

Table SM1. Calculated X-ray powder diffraction data for scandio-winchite ($\text{CuK}\alpha = 1.540598 \text{ \AA}$, Debye-Scherrer geometry, no anomalous dispersion, $I_{\text{rel}} > 1$).

<i>I</i>	<i>d</i> [Å]	<i>h k l</i>	<i>I</i>	<i>d</i> [Å]	<i>h k l</i>	<i>I</i>	<i>d</i> [Å]	<i>h k l</i>
17.23	9.08175	0 2 0	1.75	1.9424	-3 5 2	4.86	1.34901	1 11 2
100	8.45496	1 1 0	2.27	1.93933	4 2 1	2.05	1.34336	5 3 2
3.71	5.11393	1 3 0	4.11	1.90013	5 1 0	3.66	1.3427	2 6 3
24.79	4.8957	-1 1 1	2.05	1.88394	-4 6 1	2.51	1.34106	-3 11 2
1.66	4.77653	2 0 0	7.36	1.87577	-1 9 1	1.33	1.32506	-5 9 2
25.9	4.54087	0 4 0	2.22	1.87516	2 4 2	4.4	1.31371	-1 1 4
6.19	4.47215	0 2 1	1.16	1.85472	-1 7 2	5.21	1.31354	-7 5 1
3.65	4.22748	2 2 0	2.19	1.84369	-4 4 2	3.66	1.30412	0 12 2
1.94	4.01591	1 1 1	2.51	1.82204	5 3 0	10.12	1.30052	-2 12 2
16.95	3.89334	-1 3 1	1.79	1.81635	0 10 0	1.4	1.28851	6 6 1
3.13	3.68738	-2 2 1	1.01	1.81222	1 9 1	1.2	1.28706	-1 3 4
45.15	3.40494	1 3 1	5.22	1.74859	-5 1 2	2.58	1.28458	0 0 4
25.16	3.29104	2 4 0	1.68	1.7229	-5 5 1	3.5	1.27096	-4 0 4
61.64	3.13652	3 1 0	5.39	1.69348	-1 3 3	1.21	1.23511	-2 14 1
1.29	3.02753	-3 1 1	6.02	1.69332	-2 8 2	5.63	1.20317	-5 11 2
20.41	2.96027	2 2 1	2.85	1.6831	0 2 3	1.34	1.19413	8 0 0
2.22	2.95567	-1 5 1	19.59	1.66003	4 6 1	2.85	1.16964	2 0 4
9.96	2.81832	3 3 0	6.27	1.64552	4 8 0	1.59	1.13051	7 9 0
17.99	2.73846	-3 3 1	9.29	1.6271	1 11 0	1.19	1.09807	3 1 4
85.61	2.72416	1 5 1	3.26	1.59218	6 0 0	1.81	1.08822	4 12 2
26.76	2.60825	0 6 1	16.08	1.58672	-1 5 3	1.57	1.08602	4 14 1
4.04	2.56916	0 0 2	1.2	1.57116	2 10 1	1.6	1.07708	-7 1 4
47.76	2.54193	-2 0 2	3.59	1.56565	4 0 2	3.4	1.05785	5 11 2
1.2	2.44785	-2 2 2	7.11	1.53524	-6 0 2	3.68	1.05194	7 11 0
3.1	2.39459	3 5 0	2.55	1.52808	1 9 2	2.7	1.04951	-8 6 3
26.99	2.34503	-3 5 1	13.79	1.51973	-2 6 3	2.11	1.03728	8 6 1
7.94	2.3265	-4 2 1	7.53	1.51363	0 12 0	2.75	1.0342	1 17 1
10	2.31116	-1 7 1	3.83	1.51048	5 5 1	1.63	1.02969	-1 11 4
17.61	2.28039	-3 1 2	1.34	1.49072	0 6 3	1.2	1.01579	-3 5 5
1.05	2.26922	3 3 1	2.4	1.48014	4 4 2	1.38	1.00873	-8 0 4
3.83	2.21805	-2 4 2	1.48	1.47815	2 2 3	3.2	0.98676	6 6 3
6.53	2.19529	1 7 1	1.25	1.47784	-2 10 2	3.08	0.98605	-4 6 5
23.67	2.17644	2 6 1	3.02	1.46587	3 11 0	1.71	0.98514	-9 5 3
3.35	2.14892	-3 3 2	2.85	1.45875	-1 7 3	1.56	0.97941	0 12 4
12.47	2.05891	2 0 2	2.49	1.45437	-6 4 2	1.12	0.93604	-10 6 1
11.28	2.02987	3 5 1	1.02	1.44574	4 10 0	2.61	0.91551	3 11 4
6.54	2.01747	-4 0 2	19.92	1.44245	-6 6 1	1.76	0.91386	-1 17 3
2.89	2.01153	3 7 0	1.08	1.42861	-5 3 3	2.07	0.91112	-7 5 5
1.98	1.98188	-3 7 1	8.21	1.37375	5 1 2	1.17	0.90324	-7 11 4
3.39	1.97458	1 9 0	3.33	1.36276	-5 5 3	1.57	0.89954	4 18 1
1.09	1.96677	1 5 2	2.08	1.36089	7 1 0			