

AM-92-496

An empirical phase diagram for the clinozoisite-zoisite transformation in the  
system  $\text{Ca}_2\text{Al}_3\text{Si}_3\text{O}_{12}(\text{OH})$ -  $\text{Ca}_2\text{Al}_2\text{Fe}^{3+}\text{Si}_3\text{O}_{12}(\text{OH})$

Gerhard Franz, Jane Selverstone

For deposit: Table 1

American Mineralogist, 77, 5-6, 631-642.

Zoisite-clinozoisite analyses

	A	B	C	D	E	F	G	H	I	J	K	L
1	sample #	N 13-3	N 13-3	N 13-3	N 13-3	N 13-3	N 13-3	N 13-3	N 13-3	N 13-3	N 13-3	N13-3
2	analysis #	39	40	42	41	45	46	48	47	49	50	14
3	zoi/clz	clz	zoi	clz	zoi	clz	zoi	clz	zoi	clz	zoi	clz
4	coex anal:	40	39	41	42	46	45	47	48	50	49	15
5												
6	SiO2	39.08	39.73	39.28	39.56	39.09	39.66	41.26	39.75	38.59	39.12	39.45
7	TiO2	0.10	0.02	0.04	0.00	0.07	0.10	0.02	0.00	0.09	0.09	0.10
8	Al2O3	30.88	32.83	30.81	32.43	29.88	32.23	29.37	32.39	30.12	31.88	30.55
9	Fe2O3	4.00	1.24	3.44	1.64	4.49	2.04	4.19	1.58	4.61	2.17	4.13
10	MnO	0.04	0.00	0.22	0.04	0.14	0.09	0.12	0.04	0.22	0.03	0.00
11	MgO	0.01	0.04	0.01	0.20	0.01	0.00	0.02	0.00	0.00	0.02	0.01
12	CaO	24.17	25.06	24.71	24.70	24.49	24.47	22.57	24.65	24.61	24.90	24.59
13	Cr2O3											
14												
15	total	98.28	98.92	98.51	98.57	98.17	98.59	97.55	98.41	98.24	98.21	98.83
16												
17	Si	2.99	2.995	3	2.995	3.006	3.002	3.134	3.01	2.971	2.983	3.005
18	Ti	0.006	0.001	0.002	0	0.004	0.005	0.001	0	0.005	0.005	0.006
19	Al	2.785	2.916	2.774	2.894	2.708	2.876	2.629	2.891	2.734	2.865	2.743
20	Fe	0.23	0.07	0.198	0.093	0.26	0.116	0.24	0.09	0.267	0.124	0.237
21	Mn	0.002	0	0.014	0.002	0.009	0.006	0.008	0.003	0.014	0.002	0
22	Mg	0.001	0.004	0.001	0.023	0.001	0	0.002	0	0	0.003	0.001
23	Ca	1.982	2.024	2.022	2.004	2.018	1.984	1.837	2.001	2.03	2.034	2.007
24	Cr											
25												
26	total	7.996	8.01	8.011	8.011	8.006	7.989	7.851	7.995	8.021	8.016	7.999

*Depository item*

Zoisite-clinozoisite analyses

	M	N	O	P	Q	R	S	T	U	V	W	X
1	N 13-3	N 13-3	N 13-3	N 13-3	N 13-3	RM 71	RM 71	RM 71	RM 71	RM 71	RM 71	RM 71
2	15	18	17	19	20	23	24	25	26	36	37	28
3	zoi	clz	zoi	clz	zoi	clz	zoi	clz	zoi	clz	zoi	clz
4	14	17	18	20	19	24	23	26	25	37	36	29
5												
6	39.44	39.19	39.65	39.09	39.27	38.87	39.96	39.28	40.03	39.32	37.78	39.16
7	0.04	0.11	0.03	0.10	0.00	0.07	0.03	0.18	0.08	0.20	0.07	0.28
8	32.82	30.47	32.55	30.14	32.37	26.89	32.55	29.38	23.23	29.36	31.95	29.09
9	1.25	3.99	1.49	4.79	1.66	9.37	1.79	5.34	2.42	5.10	1.55	5.31
10	0.00	0.12	0.03	0.17	0.08	0.10	0.03	0.00	0.00	0.03	0.00	0.08
11	0.00	0.02	0.00	0.02	0.01	0.00	0.00	0.04	0.06	0.05	0.00	0.06
12	24.59	24.49	24.71	24.50	24.96	23.83	24.73	24.32	24.49	24.23	24.60	24.05
13												
14												
15	98.14	98.39	98.46	98.81	98.35	99.13	99.09	98.54	90.31	98.29	95.95	98.03
16												
17	2.992	3	3.003	2.99	2.985	3.007	3.008	3.014	3.01	3.021	2.947	3.02
18	0.002	0.006	0.002	0.005	0	0.004	0.002	0.011	0.004	0.012	0.004	0.016
19	2.935	2.749	2.905	2.717	2.899	2.452	2.888	2.657	2.857	2.659	2.937	2.644
20	0.071	0.23	0.085	0.276	0.095	0.546	0.101	0.308	0.137	0.295	0.091	0.308
21	0	0.007	0.002	0.011	0.005	0.007	0.002	0	0	0.002	0	0.005
22	0	0.002	0	0.002	0.001	0	0	0.004	0.007	0.005	0	0.007
23	1.999	2.008	2.005	2.007	2.032	1.975	1.994	1.999	1.973	1.995	2.056	1.987
24												
25												
26	7.999	8.002	8.002	8.008	8.017	7.991	7.995	7.993	7.988	7.989	8.035	7.987

Zoisite-clinozoisite analyses

	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	RM 71	RM 71	RM 71	RM 71	RM 71	RM 71	RM 71	RM 71	RM 71	RM 71	RM 71	RM 71
2	29	30	31	32	33	34	35	1-2	1-1	1-3	1-4	1-5
3	zoi	clz	zoi	clz	zoi	clz	zoi	clz	zoi	clz	zoi	clz
4	28	31	30	33	32	35	34	1-1	1-2	1-4	1-3	1-6
5												
6	39.95	39.17	40.08	39.26	39.65	39.07	39.84	38.58	39.83	38.58	39.44	39.53
7	0.06	0.16	0.04	0.27	0.13	0.09	0.12	0.21	0.06	0.21	0.05	0.19
8	32.20	29.45	31.97	29.06	31.65	28.16	31.88	29.26	32.07	29.26	32.16	29.76
9	1.51	5.52	1.78	5.54	2.03	7.33	1.86	5.35	1.69	5.35	1.78	5.53
10	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.04	0.00	0.04	0.03	0.04
11	0.00	0.09	0.00	0.06	0.00	0.00	0.04	0.08	0.01	0.08	0.01	0.12
12	24.76	23.85	24.62	23.67	24.56	23.50	24.78	23.70	24.58	23.70	24.53	23.77
13								0.07	0.08	0.07	0.03	0.04
14												
15	98.48	98.28	98.51	97.86	98.02	98.15	98.52	97.29	98.32	97.29	98.03	98.98
16												
17	3.024	3.011	3.033	3.029	3.021	3.024	3.019	2.997	3.021	3.038	3.003	3.015
18	0.003	0.009	0.003	0.015	0.007	0.005	0.007	0.012	0.004	0.005	0.003	0.012
19	2.873	2.668	2.852	2.643	2.842	2.568	2.847	2.679	2.867	2.551	2.886	2.675
20	0.086	0.319	0.101	0.321	0.116	0.427	0.106	0.313	0.096	0.405	0.102	0.317
21	0	0.003	0.002	0	0	0	0	0.003	0	0.002	0.002	0.003
22	0	0.01	0	0.007	0	0	0.005	0.01	0.001	0.002	0.002	0.014
23	2.008	1.965	1.997	1.957	2.005	1.949	2.012	1.974	1.997	1.971	2.001	1.942
24								0.005	0.005	0.004	0.002	0.002
25												
26	7.994	7.985	7.988	7.972	7.991	7.973	7.996	7.993	7.991	7.978	8.001	7.98

Zoisite-clinozoisite analyses

	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV
1	RM 71	RM 71	RM 71	RM 71	RM 71	RM 71	RM	RM 71	NR 125	NR 125	NR 125	NR 125
2	1-6	1-7	1-8	2-1	2-2	2-3	2-4	2-5	1-5	1-1	1-3	1-4
3	zoi	clz	zoi	clz	clz	zoi	clz	zoi	clz	zoi	clz	zoi
4	1-5	1-8	1-7	2-3	2-3	2-1,2-2	2-5	2-4	1-1	1-5	1-4	1-3
5												
6	39.21	38.78	39.50	39.04	38.24	39.72	38.42	39.69	39.11	39.79	38.95	38.73
7	0.04	0.08	0.04	0.20	0.07	0.12	0.12	0.07	0.19	0.06	0.16	0.06
8	32.53	27.85	32.16	29.53	26.98	32.66	27.13	31.45	29.11	31.84	29.14	31.70
9	1.71	7.71	1.74	5.06	8.53	1.46	8.14	2.81	5.67	2.02	6.44	2.18
10	0.02	0.09	0.00	0.03	0.02	0.01	0.04	0.02	0.05	0.02	0.10	0.03
11	0.01	0.02	0.01	0.10	0.02	0.03	0.02	0.06	0.06	0.02	0.06	0.02
12	24.76	23.81	24.41	24.07	23.75	24.57	23.98	24.07	24.03	24.44	24.06	24.83
13	0.04	0.06	0.04	0.09	0.05	0.02	0.08	0.02	0.04	0.00	0.01	0.00
14												
15	98.32	98.40	97.90	98.12	97.66	98.59	97.93	98.19	98.26	98.19	98.92	97.55
16												
17	2.979	3.005	3.008	3.005	2.998	3.002	3.001	3.022	3.012	3.024	2.989	2.975
18	0.002	0.005	0.003	0.012	0.004	0.007	0.007	0.004	0.011	0.004	0.009	0.004
19	2.913	2.543	2.888	2.679	2.493	2.909	2.498	2.823	2.643	2.852	2.636	2.87
20	0.098	0.45	0.1	0.293	0.503	0.083	0.478	0.161	0.329	0.115	0.372	0.126
21	0.001	0.005	0	0.003	0.002	0.001	0.003	0.002	0.003	0.001	0.006	0.002
22	0.001	0.003	0.002	0.011	0.002	0.003	0.002	0.006	0.007	0.002	0.007	0.003
23	2.015	1.977	1.992	1.985	1.995	1.989	2.007	1.964	1.983	1.99	1.978	2.043
24	0.002	0.004	0.002	0.005	0.003	0.001	0.005	0.001	0.002	0	0	0
25												
26	8.011	7.992	7.995	7.993	8	7.995	8.001	7.983	7.99	7.988	7.997	8.023

Zoisite-clinozoisite analyses

	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH
1	NR 125	NR 125	NR 125	NR 125	NR 125	NR 125	NR 125	NR 125	NR 125	NR 125	NR 125	RW 103
2	2-2	2-1	2-4	2-3	2-6	2-7	2-10	2-9	3-2	3-3	3-1	1-2
3	clz	zoi	clz	zoi	clz	zoi	clz	zoi	clz	clz	zoi	clz
4	2-1	2-2	2-3	2-4	2-7	2-6	2-9	2-10	3-1	3-1	3-2,3-3	1-1
5												
6	39.04	39.03	39.12	39.27	37.99	39.91	39.25	39.21	39.21	38.83	39.51	38.91
7	0.15	0.10	0.16	0.08	0.34	0.08	0.14	0.06	0.17	0.16	0.07	0.04
8	29.00	31.93	28.90	32.05	28.86	32.52	28.67	31.68	28.64	28.96	32.43	28.79
9	6.54	1.71	6.72	2.12	5.78	1.68	6.26	2.21	6.62	6.45	1.84	6.17
10	0.09	0.01	0.13	0.01	0.04	0.01	0.11	0.04	0.15	0.08	0.00	0.09
11	0.06	0.02	0.06	0.02	0.09	0.02	0.06	0.02	0.07	0.06	0.03	0.01
12	23.82	24.84	23.98	24.90	24.08	24.61	24.29	24.65	23.90	23.87	24.79	24.10
13	0.01	0.00	0.01	0.00	0.00	0.02	0.01	0.00	0.02	0.02	0.00	0.02
14												
15	98.71	97.64	99.08	98.45	97.18	98.85	98.79	97.87	98.78	98.43	98.67	98.13
16												
17	3	2.989	2.998	2.985	2.968	3.01	3.016	2.999	3.014	2.994	2.991	3.009
18	0.009	0.006	0.01	0.005	0.02	0.005	0.009	0.004	0.01	0.009	0.004	0.002
19	2.627	2.882	2.611	2.871	2.657	2.89	2.596	2.855	2.594	2.632	2.894	2.623
20	0.378	0.099	0.388	0.121	0.34	0.096	0.362	0.127	0.383	0.374	0.105	0.359
21	0.006	0.001	0.009	0.001	0.003	0	0.007	0.002	0.01	0.005	0	0.006
22	0.006	0.001	0.007	0.002	0.01	0.002	0.007	0.002	0.008	0.006	0.004	0.001
23	1.962	2.038	1.97	2.028	2.015	1.988	2	2.019	1.968	1.972	2.01	1.996
24	0.001	0	0.001	0	0.001	0.001	0	0	0.001	0.001	0	0.001
25												
26	7.989	8.016	7.994	8.013	8.014	7.992	7.997	8.008	7.988	7.993	8.008	7.997

Zoisite-clinozoisite analyses

	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT
1	RW 103	RW 103	RW 103	RW 103	RW 103	RW 103	RW 103	RW 103	RW 103	RW 103	RW 103	RW 103
2	1-1	1-4	1-5	1-12	1-11	1-14	1-13	2-3	2-4	2-10	2-9	2-12
3	zoi	clz	zoi	clz	zoi	clz	zoi	clz	zoi	clz	zoi	clz
4	1-2	1-5	1-4	1-11	1-12	1-13	1-14	2-4	2-3	2-9	2-10	2-11
5												
6	39.78	38.31	40.13	38.67	39.45	38.43	39.58	39.37	39.13	38.25	39.39	38.40
7	0.00	0.06	0.00	0.08	0.02	0.06	0.02	0.16	0.10	0.09	0.05	0.12
8	32.90	28.28	33.25	28.11	32.41	28.26	31.88	28.64	32.47	28.80	32.32	28.31
9	0.91	6.80	0.31	6.77	1.61	6.70	2.18	6.57	1.19	6.30	1.52	6.25
10	0.20	0.07	0.06	0.08	0.07	0.07	0.03	0.08	0.11	0.07	0.06	0.04
11	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.02	0.02	0.01	0.02
12	24.57	24.20	24.60	24.24	25.04	24.39	24.57	23.95	24.58	24.30	24.37	24.02
13	0.00	0.02	0.00	0.03	0.00	0.02	0.00	0.00	0.00	0.02	0.01	0.00
14												
15	98.37	97.75	98.36	97.99	98.61	97.94	98.26	98.77	97.60	97.85	97.73	97.16
16												
17	3.009	2.986	3.025	3.004	2.989	2.989	3.009	3.023	2.989	2.973	3.004	3.002
18	0	0.003	0	0.005	0.001	0.004	0.001	0.009	0.006	0.005	0.003	0.007
19	2.933	2.597	2.954	2.574	2.895	2.591	2.858	2.593	2.924	2.639	2.905	2.608
20	0.052	0.399	0.018	0.396	0.092	0.392	0.125	0.38	0.068	0.369	0.087	0.368
21	0.013	0.005	0.003	0.005	0.004	0.005	0.002	0.005	0.007	0.005	0.004	0.003
22	0.001	0.001	0.001	0.001	0.001	0.001	0	0.001	0.003	0.002	0.002	0.003
23	1.991	2.021	1.987	2.017	2.033	2.033	2.002	1.971	2.012	2.024	1.991	2.012
24	0	0.001	0	0.002	0	0.001	0	0	0	0.001	0.001	0
25												
26	7.999	8.013	7.988	8.004	8.015	8.016	7.997	7.982	8.009	8.018	7.997	8.003

Zoisite-clinozoisite analyses

	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF
1	RW 103	RW 103	FT 1 A	FT 1 A	FT 1 A	FT 1 A	FT 1 A	FT 1 A	FT 1 A	FT 1 A	FT 1 A	FT 1 A
2	2-11	2-12	9-2	9-1	9-3	9-4	9-5	9-6	9-7	9-8	9-10	9-11
3	zoi	clz	clz	zoi	clz	clz	zoi	clz	zoi	zoi	clz	clz
4	2-12	2-11	9-1	9-2,9-3	9-1	9-5	9-4	9-7,9-8	9-6	9-6	9-9	9-9
5												
6	39.66	38.40	38.48	39.22	38.03	39.22	39.29	38.92	39.55	40.06	38.80	39.16
7	0.36	0.12	0.08	0.05	0.09	0.12	0.04	0.11	0.07	0.07	0.15	0.15
8	31.61	28.31	28.42	31.56	28.03	29.86	32.06	28.02	32.02	32.10	27.80	29.86
9	1.48	6.25	7.22	1.99	7.25	4.99	1.96	7.62	2.51	2.39	8.17	5.49
10	0.07	0.04	0.07	0.03	0.06	0.02	0.00	0.09	0.04	0.01	0.05	0.01
11	0.14	0.02	0.12	0.03	0.08	0.16	0.03	0.16	0.09	0.10	0.22	0.25
12	24.70	24.02	23.89	24.64	23.54	24.09	24.60	23.78	24.86	24.50	23.75	24.13
13	0.00	0.00	0.04	0.13	0.09	0.08	0.12	0.07	0.07	0.07	0.06	0.10
14												
15	98.02	97.16	98.32	97.65	97.17	98.54	98.10	98.77	99.21	99.30	99.00	99.15
16												
17	3.02	3.002	2.98	3.004	2.981	3.004	2.993	3.002	2.986	3.014	2.992	2.987
18	0.02	0.007	0.005	0.003	0.005	0.007	0.002	0.007	0.004	0.004	0.009	0.008
19	2.837	2.609	2.595	2.849	2.59	2.696	2.879	2.548	2.85	2.846	2.527	2.684
20	0.085	0.368	0.421	0.115	0.429	0.288	0.112	0.442	0.143	0.135	0.474	0.315
21	0.005	0.003	0.005	0.002	0.004	0.001	0	0.006	0.002	0.001	0.003	0.001
22	0.015	0.003	0.014	0.004	0.01	0.018	0.003	0.018	0.01	0.01	0.025	0.028
23	2.015	2.012	1.983	2.022	1.978	1.977	2.008	1.966	2.011	1.975	1.963	1.972
24	0	0	0.003	0.008	0.006	0.005	0.007	0.004	0.004	0.004	0.004	0.006
25												
26	7.997	8.004	8.006	8.007	8.003	7.996	8.004	7.993	8.01	7.989	7.997	8.001



Zoisite-clinozoisite analyses

	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR
1	FT 1 A	FT 1 A	FT 1 A	FT 1 A	FT 1 A	FT 1 A	FT 1 A	DT 8 D	DT 8 D	DT 8 D	DT 8 D	DT 8 D
2	9-9	9-13	9-12	8-1	8-2	8-4	8-3	2-1	2-2	2-3	2-4	2-5
3	zoi	clz	zoi	clz	zoi	clz	zoi	clz	zoi	clz	zoi	clz
4	10,9-11	9-12	9-13	8-2	8-1	8-3	8-4	2-2	2-1	2-4	2-3	2-6
5												
6	39.40	38.71	39.67	39.20	39.14	38.80	39.19	38.51	38.53	39.11	38.80	38.94
7	0.05	0.10	0.06	0.12	0.06	0.11	0.04	0.17	0.04	0.10	0.05	0.08
8	32.55	27.77	32.45	27.90	32.44	27.80	31.98	27.33	31.58	27.80	31.54	28.87
9	1.73	7.60	1.93	8.32	2.05	8.19	1.83	8.22	2.26	7.37	2.20	6.39
10	0.02	0.02	0.00	0.11	0.01	0.07	0.02	0.11	0.00	0.05	0.00	0.03
11	0.03	0.15	0.08	0.13	0.05	0.14	0.06	0.07	0.04	0.05	0.05	0.12
12	24.83	23.69	24.91	23.79	24.40	23.71	24.94	23.73	24.59	24.02	24.58	23.57
13	0.09	0.14	0.07	0.06	0.06	0.11	0.11	0.03	0.01	0.07	0.06	0.08
14												
15	98.70	98.18	99.17	99.63	98.21	98.93	98.17	98.17	97.05	98.57	97.28	98.08
16												
17	2.982	3.005	2.989	3.003	2.977	2.995	2.987	2.999	2.974	3.022	2.987	3.008
18	0.003	0.006	0.003	0.007	0.003	0.006	0.002	0.01	0.002	0.005	0.003	0.004
19	2.904	2.54	2.882	2.52	2.908	2.529	2.873	2.508	2.873	2.532	2.862	2.628
20	0.098	0.444	0.109	0.48	0.117	0.475	0.105	0.482	0.132	0.428	0.127	0.372
21	0.001	0.001	0	0.007	0.001	0.005	0.002	0.007	0	0.003	0	0.002
22	0.003	0.017	0.009	0.15	0.006	0.016	0.006	0.007	0.005	0.005	0.005	0.014
23	2.014	1.97	2.012	1.953	1.989	1.961	2.036	1.98	2.033	1.989	2.027	1.951
24	0.005	0.009	0.004	0.004	0.003	0.007	0.007	0.002	0.001	0.004	0.003	0.005
25												
26	8.01	7.992	8.008	8.124	8.004	7.994	8.018	7.995	8.02	7.988	8.014	7.984

Zoisite-clinozoisite analyses

	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD
1	DT 8 D	DT 8 D	DT 8 D	DT 8 D	DT 8 D	DT 8 D	DT 8 D	DT 8 D	DT 8 D	DT 8 D	DT 8 D	DT 8 D
2	2-6	2-7	2-8	2-9	2-10	1-1	1-2	1-3	1-4	4	85-1	85-1
3	zoi	clz	zoi	clz	zoi	clz	zoi	clz	zoi	clz	zoi	clz
4	2-5	2-8	2-7	2-10	2-9	1-2	1-1	1-4	1-3	3	4	5
5												
6	38.57	38.37	38.83	38.44	38.74	38.42	38.75	38.24	38.70	38.84	39.12	38.72
7	0.04	0.11	0.04	0.08	0.05	0.07	0.04	0.11	0.05	0.30	0.15	0.19
8	32.01	27.80	31.42	27.93	31.56	28.16	31.68	27.77	31.74	28.31	32.3	28.81
9	1.81	7.67	2.62	7.22	2.38	7.35	2.53	7.72	2.20	6.61	1.99	5.90
10	0.01	0.10	0.00	0.06	0.00	0.10	0.00	0.11	0.00	0.09	0.04	0.09
11	0.03	0.07	0.04	0.06	0.03	0.08	0.05	0.07	0.05	0.07	0.02	0.04
12	24.55	23.82	24.20	23.92	24.60	24.01	24.36	23.83	24.60	23.55	24.33	23.66
13	0.01	0.03	0.03	0.03	0.00	0.01	0.04	0.00	0.00	0.01	0.02	0.07
14												
15	97.03	97.97	97.18	97.74	97.36	98.20	97.45	97.85	97.34	97.78	97.97	97.48
16												
17	2.972	2.989	2.991	2.997	2.981	2.984	2.978	2.984	2.977	3.014	2.982	3.008
18	0.002	0.006	0.002	0.005	0.003	0.004	0.002	0.006	0.003	0.018	.009	.011
19	2.908	2.553	2.853	2.567	2.862	2.578	2.869	2.554	2.878	2.589	2.902	2.638
20	0.105	0.45	0.152	0.423	0.138	0.43	0.146	0.454	0.127	0.386	.114	.345
21	0	0.007	0	0.004	0	0.006	0	0.007	0	0.005	.001	.003
22	0.004	0.008	0.005	0.006	0.004	0.009	0.006	0.009	0.005	0.010	.005	.010
23	2.027	1.988	1.998	1.998	2.028	1.998	2.006	1.992	2.027	1.958	1.987	1.969
24	0.001	0.002	0.002	0.002	0	0	0.002	0	0	.001	.001	.004
25												
26	8.019	8.003	8.003	8.002	8.016	8.009	8.009	8.006	8.017	7.981	8.001	7.988

Zoisite-clinozoisite analyses

	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP
1	85-1	85-1	85-1	85-1	85-1	85-1	85-1	85-1	85-1	85-1	85-1	85-1
2	5	7	8	9	10	14	15	16	19	18	37	36
3	zoi	clz	zoi	clz	zoi	clz	zoi	clz	clz	zoi	clz	zoi
4	6	8	7	10	9	15	1416	15	18	19	36	37
5												
6	39.81	38.68	39.46	38.62	39.09	38.83	39.29	39.22	39.07	39.43	38.91	39.29
7	0.14	0.27	0.13	0.42	0.15	0.23	0.10	0.39	0.23	0.09	0.20	0.10
8	31.85	28.47	31.89	28.70	31.88	28.62	31.92	28.86	28.66	32.09	28.54	31.91
9	2.02	6.16	2.11	6.29	2.10	6.24	2.13	6.04	6.43	2.05	6.19	2.19
10	0.06	0.06	0.08	0.13	0.04	0.06	0.05	0.12	0.06	0.00	0.07	0.07
11	0.05	0.09	0.04	0.07	0.04	0.06	0.05	0.07	0.04	0.04	0.05	0.03
12	24.26	23.50	24.26	23.83	24.17	23.28	24.06	23.23	23.68	24.18	23.21	23.87
13	0.02	0.07	0.02	0.06	0.02	0.02	0.00	0.10	0.05	0.00	0.09	0.04
14												
15	98.21	97.30	97.99	98.12	97.49	97.34	97.60	98.03	98.22	97.88	97.26	97.50
16												
17	3.024	3.013	3.007	2.988	2.995	3.019	3.004	3.025	3.015	3.005	3.028	3.007
18	.008	.016	.007	.024	.009	0.014	0.006	0.022	0.013	0.005	0.012	0.006
19	2.851	2.614	2.864	2.617	2.879	2.623	2.877	2.623	2.607	2.882	2.617	2.878
20	.115	.361	.121	.366	.121	0.365	0.123	0.351	0.374	0.118	0.362	0.126
21	.003	.006	.003	.005	.003	0.004	0.003	0.008	0.004	0	0.005	0.004
22	.007	.007	.009	.015	.005	0.007	0.006	0.008	0.005	0.005	0.005	0.006
23	1.974	1.961	1.981	1.975	1.984	1.94	1.972	1.92	1.959	1.975	1.935	1.957
24	.001	.004	.001	.004	.001	0.001	0	0.006	0.003	0	0.005	0.002
25												
26	7.984	7.982	7.993	7.994	7.996	7.973	7.991	7.963	7.98	7.99	7.969	7.986

Zoisite-clinozoisite analyses

	DQ	DR	DS	DT	DU	DV
1	85-1	85-1	85-1	85-1	85-1	85-1
2	38	39	41	40	43	44
3	clz	zoi	clz	zoi	clz	zoi
4	39	38	40	41	44	43
5						
6	38.65	39.31	38.88	39.17	38.60	39.59
7	0.22	0.07	0.22	0.07	0.21	0.11
8	27.99	31.56	28.61	31.74	28.71	32.07
9	6.90	2.40	5.94	2.32	6.01	2.08
10	0.07	0.04	0.10	0.02	0.05	0.02
11	0.07	0.00	0.04	0.02	0.05	0.03
12	23.15	23.62	23.47	24.14	23.26	23.93
13	0.09	0.01	0.06	0.03	0.07	0.03
14						
15	97.14	97.01	97.32	97.51	96.96	97.86
16						
17	3.02	3.022	3.023	3.001	3.012	3.015
18	0.013	0.004	0.013	0.004	0.012	0.006
19	2.578	2.86	2.622	2.867	2.641	2.879
20	0.406	0.139	0.348	0.134	0.353	0.119
21	0.005	0.002	0.006	0.001	0.003	0.001
22	0.008	0	0.004	0.002	0.005	0.003
23	1.939	1.95	1.956	1.982	1.945	1.953
24	0.005	0.001	0.004	0.002	0.004	0.002
25						
26	7.974	7.978	7.976	7.993	7.975	7.978