

TABLE III, 4

CALIBRATION TEST RESULTS - α AND β BASE-LINE MEASUREMENTS ONLY

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No.	Percentage of Sample No. 10	HORIZONTAL FURNACE						VERTICAL FURNACE						Percentage SiO ₂ by X-Ray	Percentage Total SiO ₂ (Chemical)
		Cycle No.	Mass in mgm	$\alpha \rightarrow \beta$		$\beta \rightarrow \alpha$		Cycle No.	Mass in mgm	$\alpha \rightarrow \beta$		$\beta \rightarrow \alpha$			
				Height	Area	Height	Area			Height	Area	Height	Area		
1	100	H140/10	198	64.6	32.7	78.2	31.6	V027/10	206	43.2	14.0	35.4	13.8	92.0	96.78
2		H141/10		65.6	32.0	78.6	33.8	V028/10		44.1	14.7	35.2	14.1		
3		H142/10	218	68.2	32.3	80.4	32.8	V029/10	195	41.5	12.9	35.9	16.6		
4		H143/10		68.2	29.1	80.8	32.7	V030/10		42.3	11.2	35.6	14.2		
5		H144/10	196	65.4	29.6	77.2	31.0	V114/10	211	42.8	16.5	35.6	14.9		
6		H145/10		65.4	35.3	77.6	31.4	V115/10		41.7	13.1	35.0	14.1		
7		H146/10	196	64.6	29.8	75.2	30.4	V116/10	195	42.2	16.3	32.2	12.7		
8		H147/10		64.4	28.8	74.2	28.4	V117/10		42.9	13.3	35.9	15.9		
		Averages	202	65.8	31.2	77.8	31.5	Averages	202	42.6	14.0	37.6	14.5		
9	80	H069/11	247	61.6	22.2	70.0	21.4	V037/11	249	42.5	12.0	35.0	14.8	75.8	75.26
10		H070/11		65.0	25.0	70.0	22.6	V038/11		43.0	14.8	35.1	13.5		
11		H071/11	235	64.8	24.8	70.3	22.6	V039/11	256	42.0	12.8	34.2	14.2		
12		H072/11		61.8	21.6	70.2	22.2	V040/11		42.5	12.8	32.6	10.9		
13		H087/11	236	62.4	24.8	65.0	23.6	V041/11	244	42.5	13.0	33.4	12.6		
14		H088/11		61.4	22.8	68.8	21.6	V042/11		41.8	13.2	34.8	15.3		
15		H148/11	237	59.2	22.8	73.2	28.4	V118/11	250	41.4	12.3	31.0	14.0		
16		H149/11		62.2	24.7	72.2	26.5	V119/11		42.2	15.7	32.9	13.0		
		Averages	239	62.3	23.6	70.0	23.6	Averages	250	42.2	13.3	33.6	13.5		
17	60	H079/12	249	53.2	16.8	60.2	16.7	V047/12	255	33.6	7.8	26.0	7.8	56.1	56.62
18		H080/12		54.4	17.8	58.4	16.1	V048/12		34.0	7.9	26.8	9.0		
19		H081/12	248	55.2	18.0	58.2	18.0	V049/12	245	34.6	8.2	26.8	8.3		
20		H082/12		55.0	17.8	58.1	17.8	V050/12		31.6	11.1	27.8	9.8		
21		H083/12	245	53.4	18.3	58.0	17.3	V051/12	275	35.2	6.7	27.8	8.1		
22		H084/12		54.0	19.3	56.6	17.2	V052/12		36.0	7.9	28.5	9.5		
23		H085/12	247	53.5	18.6	56.0	17.5	V053/12	245	36.1	8.0	26.6	8.2		
24		H086/12		53.8	18.8	56.3	17.6	V054/12		36.5	9.7	26.1	7.1		
		Averages	247	54.1	18.2	57.7	17.3	Averages	255	35.5	8.4	27.1	8.5		
25	40	H089/13	245	39.4	9.9	37.0	10.1	V055/13	247	24.9	4.1	17.4	3.8	33.8	40.43
26		H090/13		40.2	10.4	40.0	10.8	V056/13		24.1	3.3	17.7	4.5		
27		H091/13	247	39.6	10.1	39.3	11.2	V057/13	254	26.9	7.1	17.6	4.3		
28		H092/13		39.7	9.9	38.5	9.1	V058/13		26.1	6.3	18.1	4.4		
29		H093/13	238	37.7	9.5	36.4	8.9	V059/13	270	26.3	4.6	19.1	5.1		
30		H094/13		38.2	10.3	37.0	10.4	V060/13		25.7	5.1	20.1	6.6		
31		H095/13	246	41.0	10.7	43.4	11.8	V061/13	254	27.5	5.7	19.9	5.2		
32		H096/13		41.1	11.4	42.3	11.3	V063/13		28.1	6.3	21.8	7.3		
		Averages	244	39.6	10.3	39.2	10.5	Averages	256	26.2	5.3	18.1	5.2		
33	20	H098/14	236	21.3	4.1	20.0	4.8	V065/14	242	13.8	2.5	8.8	1.8	26.7	16.83
34		H099/14		21.1	4.0	20.1	4.9	V066/14		13.1	2.5	10.5	3.3		
35		H100/14	234	20.8	3.6	19.7	4.1	V067/14	254	13.7	0.9	9.2	2.6		
36		H101/14		21.0	4.1	20.0	4.3	V068/14		14.5	2.3	9.5	2.5		
37		H102/14	233	20.5	4.1	18.2	3.9	V070/14	248	16.3	3.9	11.7	2.9		
38		H103/14		21.1	4.6	18.7	4.4	V071/14		15.5	2.3	10.5	2.2		
39		H104/14	231	20.7	3.9	18.9	4.4	V072/14	261	16.6	2.9	11.5	2.8		
40		H105/14		20.9	4.1	18.1	4.5	V073/14		14.8	2.0	11.3	2.7		
		Averages	234	20.9	4.1	19.2	4.4	Averages	251	14.8	2.4	10.4	2.6		

TABLE III, 2

COEFFICIENTS OF VARIATION OF SOME PARAMETERS MEASURED IN CONNECTION WITH D.T.A. CALIBRATION TESTS

Method	Parameter Measured	Sample No. 10, 100%				Sample No. 11, 80%				Sample No. 12, 60%				Sample No. 13, 40%				Sample No. 14, 20%			
		Horizontal		Vertical		Horizontal		Vertical		Horizontal		Vertical		Horizontal		Vertical		Horizontal		Vertical	
		$\alpha \rightarrow \beta$	$\beta \rightarrow \alpha$	$\alpha \rightarrow \beta$	$\beta \rightarrow \alpha$	$\alpha \rightarrow \beta$	$\beta \rightarrow \alpha$	$\alpha \rightarrow \beta$	$\beta \rightarrow \alpha$	$\alpha \rightarrow \beta$	$\beta \rightarrow \alpha$	$\alpha \rightarrow \beta$	$\beta \rightarrow \alpha$	$\alpha \rightarrow \beta$	$\beta \rightarrow \alpha$	$\alpha \rightarrow \beta$	$\beta \rightarrow \alpha$	$\alpha \rightarrow \beta$	$\beta \rightarrow \alpha$	$\alpha \rightarrow \beta$	$\beta \rightarrow \alpha$
Heights: Methods A and B	1. Peak	4.32	2.19	5.54	6.98	3.40	2.23	6.46	2.34	3.13	2.39	5.88	2.91	5.26	5.60	4.53	4.80	1.41	4.49	9.40	10.47
	2. Total	2.86	1.12	9.37	5.71	2.93	3.44	13.63	2.16	1.41	1.53	4.78	2.13	3.49	6.17	3.12	3.00	1.83	2.87	9.69	10.04
	3. Corrected Total	2.42	3.65	4.40	3.38	6.00	3.08	5.12	3.70	1.51	1.43	4.84	3.81	2.19	5.52	4.80	4.12	1.56	2.60	8.32	9.23
Areas: Method A	4. Corrected Peak	16.34	2.38	11.62	5.73	7.49	4.94	24.05	5.38	12.73	3.86	25.84	10.51	12.95	9.00	13.99	17.50	8.93	7.08	21.79	21.43
Areas: Method B	5. Total	4.69	1.75	16.34	9.51	7.61	6.10	5.74	6.45	3.13	2.88	18.07	9.58	5.90	10.39	12.36	11.49	5.31	8.54	12.19	18.61
	6. Corrected Total	5.84	1.72	10.25	3.97	5.21	3.68	4.02	4.92	3.20	3.07	18.39	8.77	5.26	10.24	12.93	10.02	5.55	8.60	14.15	19.16
α -base line measurements	7. Peak Height	<u>2.34</u>		<u>2.00</u>		<u>3.02</u>		<u>1.18</u>		<u>1.37</u>		<u>3.81</u>		<u>3.05</u>		<u>5.03</u>		<u>1.22</u>		<u>7.98</u>	
	8. Corrected Height	9.33		11.22		3.66		5.14		1.32		6.94		1.98		4.11		0.97		7.22	
	9. Half-peak Area	<u>7.24</u>		<u>12.79</u>		<u>7.25</u>		<u>9.77</u>		<u>4.19</u>		<u>16.16</u>		<u>5.57</u>		<u>24.01</u>		<u>6.83</u>		<u>35.04</u>	
	10. Corrected Area	13.67		18.46		5.75		11.03		4.69		19.63		5.23		23.30		6.99		35.14	
β -base line measurements	11. Peak Height		<u>2.94</u>		<u>7.79</u>		<u>3.49</u>		<u>4.26</u>		<u>2.39</u>		<u>3.30</u>		<u>6.53</u>		<u>8.28</u>		<u>4.35</u>		<u>10.75</u>
	12. Corrected Height		11.06		8.22		4.64		7.58		2.08		3.91		5.70		7.58		3.86		9.99
	13. Half-peak Area		<u>5.30</u>		<u>8.48</u>		<u>10.64</u>		<u>10.30</u>		<u>3.58</u>		<u>10.62</u>		<u>9.96</u>		<u>23.56</u>		<u>7.51</u>		<u>17.40</u>
	14. Corrected Area		13.17		12.71		10.92		10.60		3.80		10.88		9.36		22.99		7.16		17.64

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