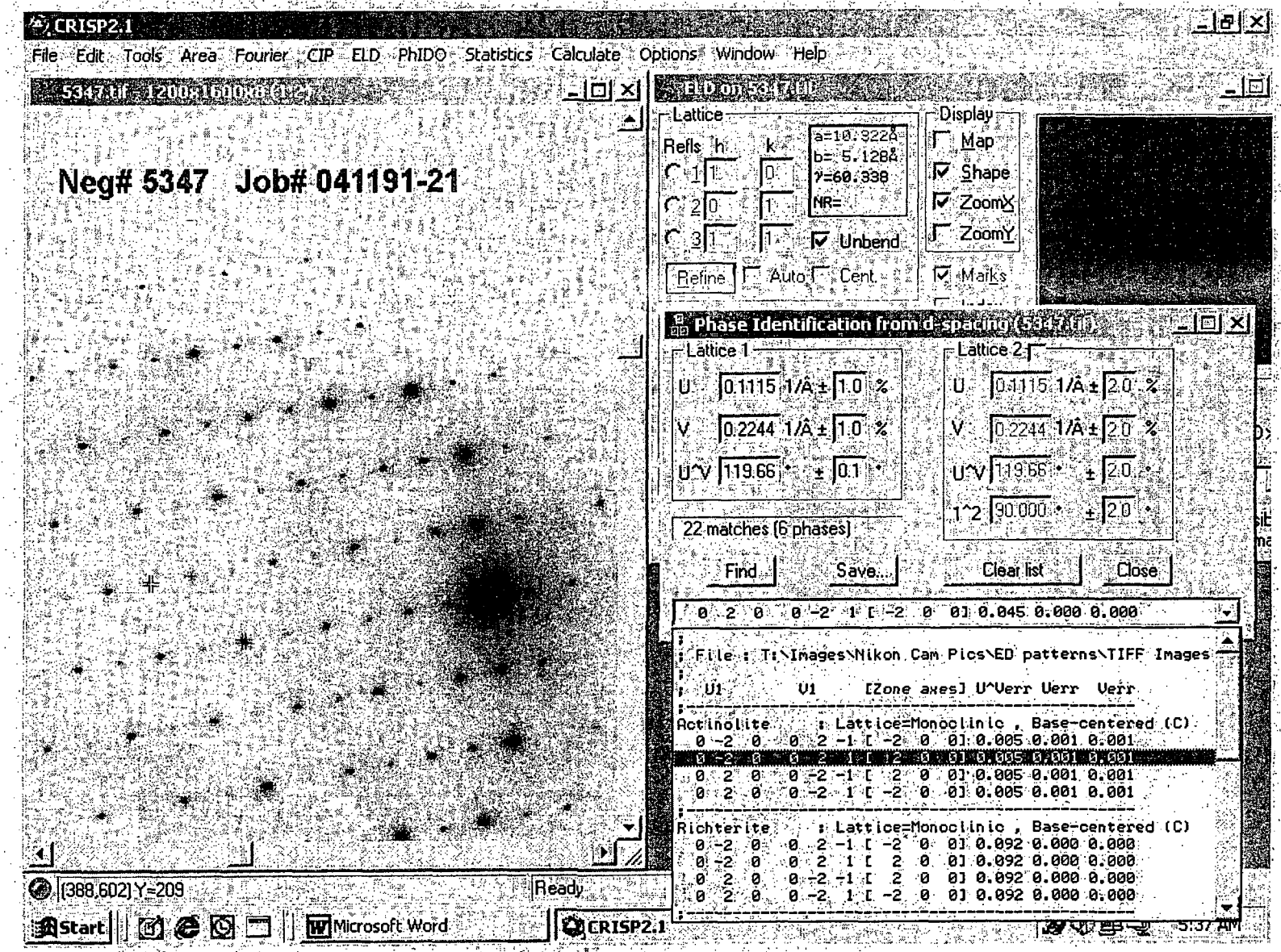
Prefix	none
Name	actinolite
Modifier	none
Group	Calcic Amphibole

Sample # 041191-17-15252

Values		Satisfied Conditions
(Ca,Na)@B	2.00	(Ca,Na)@B >= 1 and Na@B < 0.5
Na@B	0.00	Ca@B >= 1.5 and (Na,K)@A < 0.5
Ca@B	2.00	(Mg/(Mg+Fe2))>= 0.5
(Na,K)@A	0.00	Si > 7.5
Mg/(Mg+Fe2)	0.74	(Mg/(Mg+Fe2))< 0.9
Si	8.00	

Mineral Analysis Program (Version 5.0)

ACTINOLITE
[100]



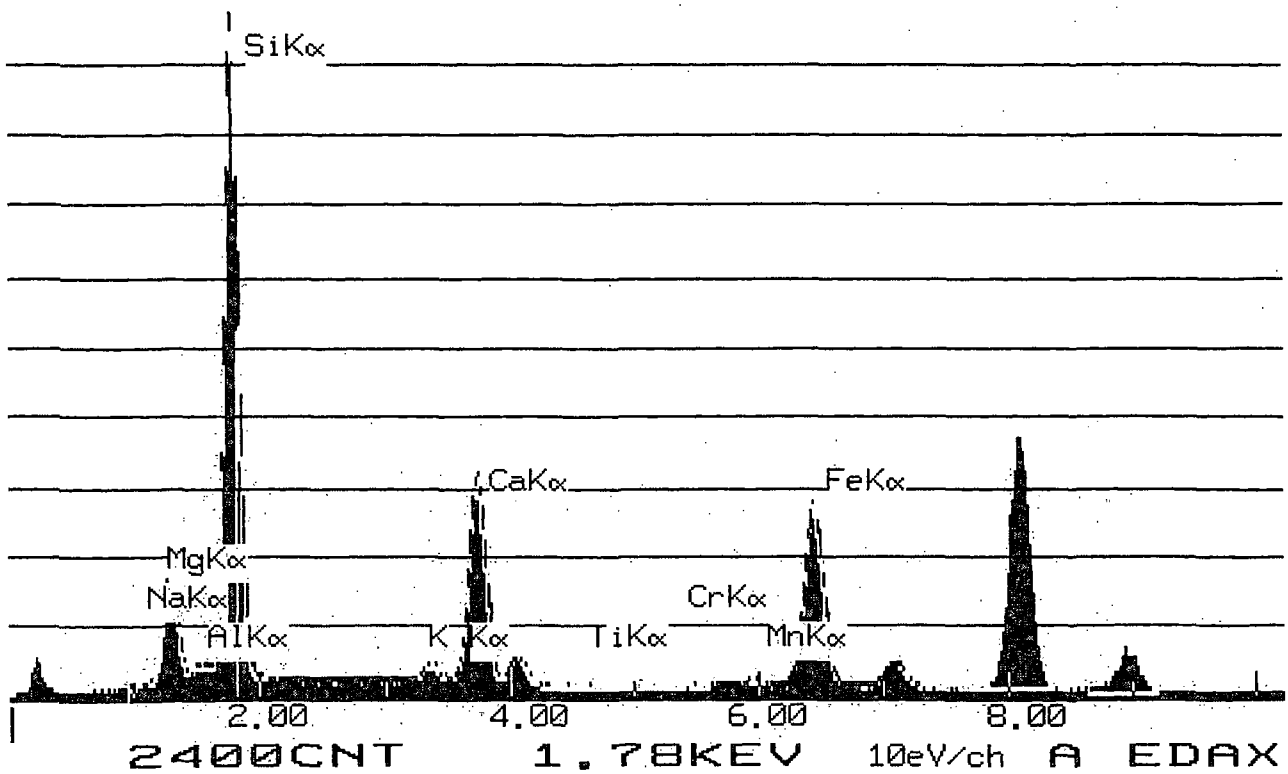
INTE-% :
LABEL = 041191-21 15250
04-JAN-73 01:56:28
87.870 LIVE SECONDS

ELEM	CPS	WT % ELEM	WT % OXIDE
MGK	59.349	8.248	13.676
ALK	7.500	0.626	1.183
SIK	324.558	25.369	54.273
K K	8.558	1.112	1.339
CAK	120.530	8.982	12.568
MNK	1.332	0.143	0.185
FEK	118.516	11.733	16.775

TOTAL			100.000

USED PEIF: USER

03-JAN-05 01:56:48 SUPER QUANT
RATE= 1957CPS TIME= 88LSEC
FS= 2895/ 2895 PRST= 200LSEC
A =041191-21 15250



	Wt Percent		ions	T site	Leftover	C site	Leftover	B site	Leftover	A site	Leftover
SiO2	54.273	Si+4	7.8176	7.8176							
Al2O3	1.183	Al+3	0.2008	0.1824	0.0184						
TiO2	0	Ti+4	0.0000	0.0000	0.0000						
Cr2O3	0	Cr+3	0.0000			0.0000	0.0000				
Fe(total)O	16.775	Fe+3	0.0545			0.0545	0.0000				
MgO	13.676	Mg+2	2.9368			2.9368	0.0000				
MnO	0.185	Fe+2	1.9599			1.9599	0.0000				
CaO	12.568	Mn+2	0.0226			0.0226	0.0000				
Na2O	0	Ca+2	1.9395					1.9395	0.0000		
K2O	1.339	Na+	0.0000					0.0000	0.0000	0.0000	0.0000
		K+	0.2460							0.2460	0.0000
Total	99.999		Excess	T site	0.0184	C site	0.0000	B site	0	A site	0
			Total	8		4.9922		1.9395		0.2460	0.0000
			%Fill	100		99.8446		96.9726			

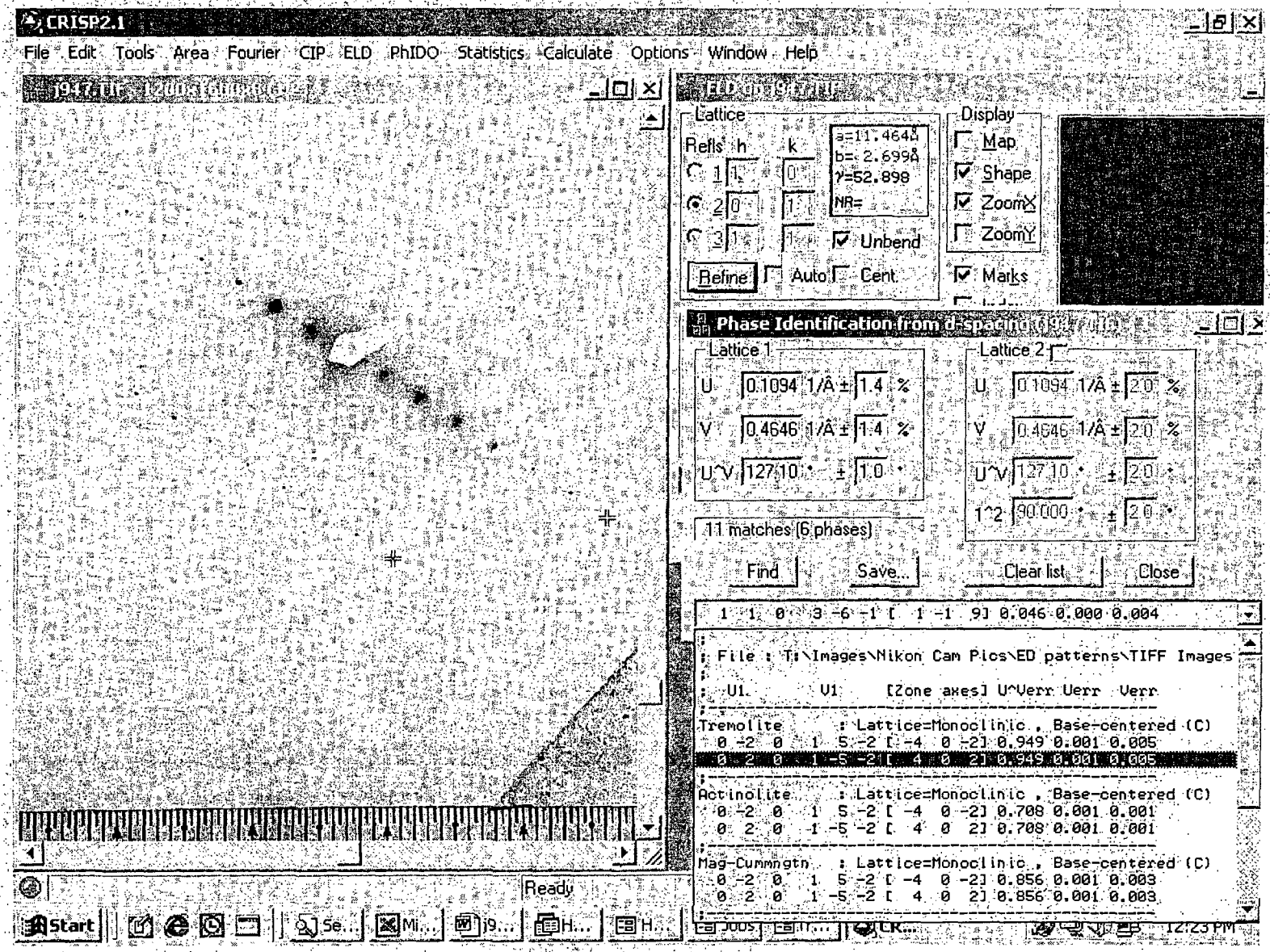
Prefix none
Name actinolite
Modifier none
Group Calcic Amphibole

Sample # 041191-21-15250

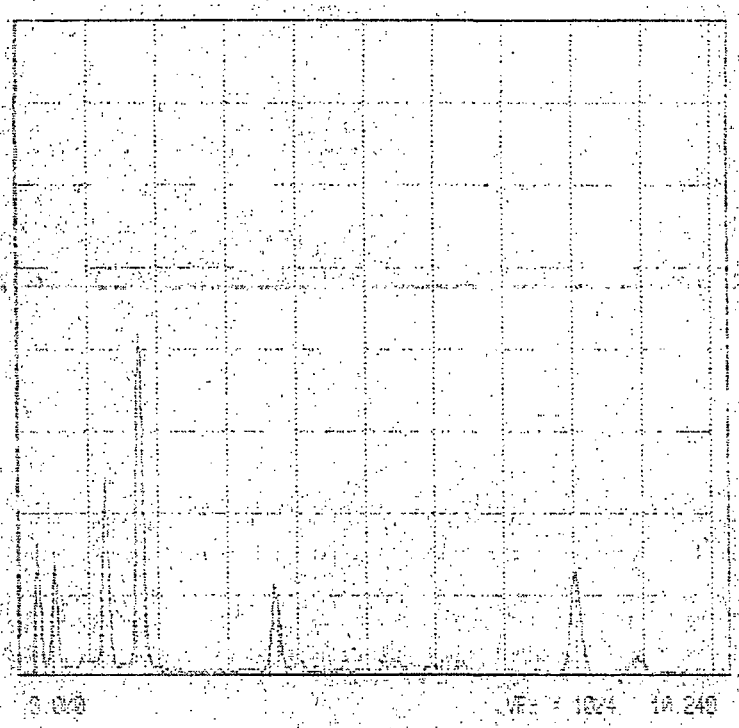
Values		Satisfied Conditions
(Ca,Na)@B	1.94	(Ca,Na)@B >= 1 and Na@B < 0.5
Na@B	0.00	Ca@B >= 1.5 and (Na,K)@A < 0.5
Ca@B	1.94	(Mg/(Mg+Fe2))>= 0.5
(Na,K)@A	0.25	Si > 7.5
Mg/(Mg+Fe2)	0.60	(Mg/(Mg+Fe2))< 0.9
Si	7.82	

Mineral Analysis Program (Version 5.0)

Neg# J947 Job# 041191-25
TREMOLITE
[2 0 1]



TN-5500 University of Washington / JPO Thu 28-OCT-04 09:25
Current: 0.000keV = 0



0 041191-25 SP 690

SQMTF: QUANTIFY
Standardless Analysis

Refit _ALK' _ALK' _K K' _K K' _NAK' _NAK'
Nefit _ALK _K K _FEK' _NAK
Chi sqd = 1.75

Element	Net Counts	
Si-K	6143 +/-	184
Mg-K	2946 +/-	79
Al-K	0 +/-	0
K-K	0 +/-	0
Ca-K	2812 +/-	89
Fe-K	192 +/-	29
Na-K	0 +/-	0

REF.S EDS:SIK EDS:MGK EDS:ALK EDS:KK EDS:CAK EDS:FEK
EDS:NAK

041191-25 SP 690

EL-LINE	PEAK	% (RAC/DP)	CEL/CPEL	ATOM%	FE WTC	WT%	FORMULA
SI-K	6143	1.000	1.000	21.61	25.95	47.07	SIO2
MG-K	2946	1.000	0.482	17.28	14.11	23.71	MGO
AL-K	0	0.758	0.000	0.00	0.00	0.00	AL2O3
K-K	0	1.000	0.000	0.00	0.00	0.00	K2O
CA-K	2812	0.949	0.311	4.29	4.00	12.06	CAO
FE-K	192	1.000	0.345	0.48	1.29	1.85	FE2O3
NA-K	0	0.549	0.000	0.00	0.00	0.00	NA2O
O			1.611	60.32	46.55		

1.00
*
0.0

	Wt Percent		ions	T site	Leftover	C site	Leftover	B site	Leftover	A site	Leftover
SiO2	62.03	Si+4	8.0000	8.0000							
Al2O3	0	Al+3	0.0000	0.0000	0.0000						
TiO2	0	Ti+4	0.0000	0.0000	0.0000						
Cr2O3	0	Cr+3	0.0000			0.0000	0.0000				
Fe(total)O	1.85	Fe+3	0.0344			0.0344	0.0000				
MgO	23.51	Mg+2	4.6983			4.6983	0.0000				
MnO	0	Fe+2	0.2255			0.2255	0.0000				
CaO	12.6	Mn+2	0.0000			0.0000	0.0000				
Na2O	0	Ca+2	1.8331					1.8331	0.0000		
K2O	0	Na+	0.0000					0.0000	0.0000	0.0000	0.0000
		K+	0.0000							0.0000	0.0000
Total	99.99		Excess	T site	0.0000	C site	0.0000	B site	0	A site	0
			Total	8		4.9582		1.8331		0.0000	0.0000
			%Fill	100		99.1637		91.653			

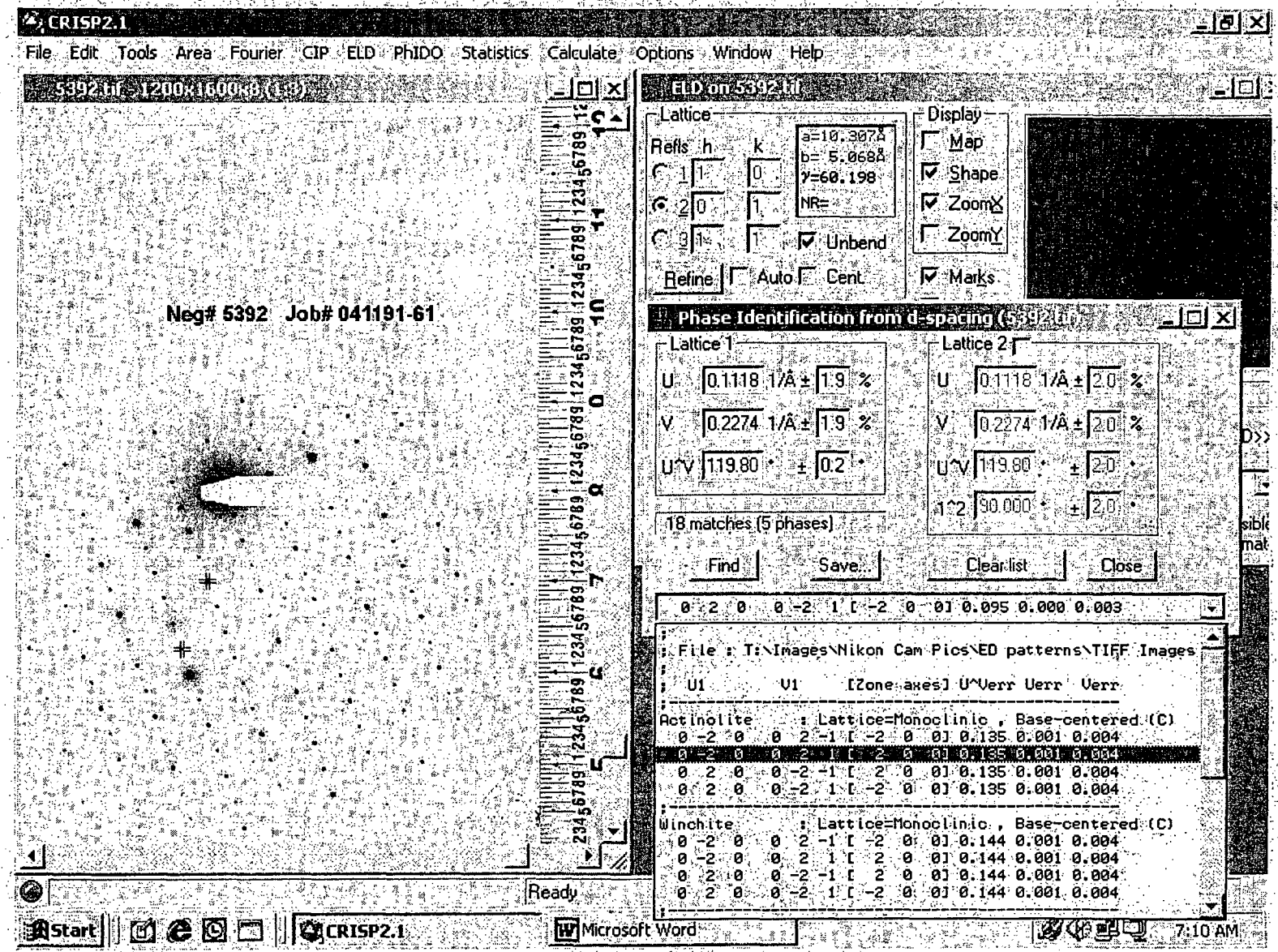
Prefix none
Name tremolite
Modifier none
Group Calcic Amphibole

Sample # 041191-25-690

Values		Satisfied Conditions
(Ca,Na)@B	1.83	(Ca,Na)@B >= 1 and Na@B < 0.5
Na@B	0.00	Ca@B >= 1.5 and (Na,K)@A < 0.5
Ca@B	1.83	(Mg/(Mg+Fe2))>= 0.5
(Na,K)@A	0.00	Si > 7.5
Mg/(Mg+Fe2)	0.95	(Mg/(Mg+Fe2))>= 0.9
Si	8.00	

Mineral Analysis Program (Version 5.0)

ACTINOLITE
[100]



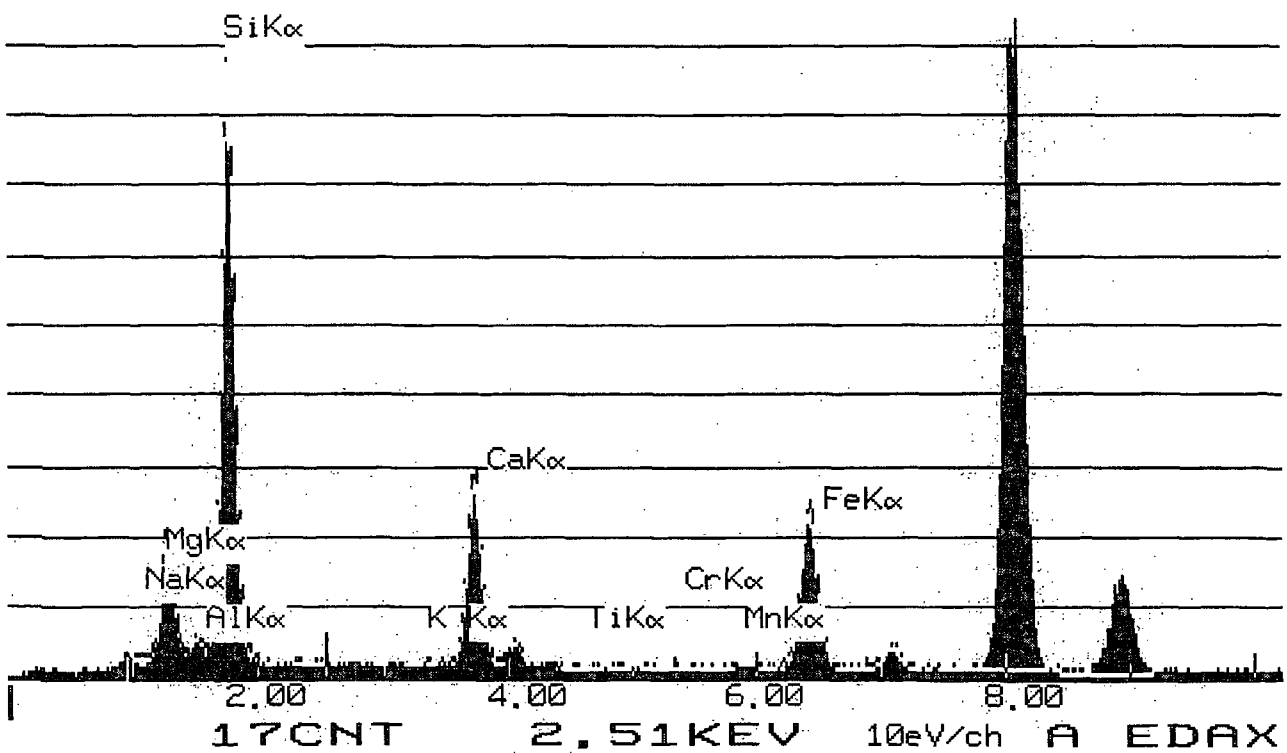
INTE-% :
LABEL = 041191-61 15287
10-JAN-73 21:42:41
67.627 LIVE SECONDS

ELEM	CPS	WT % ELEM	WT % OXIDE
MGK	26.720	9.066	15.032
ALK	3.416	0.696	1.315
SIK	132.890	25.358	54.250
K K	0.695	0.220	0.265
CAK	48.974	8.910	12.467
MNK	1.153	0.303	0.391
FEK	47.111	11.386	16.279

TOTAL			100.000

USED PEIF: USER

09-JAN-05 21:43:11 SUPER QUANT
RATE= 28CPS TIME= 67LSEC
FS= 1011/ 1011 PRST= 200LSEC
A =041191-61 15287



	Wt Percent		ions	T site	Leftover	C site	Leftover	B site	Leftover	A site	Leftover
SiO2	54.25	Si+4	7.6959	7.6959							
Al2O3	1.315	Al+3	0.2198	0.2198	0.0000						
TiO2	0	Ti+4	0.0000	0.0000	0.0000						
Cr2O3	0	Cr+3	0.0000			0.0000	0.0000				
Fe(total)O	16.279	Fe+3	0.5213			0.5213	0.0000				
MgO	15.032	Mg+2	3.1791			3.1791	0.0000				
MnO	0.391	Fe+2	1.3517			1.2996	0.0521				
CaO	12.467	Mn+2	0.0470			0.0000	0.0470				
Na2O	0	Ca+2	1.8947					1.8947	0.0000		
K2O	0.265	Na+	0.0000					0.0000	0.0000	0.0000	0.0000
		K+	0.0480							0.0480	0.0000
Total	99.999		Excess	T site	0.0000	C site	0.0991	B site	0	A site	0
			Total	7.9157		5.0000		1.8947		0.0480	0.0000
			%Fill	98.947		100		94.7357			

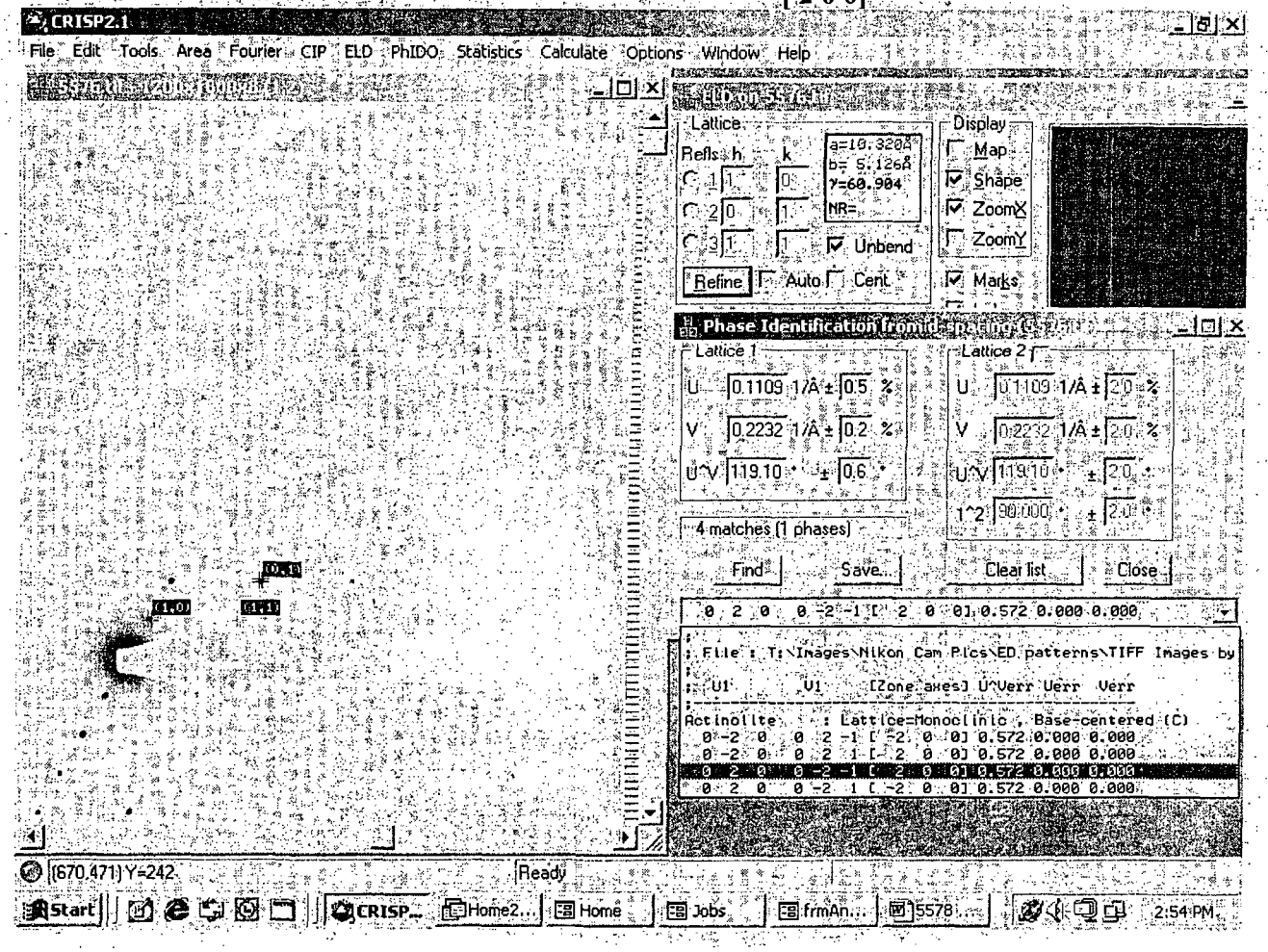
Prefix	none
Name	actinolite
Modifier	none
Group	Calcic Amphibole

Sample # 041191-61-15287

Values		Satisfied Conditions
(Ca,Na)@B	1.89	(Ca,Na)@B >= 1 and Na@B < 0.5
Na@B	0.00	Ca@B >= 1.5 and (Na,K)@A < 0.5
Ca@B	1.89	(Mg/(Mg+Fe2))>= 0.5
(Na,K)@A	0.05	Si > 7.5
Mg/(Mg+Fe2)	0.70	(Mg/(Mg+Fe2))< 0.9
Si	7.70	

Mineral Analysis Program (Version 5.0)

NEG#5576; SAMPLE# 041210-01
ACTINOLITE
[2 0 0]



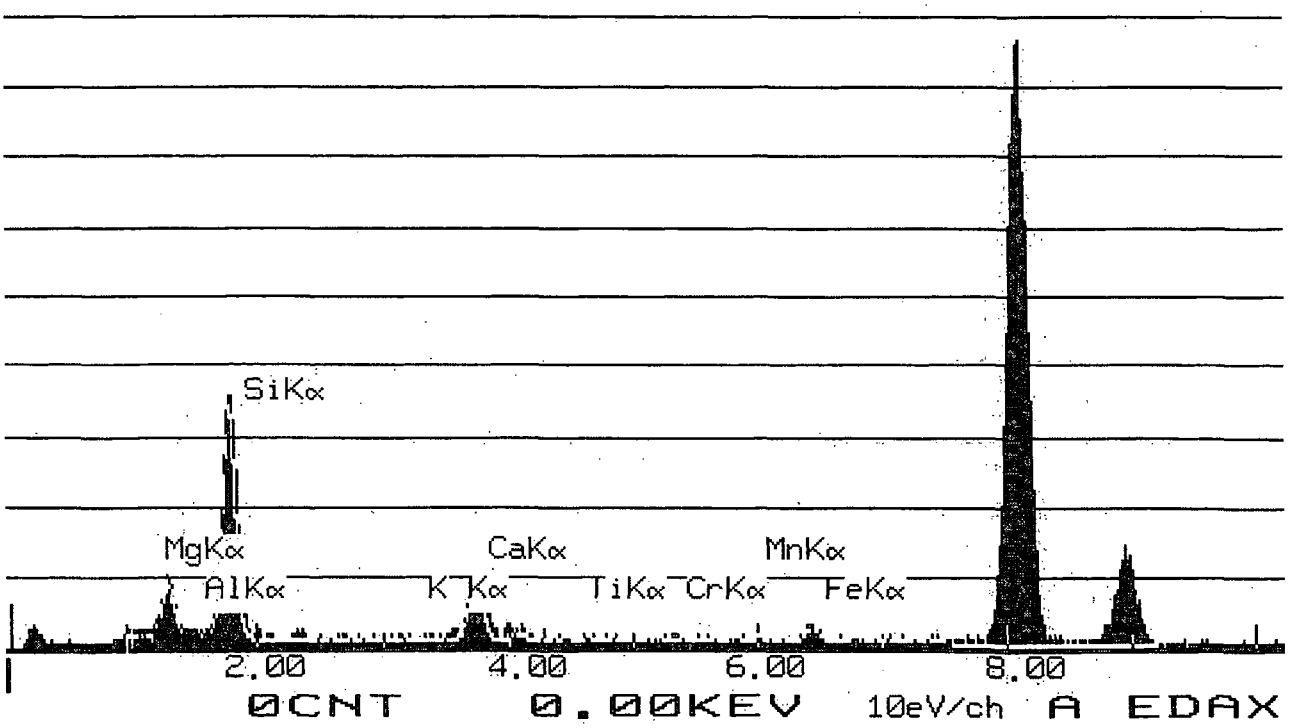
INTE-% :
LABEL = 041210-01 15436
27-NOV-72 08:41:17
130.580 LIVE SECONDS

ELEM	CPS	WT % ELEM	WT % OXIDE
MGK	4.235	10.724	17.781
SIK	20.815	29.644	63.420
CAK	6.517	8.849	12.382
TIK	0.100	0.191	0.318
CRK	0.176	0.333	0.486
MNK	0.322	0.630	0.814
FEK	1.861	3.357	4.799

TOTAL			100.000

USED PEIF: USER

26-NOV-04 08:41:48 SUPER QUANT
RATE= 56CPS TIME= 130LSEC
FS= 796/ 796 PRST= 200LSEC
A =041210-01 15436



	Wt Percent		ions	T site	Leftover	C site	Leftover	B site	Leftover	A site	Leftover
SiO2	63.42	Si+4	8.0000	8.0000							
Al2O3	0	Al+3	0.0000	0.0000	0.0000						
TiO2	0.318	Ti+4	0.0815	0.0000	0.0815						
Cr2O3	0.486	Cr+3	0.0773			0.0773	0.0000				
Fe(total)O	4.799	Fe+3	0.0296			0.0296	0.0000				
MgO	17.781	Mg+2	3.6351			3.6351	0.0000				
MnO	0.814	Fe+2	0.5852			0.5852	0.0000				
CaO	12.382	Mn+2	0.1478			0.1478	0.0000				
Na2O	0	Ca+2	1.8405					1.8405	0.0000		
K2O	0	Na+	0.0000					0.0000	0.0000	0.0000	0.0000
		K+	0.0000							0.0000	0.0000
Total	100		Excess	T site	0.0815	C site	0.0000	B site	0	A site	0
			Total	8		4.5566		1.8405		0.0000	0.0000
			%Fill	100		91.133		92.0266			

Prefix	none
Name	actinolite
Modifier	none
Group	Calcic Amphibole

Sample # 041210-01-15436

Values		Satisfied Conditions
(Ca,Na)@B	1.84	(Ca,Na)@B >= 1 and Na@B < 0.5
Na@B	0.00	Ca@B >= 1.5 and (Na,K)@A < 0.5
Ca@B	1.84	(Mg/(Mg+Fe2))>= 0.5
(Na,K)@A	0.00	Si > 7.5
Mg/(Mg+Fe2)	0.86	(Mg/(Mg+Fe2))< 0.9
Si	8.00	

Mineral Analysis Program (Version 5.0)