

Brazil Spessartine (104789)

	MgO	Al ₂ O ₃	SiO ₂	CaO	TiO ₂	H ₂ O	Cr ₂ O ₃	MnO	FeO ^T	ZnO
WET CHEM	1.12	19.19	37.95	4.57	0.57	N.A.	N.A.	28.97	5.71/0.92 6.54	N.A.
1	1.12	20.04	33.88	6.68	0.43	0.01	0.00	31.50	6.72	0.48
2	1.07	20.16	34.29	6.17	0.20	0.01	0.00	32.28	6.57	0.61
3	1.16	20.14	34.73	5.51	0.11	0.02	0.02	32.49	6.86	0.50
4	1.51	20.39	35.04	6.91	0.43	0.00	0.00	29.31	8.12	0.48
5	1.45	20.27	34.47	7.43	0.59	0.00	0.01	29.57	7.85	0.40
6	1.58	20.27	34.25	6.48	0.39	0.01	0.00	29.51	8.31	0.48
7	1.46	20.51	34.28	6.78	0.42	0.01	0.00	29.39	8.26	0.46
8	1.34	20.27	34.79	7.32	0.43	0.01	0.00	30.18	7.67	0.48
9	0.95	20.07	33.73	7.12	0.70	0.01	0.00	30.96	7.25	0.46
10	1.27	20.34	34.41	5.69	0.10	0.01	0.00	31.21	7.20	0.56

AVG	1.291	20.246	34.387	6.610	0.380	0.01	0.00	30.641	7.481	0.491
±1σ	.211	0.146	0.400	0.653	0.194			1.213	0.650	0.057
% SD	16.3	0.7	1.2	9.9	51.1			4.0	8.7	11.7
	↑			↑	↑			↑	↑	BACKGROUND FACTOR PROBLEM

WET CHEM	.02778	.37142	.63161	.08149	.00722	—	—	.40839	.09103	—
ATOMS	.01711	.23179	.38894	.05018	.00444			.2515	.0561	
FP(8CATIONS)	.137	1.854	3.111	.401	.036	—	—	2.012	.448	—

PROBE	.03203	.3971	.57231	.11787	.00482	—	—	.43195	.10413	.00603
ATOMS	.01922	.2383	.3435	.0707	.00289			.2592	.06249	.00362
FP(8CATIONS)	.154	1.907	2.748	.566	.023	—	—	2.074	.500	.029

Total +ve CHARGE = 23.451 → .549 Fe³⁺

STOICH (Mg_{.154} Ca_{.566} Fe_{.155}²⁺ Mn_{2.074} Zn_{.029} Ti_{.023})₃ (Al_{1.655} Fe_{.1345}³⁺)₂ (Al_{.252} Si_{.748})₃ O₁₂

SANS ZN ATOMS	.01929	.2392	.3447	.0710	.00290			.2602	.0627	
	.154	1.913	2.758	.568	.023			2.081	.502	

Total +ve CHARGE = 23.473 → .527 Fe³⁺

(Mg_{.154} Ca_{.568} Fe_{.173}²⁺ Mn_{2.081} Ti_{.023})₃ (Al_{1.671} Fe_{.1329}³⁺)₂ (Al_{.242} Si_{.758})₃ O₁₂