

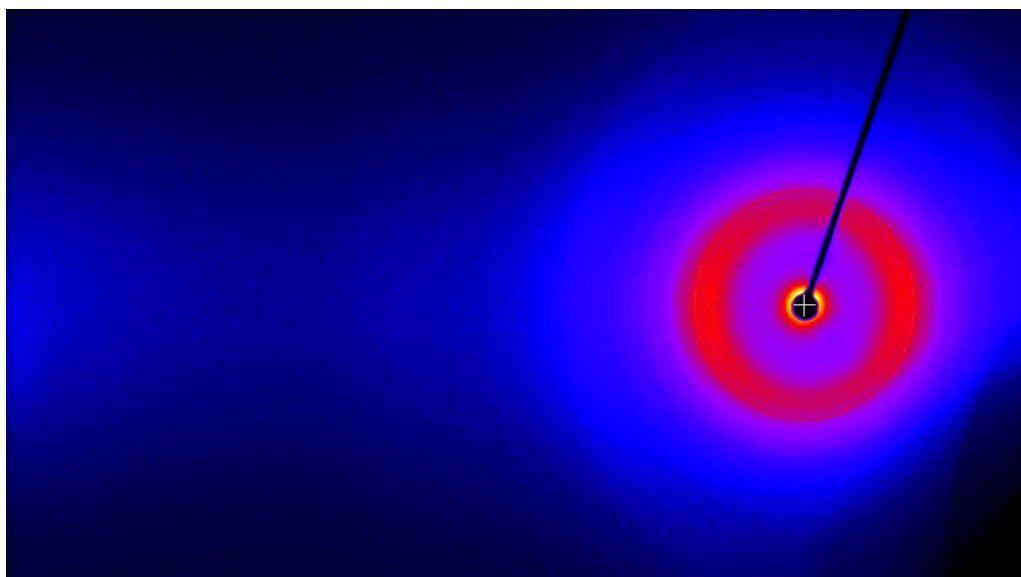
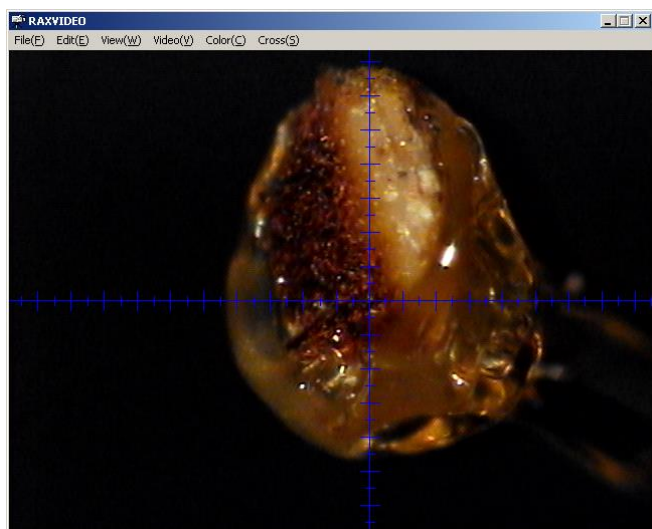
Rigaku microdiffraction analyses of white and pink pigments from Transitional Inka/Early Colonial and later colonial qero cups (2009-10)

No. 1 Owner/Qero ID: AMNH B1847 Stylistic Period: Transitional Inka/Early Colonial

Sample: yellow-white pigment

Rigaku file: AMNH-B1847a.asc

Cu K α rad; 46 kV, 40 mA; 800 μ m collimator; osc on ω -10° – 30° at 1°/sec; osc on ϕ -180° - 0° at 3°/sec; 15 minute exp.



Additional File 2: Selected listings of XRD results

Peak ID Extended Report (74 Peaks, Max P/N = 96.9)

[AMNH-B1847a.asc] , Created by AreaMax

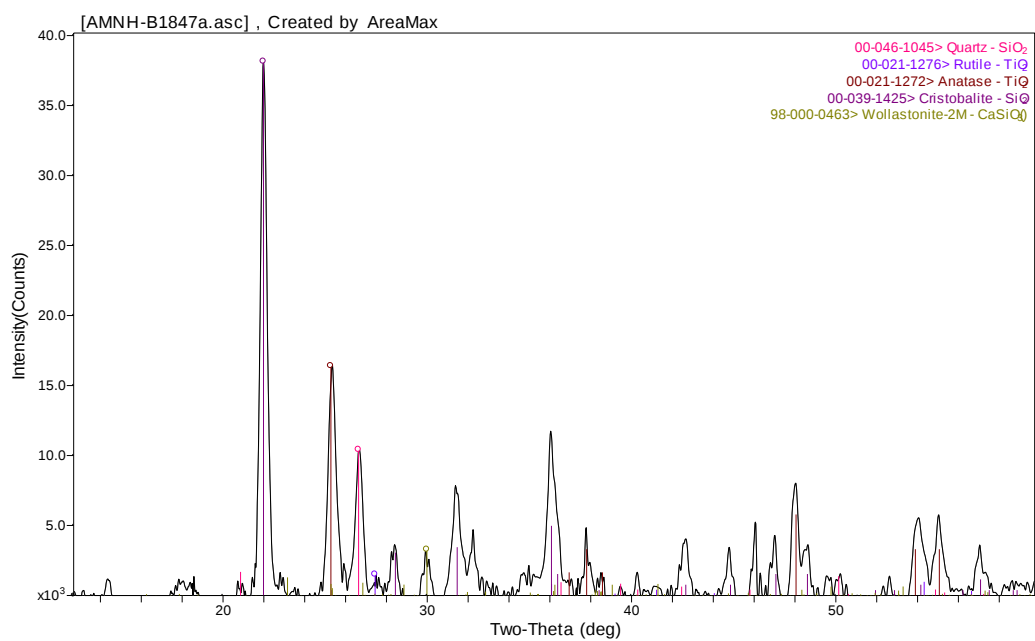
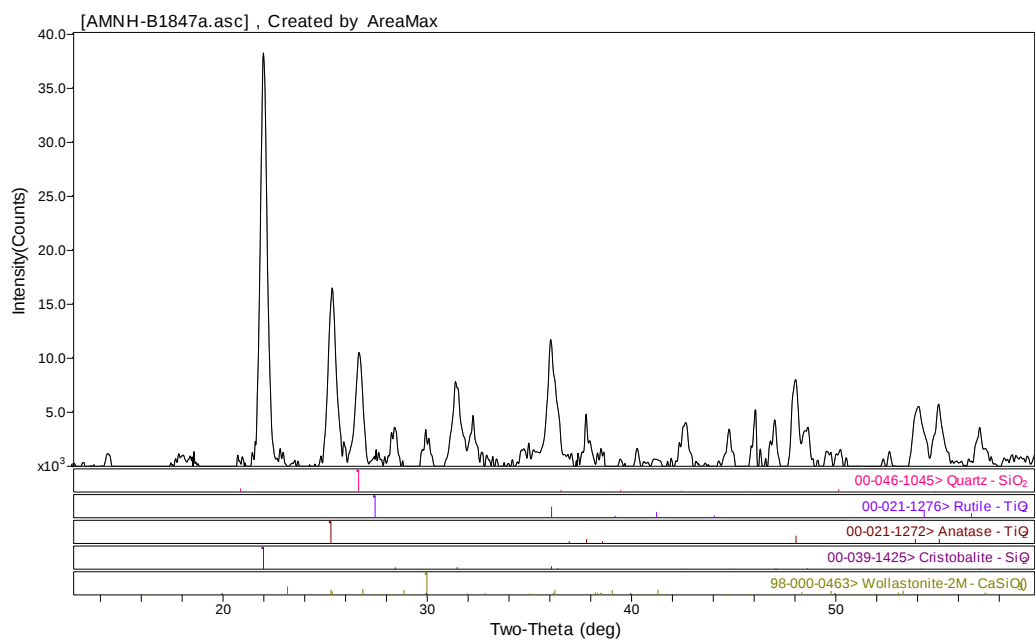
PEAK: 25-pts/Parabolic Filter, Threshold=3.0, Cutoff=0.1%, BG=3/1.0, Peak-Top=Summit

2-Theta	d(Å)	Height	Height%	Phase ID	d(Å)	I%	(h k l)	2-Theta	Delta
5.354	16.4920	427	1.1						
7.253	12.1776	171	0.5						
11.255	7.8555	918	2.4						
12.585	7.0282	455	1.2						
14.436	6.1306	888	2.3						
15.713	5.6352	576	1.5						
16.214	5.4624	136	0.4						
20.894	4.2480	700	1.9	Quartz	4.2435	24.1	(1 0 0)	20.917	0.022
22.055	4.0271	37819	100.0	Cristobalite low	4.0239	100.0	(1 0 1)	22.073	0.018
22.933	3.8748	1303	3.4						
23.435	3.7930	353	0.9						
25.395	3.5044	14947	39.5	Cristobalite low	3.5051	1.0	(1 1 0)	25.390	-0.005
26.715	3.3342	9216	24.4	Quartz	3.3366	100.0	(1 0 1)	26.696	-0.019
28.456	3.1341	3734	9.9	Cristobalite low	3.1241	12.9	(1 1 1)	28.548	0.093
29.135	3.0626	478	1.3						
30.035	2.9728	3204	8.5						
31.515	2.8365	7168	19.0	Cristobalite low	2.8290	17.8	(1 0 2)	31.601	0.086
32.315	2.7681	3430	9.1						
34.737	2.5804	593	1.6						
36.076	2.4877	10700	28.3						
36.332	2.4707	5784	15.3	Cristobalite low	2.4785	22.7	(2 0 0)	36.214	-0.118
37.835	2.3759	4335	11.5	Anatase	2.3786	27.4	(0 0 4)	37.791	-0.044
40.336	2.2342	2004	5.3	Quartz	2.2311	37.1	(1 1 -1)	40.395	0.059
40.817	2.2090	812	2.1	Cristobalite low	2.2168	0.2	(2 1 0)	40.666	-0.151
41.155	2.1916	982	2.6						
41.919	2.1534	211	0.6						
42.734	2.1142	3715	9.8	Cristobalite low	2.1103	5.5	(2 1 1)	42.817	0.083
44.316	2.0423	913	2.4						
46.115	1.9668	4885	12.9	Quartz	1.9748	10.1	(2 0 1)	45.917	-0.198
48.035	1.8925	9748	25.8	Anatase	1.8922	45.2	(2 0 0)	48.043	0.008
48.655	1.8699	3972	10.5	Cristobalite low	1.8642	11.4	(2 1 2)	48.811	0.157
49.694	1.8332	406	1.1						
50.273	1.8134	868	2.3	Quartz	1.8144	1.8	(1 1 -2)	50.245	-0.028
51.753	1.7650	543	1.4	Anatase	1.7583	0.2	(2 0 2)	51.966	0.212
52.374	1.7455	1602	4.2	Cristobalite low	1.7526	1.1	(2 2 0)	52.147	-0.227
52.675	1.7362	2067	5.5	Cristobalite low	1.7226	2.3	(0 0 4)	53.125	0.450
54.035	1.6957	4855	12.8	Cristobalite low	1.6985	0.2	(2 2 1)	53.940	-0.096
55.094	1.6656	4831	12.8	Anatase	1.6663	32.1	(2 1 1)	55.068	-0.026
57.075	1.6124	2666	7.0	Cristobalite low	1.6068	9.0	(3 0 1)	57.293	0.218
58.475	1.5771	471	1.2	Cristobalite low	1.5675	1.5	(3 1 0)	58.866	0.391
59.394	1.5548	333	0.9	Cristobalite low	1.5621	1.3	(2 2 2)	59.093	-0.302
59.896	1.5430	1177	3.1	Cristobalite low	1.5460	0.3	(1 1 4)	59.770	-0.127
60.215	1.5356	3193	8.4	Quartz	1.5375	29.1	(1 2 -1)	60.133	-0.083
61.515	1.5062	1103	2.9						
61.995	1.4957	4338	11.5	Anatase	1.4932	6.1	(2 1 3)	62.113	0.118
62.755	1.4794	4723	12.5	Anatase	1.4808	26.1	(2 0 4)	62.689	-0.066
64.194	1.4497	650	1.7	Quartz	1.4506	5.1	(1 1 -3)	64.149	-0.045
64.975	1.4341	2395	6.3						
65.335	1.4271	1591	4.2	Cristobalite low	1.4268	4.8	(3 1 2)	65.351	0.016
65.715	1.4198	918	2.4	Quartz	1.4145	1.4	(3 0 0)	65.990	0.275
66.754	1.4002	632	1.7						
67.297	1.3902	287	0.8	Cristobalite low	1.3933	4.0	(2 2 3)	67.128	-0.169

Additional File 2: Selected listings of XRD results

67.895	1.3794	478	1.3	Quartz	1.3789	16.2	(1 2-2)	67.919	0.024
68.595	1.3670	2505	6.6	Quartz	1.3683	22.2	(3 0 1)	68.519	-0.076
69.675	1.3484	494	1.3	Cristobalite low	1.3482	3.6	(3 2 1)	69.686	0.011
70.335	1.3374	2908	7.7	Anatase	1.3380	13.7	(2 2 0)	70.297	-0.038
72.616	1.3009	1408	3.7	Cristobalite low	1.2947	8.7	(3 1 3)	73.018	0.402
73.735	1.2839	1269	3.4	Cristobalite low	1.2825	0.3	(1 1 5)	73.829	0.094
75.015	1.2651	1606	4.2	Anatase	1.2646	21.4	(2 1 5)	75.050	0.035
75.354	1.2603	1297	3.4						
75.915	1.2524	493	1.3	Quartz	1.2530	4.3	(0 3 2)	75.871	-0.044
76.275	1.2473	327	0.9	Anatase	1.2506	5.6	(3 0 1)	76.043	-0.232
77.295	1.2334	811	2.1	Cristobalite low	1.2285	2.0	(2 2 4)	77.661	0.366
77.876	1.2257	1609	4.3	Quartz	1.2250	6.0	(2 2 0)	77.925	0.050
79.334	1.2067	1206	3.2	Cristobalite low	1.2044	0.7	(2 0 5)	79.518	0.184
80.076	1.1974	201	0.5	Quartz	1.1975	9.5	(1 2-3)	80.071	-0.004
81.035	1.1857	1410	3.7	Cristobalite low	1.1844	1.7	(4 1 1)	81.142	0.107
81.715	1.1775	1243	3.3	Quartz	1.1769	9.4	(1 3 0)	81.762	0.047
82.775	1.1651	1879	5.0	Cristobalite low	1.1661	2.1	(4 0 2)	82.687	-0.088
83.732	1.1542	210	0.6	Cristobalite low	1.1519	1.7	(3 3 1)	83.934	0.202
84.073	1.1504	391	1.0	Quartz	1.1500	8.1	(3 1-1)	84.111	0.038
87.495	1.1140	239	0.6	Quartz	1.1156	5.1	(2 2-2)	87.340	-0.155
88.174	1.1071	583	1.5	Cristobalite low	1.1065	1.8	(3 3 2)	88.241	0.066
89.155	1.0975	2839	7.5	Cristobalite low	1.0943	3.7	(4 2 1)	89.479	0.324

Additional File 2: Selected listings of XRD results



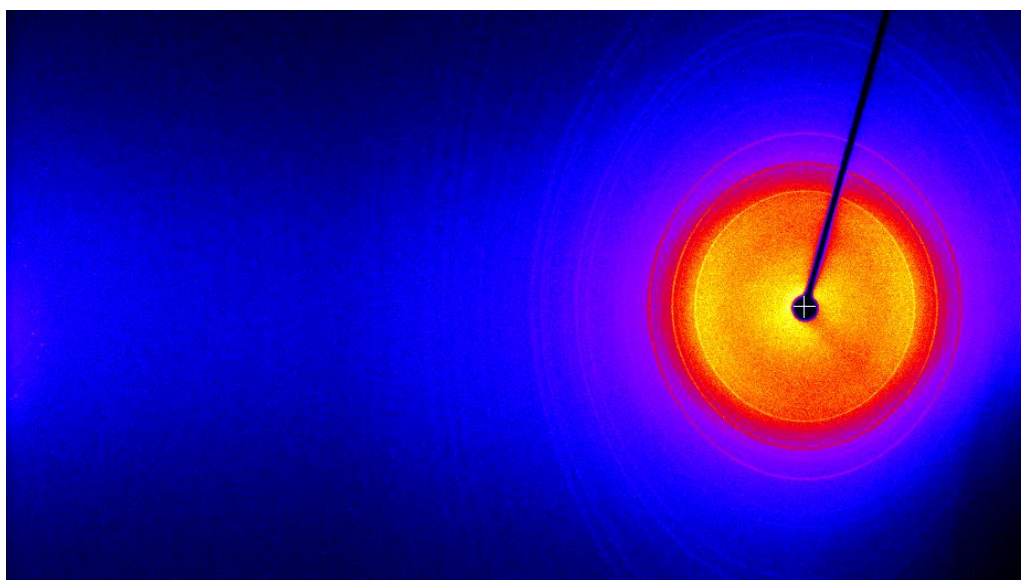
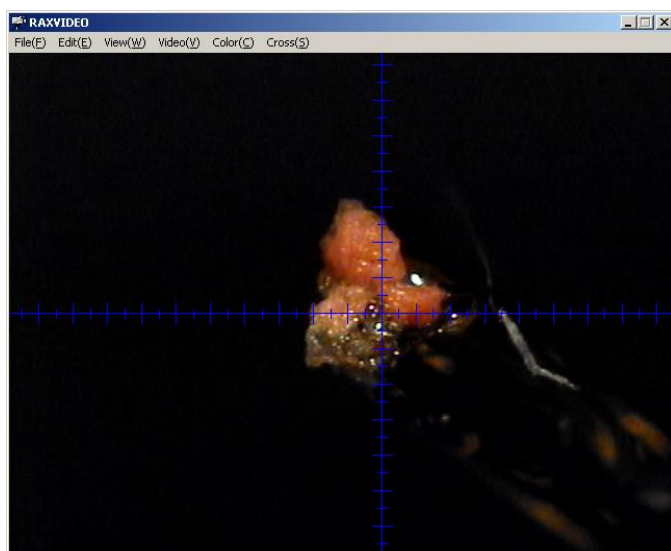
Additional File 2: Selected listings of XRD results

No. 2 Owner/Qero ID: Private Collection 2 Stylistic Period: Transitional Inka/Early Colonial

Sample: pink pigment around muzzle of llama head

Rigaku file: Kasser2.asc

Cu K α rad; 46 kV, 40 mA; 800 μ m collimator; osc on ω -10° – 30° at 1°/sec; osc on ϕ -180° - 0° at 3°/sec; 15 minute exp.



Additional File 2: Selected listings of XRD results

Peak ID Extended Report (70 Peaks, Max P/N = 103.6)

[Kasser2.asc] , Created by AreaMax

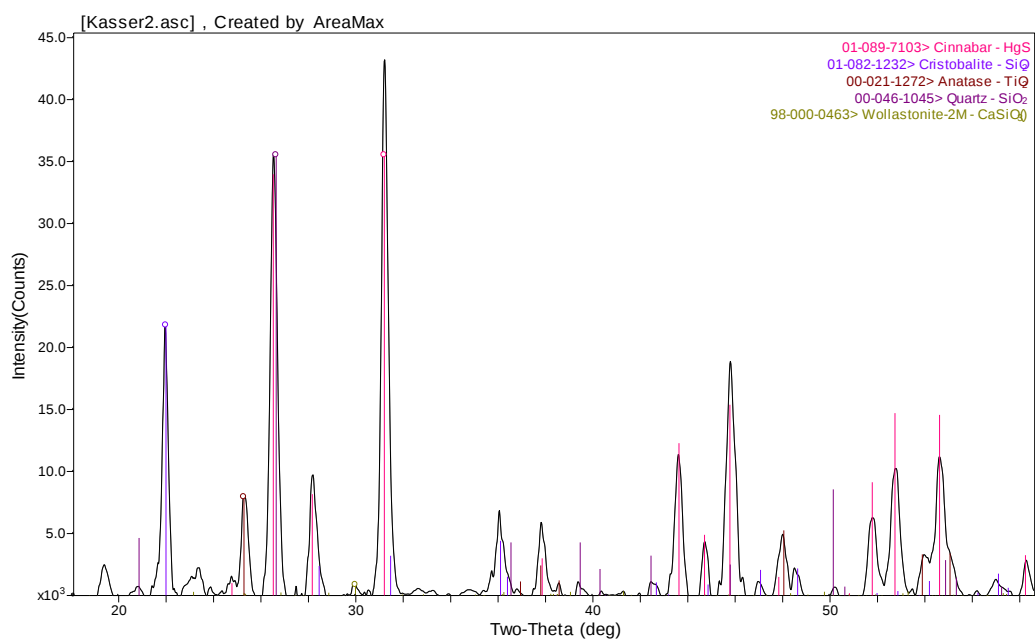
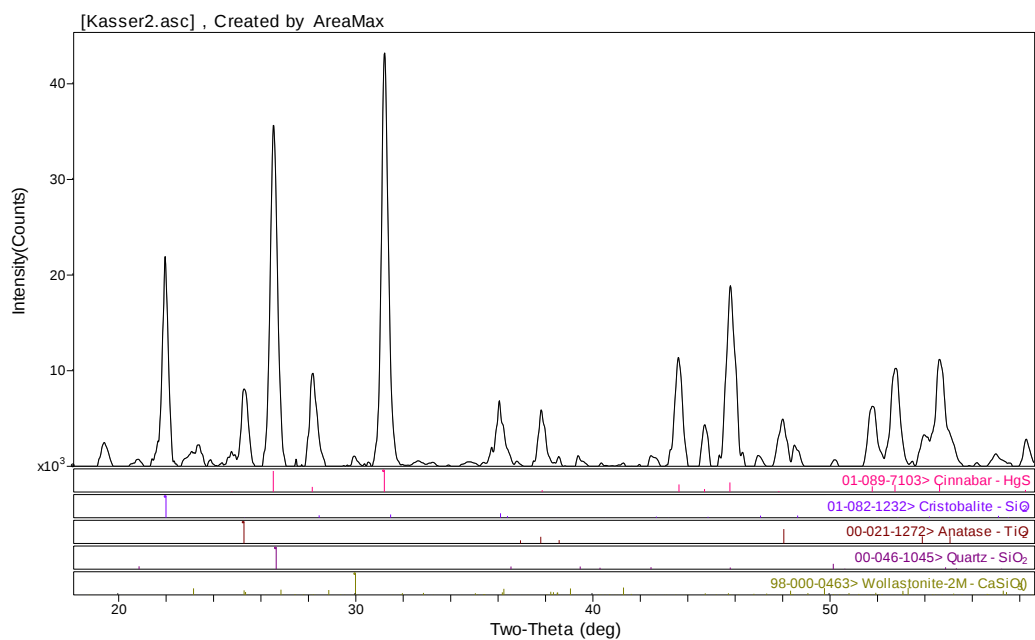
PEAK: 25-pts/Parabolic Filter, Threshold=3.0, Cutoff=0.1%, BG=3/1.0, Peak-Top=Summit

2-Theta	d(Å)	Height	Height%	Phase ID	d(Å)	I%	(h k l)	2-Theta	Delta
15.461	5.7264	372	0.9						
16.659	5.3173	303	0.7						
19.400	4.5719	2482	5.8						
20.820	4.2631	614	1.4	Quartz	4.2550	13.0	(1 0 0)	20.860	0.040
21.960	4.0443	21812	50.7	Cristobalite \$GA	4.0381	100.0	(1 0 1)	21.994	0.034
23.062	3.8535	1388	3.2						
23.380	3.8018	2108	4.9						
23.878	3.7236	628	1.5						
24.760	3.5929	1415	3.3	Cinnabar	3.5905	2.8	(1 0 0)	24.776	0.016
25.280	3.5201	7850	18.2	Anatase	3.5200	100.0	(1 0 1)	25.281	0.001
26.521	3.3582	35433	82.3	Cinnabar	3.3585	95.3	(0 1 1)	26.518	-0.003
28.199	3.1620	9726	22.6	Cinnabar	3.1657	22.9	(0 0 3)	28.166	-0.033
29.940	2.9820	1059	2.5						
30.525	2.9262	377	0.9						
31.220	2.8626	43061	100.0	Cinnabar	2.8640	100.0	(1 0 2)	31.205	-0.015
32.620	2.7428	567	1.3						
33.240	2.6931	414	1.0						
34.800	2.5759	423	1.0						
36.059	2.4888	6781	15.7	Cristobalite \$GA	2.4859	20.1	(2 0 0)	36.103	0.044
37.820	2.3768	5862	13.6	Anatase	2.3780	30.0	(0 0 4)	37.801	-0.019
39.381	2.2862	989	2.3	Quartz	2.2815	12.0	(1 0 2)	39.465	0.084
41.281	2.1852	323	0.7						
42.460	2.1272	1101	2.6	Quartz	2.1277	9.0	(2 0 0)	42.450	-0.010
43.600	2.0742	11177	26.0	Cinnabar	2.0730	34.4	(1 1 0)	43.627	0.027
44.720	2.0248	3779	8.8	Cinnabar	2.0253	13.7	(1 1 1)	44.709	-0.011
45.800	1.9796	18335	42.6	Quartz	1.9799	7.0	(2 0 1)	45.793	-0.007
46.962	1.9333	923	2.1	Cristobalite \$GA	1.9290	9.4	(1 1 3)	47.071	0.109
48.000	1.8938	4937	11.5	Anatase	1.8920	65.0	(2 0 0)	48.050	0.049
48.519	1.8748	2163	5.0	Cristobalite \$GA	1.8707	9.9	(2 1 2)	48.632	0.113
50.181	1.8165	669	1.6	Quartz	1.8180	24.0	(1 1 2)	50.139	-0.043
51.780	1.7641	6279	14.6	Cinnabar	1.7640	25.6	(2 0 1)	51.783	0.003
52.780	1.7330	10086	23.4	Cinnabar	1.7342	41.2	(1 1 3)	52.740	-0.040
53.960	1.6979	3132	7.3	Anatase	1.6999	41.0	(1 0 5)	53.891	-0.070
54.601	1.6795	11030	25.6	Cinnabar	1.6790	40.8	(0 2 2)	54.619	0.018
55.098	1.6655	3021	7.0	Anatase	1.6665	42.0	(2 1 1)	55.061	-0.037
57.000	1.6143	1284	3.0	Cristobalite \$GA	1.6117	8.0	(3 0 1)	57.102	0.103
58.280	1.5819	2661	6.2	Cinnabar	1.5828	9.1	(0 0 6)	58.242	-0.038
59.100	1.5619	2164	5.0	Cinnabar	1.5616	10.2	(2 0 3)	59.111	0.010
60.020	1.5401	854	2.0	Quartz	1.5415	20.0	(2 1 1)	59.960	-0.061
62.020	1.4952	1746	4.1	Cristobalite \$GA	1.4947	6.8	(3 0 2)	62.040	0.020
62.740	1.4797	2494	5.8	Anatase	1.4808	33.0	(2 0 4)	62.690	-0.050
64.060	1.4524	700	1.6	Quartz	1.4529	5.0	(1 1 3)	64.035	-0.025
65.080	1.4321	4208	9.8	Cinnabar	1.4320	13.2	(2 0 4)	65.085	0.005
66.760	1.4001	1340	3.1	Cinnabar	1.4004	4.6	(1 1 5)	66.739	-0.021
67.739	1.3822	684	1.6	Quartz	1.3821	15.0	(2 1 2)	67.744	0.004
68.200	1.3740	1490	3.5	Quartz	1.3750	17.0	(2 0 3)	68.144	-0.056
68.541	1.3680	2011	4.7	Cristobalite \$GA	1.3657	5.9	(2 1 4)	68.672	0.131
69.159	1.3572	1095	2.5	Cinnabar	1.3571	7.8	(2 1 0)	69.167	0.008
69.960	1.3436	4438	10.3	Cinnabar	1.3435	21.9	(1 2 1)	69.971	0.011
71.901	1.3121	1167	2.7						
72.400	1.3042	4536	10.5	Cinnabar	1.3048	22.3	(2 1 2)	72.361	-0.039
73.960	1.2805	372	0.9	Cristobalite \$GA	1.2810	6.0	(3 2 2)	73.930	-0.030

Additional File 2: Selected listings of XRD results

74.860	1.2674	1663	3.9	Cinnabar	1.2691	8.3	(0 1 7)	74.738	-0.122
75.620	1.2565	2517	5.8	Quartz	1.2559	8.0	(3 0 2)	75.659	0.039
76.120	1.2495	1339	3.1	Anatase	1.2509	11.0	(3 0 1)	76.019	-0.100
76.440	1.2451	1233	2.9	Cristobalite \$GA	1.2429	0.3	(4 0 0)	76.595	0.155
77.881	1.2256	336	0.8	Cristobalite \$GA	1.2234	3.0	(4 0 1)	78.049	0.169
79.379	1.2062	361	0.8	Cristobalite \$GA	1.2058	4.0	(4 1 0)	79.408	0.029
79.981	1.1986	255	0.6	Quartz	1.1978	3.0	(2 2 1)	80.046	0.065
80.880	1.1875	554	1.3	Cinnabar	1.1875	3.8	(3 0 1)	80.887	0.007
81.780	1.1767	1793	4.2	Cinnabar	1.1782	9.0	(1 2 4)	81.655	-0.125
82.460	1.1687	870	2.0	Cristobalite \$GA	1.1698	1.0	(4 0 2)	82.370	-0.090
82.920	1.1634	907	2.1	Cristobalite \$GA	1.1637	2.4	(3 1 4)	82.897	-0.023
83.380	1.1582	544	1.3	Cinnabar	1.1606	5.0	(0 3 2)	83.170	-0.209
84.842	1.1419	294	0.7	Quartz	1.1407	3.0	(2 0 4)	84.957	0.115
85.479	1.1350	534	1.2	Cinnabar	1.1352	2.3	(1 1 7)	85.462	-0.018
86.240	1.1269	1738	4.0	Cinnabar	1.1271	7.7	(1 0 8)	86.223	-0.017
86.920	1.1199	914	2.1	Cinnabar	1.1195	7.1	(0 3 3)	86.954	0.034
88.480	1.1041	1810	4.2	Cinnabar	1.1042	11.6	(2 1 5)	88.469	-0.011
88.940	1.0996	1150	2.7	Cristobalite \$GA	1.0976	3.3	(4 2 1)	89.139	0.199

Additional File 2: Selected listings of XRD results



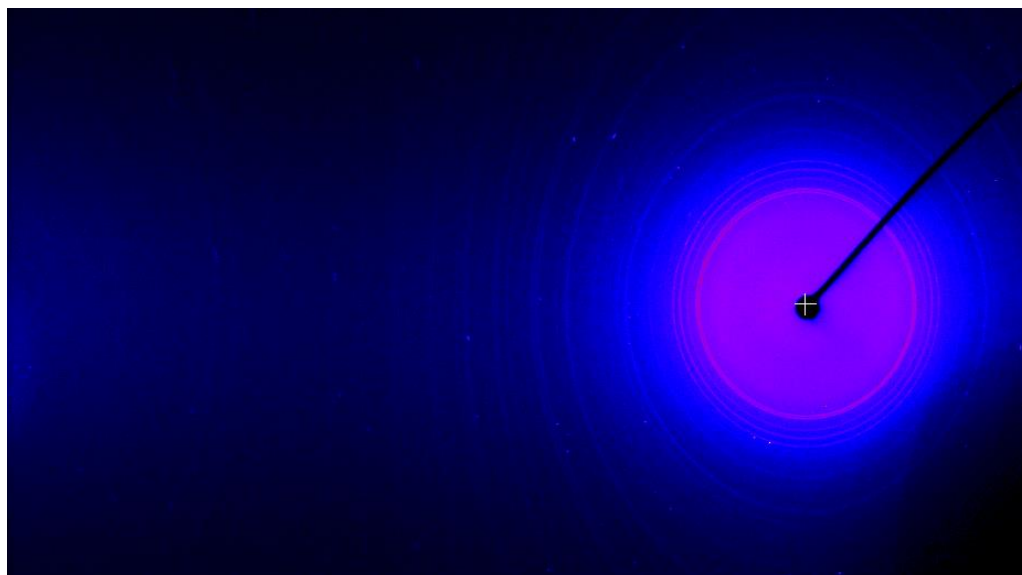
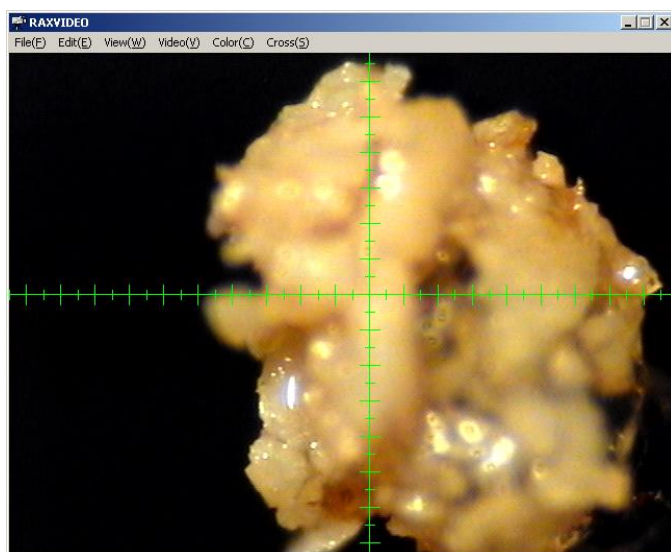
Additional File 2: Selected listings of XRD results

No. 4 Owner/Qero ID: MMA 1994.35.12; Stylistic Period: Transitional Inka/Early Colonial

Sample: sub-sample no. 2: cream-colored pigment from diamond motif, crushed between glass slides on glass fiber with Vaseline (*cf.* 1994_35_12_white1a.asc obtained from separate aliquot of same sample)

Rigaku file: 1994_35_12_white1b.asc

Cu K α rad; 46 kV, 40 mA; 800 μ m collimator; osc on ω -10° – 20° at 1°/sec; osc on ϕ --90° - 90° at 3°/sec; 16 minute exp. This is 16 min exposure compared to 14 min exposure of 1994_35_12_white1a.asc



Additional File 2: Selected listings of XRD results

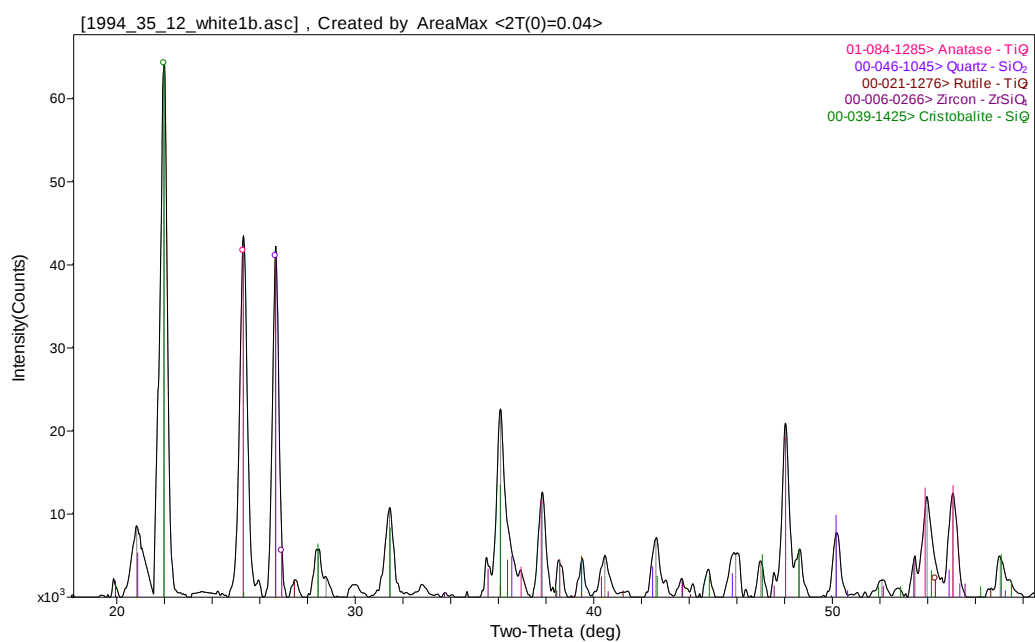
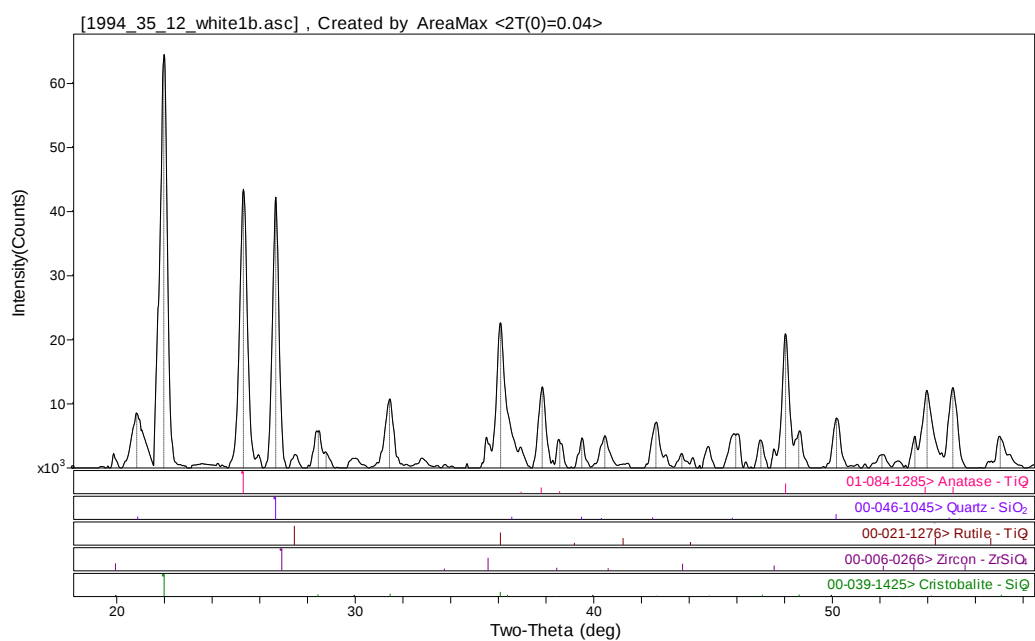
Peak ID Extended Report (45 Peaks, Max P/N = 127.0)

[1994_35_12_white1b.asc] , Created by AreaMax

PEAK: 27-pts/Parabolic Filter, Threshold=3.0, Cutoff=3.1%, BG=3/1.0, Peak-Top=Centroid Fit

2-Theta	d(Å)	Height	Height%	Phase ID	d(Å)	I%	(h k l)	2-Theta	Delta
20.842	4.2585	8457	13.1	Quartz	4.2510	13.0	(1 0 0)	20.880	0.038
21.973	4.0419	64492	100.0	\$GA-Cristobalite	4.0434	100.0	(1 0 1)	21.965	-0.008
25.315	3.5154	43302	67.1	Anatase	3.5167	100.0	(1 0 1)	25.306	-0.009
26.668	3.3400	41885	64.9	Quartz	3.3410	100.0	(1 0 1)	26.660	-0.008
28.454	3.1342	5785	9.0	\$GA-Cristobalite	3.1384	12.0	(1 1 1)	28.416	-0.038
28.780	3.0995	2210	3.4						
31.438	2.8433	10721	16.6	\$GA-Cristobalite	2.8447	16.2	(1 0 2)	31.421	-0.016
35.550	2.5233	4783	7.4	Zircon	2.5221	59.0	(1 1 2)	35.566	0.017
36.100	2.4861	22645	35.1	Rutile	2.4870	57.0	(1 0 1)	36.086	-0.014
37.839	2.3757	12381	19.2	Anatase	2.3781	27.8	(0 0 4)	37.799	-0.040
38.578	2.3319	4078	6.3	Anatase	2.3324	10.9	(1 1 2)	38.569	-0.009
39.500	2.2795	4459	6.9	Quartz	2.2804	12.0	(1 0 2)	39.485	-0.015
40.463	2.2275	4822	7.5	\$GA-Cristobalite	2.2259	0.2	(2 1 0)	40.492	0.029
42.610	2.1201	7159	11.1	\$GA-Cristobalite	2.1194	5.0	(2 1 1)	42.624	0.014
45.956	1.9732	5120	7.9	Quartz	1.9790	7.0	(2 0 1)	45.813	-0.143
47.007	1.9315	4029	6.2	\$GA-Cristobalite	1.9319	10.0	(1 1 3)	46.997	-0.009
48.043	1.8923	20790	32.2	Anatase	1.8924	45.7	(2 0 0)	48.039	-0.004
48.596	1.8720	5713	8.9	\$GA-Cristobalite	1.8731	10.4	(2 1 2)	48.566	-0.030
50.179	1.8166	7798	12.1	Quartz	1.8173	24.0	(1 1 2)	50.159	-0.020
52.085	1.7545	1850	2.9	Zircon	1.7529	23.0	(3 2 1)	52.137	0.053
53.466	1.7124	4701	7.3	Zircon	1.7138	77.0	(3 1 2)	53.419	-0.047
53.975	1.6974	11842	18.4	Anatase	1.6998	31.4	(1 0 5)	53.894	-0.081
55.054	1.6667	12517	19.4	Anatase	1.6664	32.1	(2 1 1)	55.063	0.010
57.043	1.6132	4944	7.7	\$GA-Cristobalite	1.6136	8.3	(3 0 1)	57.029	-0.013
60.078	1.5388	6170	9.6	Quartz	1.5411	20.0	(2 1 1)	59.980	-0.099
62.072	1.4940	5086	7.9	Anatase	1.4932	6.4	(2 1 3)	62.112	0.039
62.742	1.4797	9819	15.2	Rutile	1.4797	19.0	(0 0 2)	62.742	-0.001
65.118	1.4313	3224	5.0	\$GA-Cristobalite	1.4332	4.2	(3 1 2)	65.023	-0.095
65.585	1.4223	2127	3.3	\$GA-Cristobalite	1.4224	3.4	(2 0 4)	65.579	-0.006
67.854	1.3801	5652	8.8	\$GA-Cristobalite	1.3805	0.3	(3 2 0)	67.834	-0.020
68.315	1.3719	6477	10.0	Quartz	1.3715	12.0	(3 0 1)	68.338	0.022
68.661	1.3659	4230	6.6	\$GA-Cristobalite	1.3676	5.6	(2 1 4)	68.560	-0.102
69.870	1.3451	1929	3.0	Rutile	1.3465	25.0	(1 1 2)	69.790	-0.081
70.347	1.3372	6503	10.1	Anatase	1.3381	13.7	(2 2 0)	70.290	-0.056
72.624	1.3008	2063	3.2	\$GA-Cristobalite	1.3009	6.5	(3 1 3)	72.613	-0.011
73.838	1.2824	2732	4.2	\$GA-Cristobalite	1.2825	6.0	(3 2 2)	73.826	-0.012
75.111	1.2637	6765	10.5	Anatase	1.2646	22.0	(2 1 5)	75.054	-0.057
75.798	1.2540	2645	4.1	Quartz	1.2557	8.0	(3 0 2)	75.679	-0.119
79.978	1.1986	1736	2.7	\$GA-Cristobalite	1.1986	0.3	(3 0 4)	79.984	0.006
80.857	1.1878	2021	3.1	Zircon	1.1890	33.0	(5 1 2)	80.757	-0.101
81.171	1.1840	3009	4.7	Quartz	1.1837	6.0	(1 1 4)	81.193	0.021
81.619	1.1786	2035	3.2	Quartz	1.1799	6.0	(3 1 0)	81.511	-0.108
82.757	1.1653	3383	5.2	\$GA-Cristobalite	1.1653	2.8	(3 1 4)	82.760	0.002
87.765	1.1112	1583	2.5	\$GA-Cristobalite	1.1113	1.5	(3 3 2)	87.762	-0.003
89.124	1.0978	3723	5.8	\$GA-Cristobalite	1.0979	4.8	(1 1 6)	89.110	-0.014

Additional File 2: Selected listings of XRD results



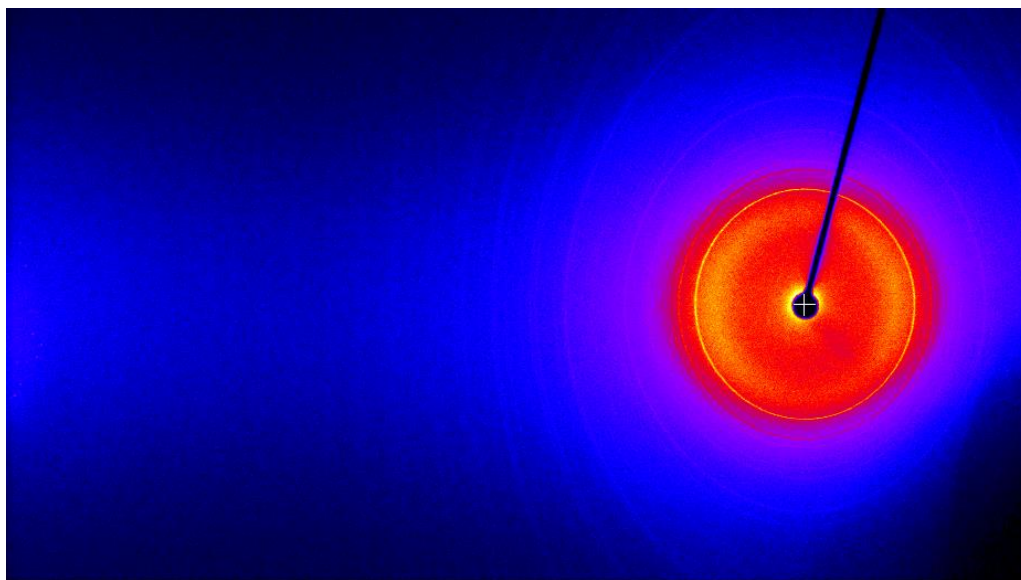
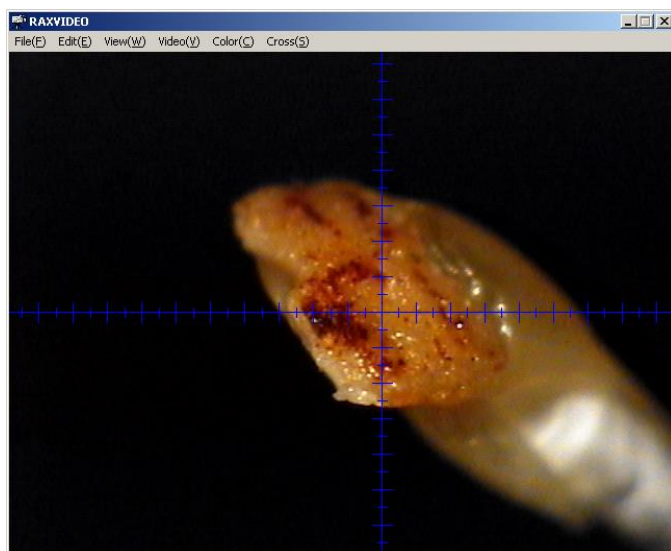
Additional File 2: Selected listings of XRD results

No. 10 Owner/Qero ID: NMAI 21/7453; Stylistic Period: Transitional Inka/Early Colonial

Sample: white pigment (1 thin flake mounted as is)

Rigaku file: NMAI217453-000-01a.asc

Cu K α rad; 46 kV, 40 mA; 800 μ m collimator; osc on ω -10° – 30° at 1°/sec; osc on ϕ -180° - 0° at 3°/sec; 15 minute exp.



Additional File 2: Selected listings of XRD results

Peak ID Extended Report (66 Peaks, Max P/N = 124.0)

[NMAI217453-000-01a.asc] , Created by AreaMax

PEAK: 25-pts/Parabolic Filter, Threshold=3.0, Cutoff=0.1%, BG=3/1.0, Peak-Top=Summit

2-Theta	d(Å)	Height	Height%	Phase ID	d(Å)	I%	(h k l)	2-Theta	Delta
20.900	4.2468	1618	2.6	Quartz	4.2551	14.8	(1 0 0)	20.859	-0.041
21.960	4.0443	61553	100.0	Cristobalite low	4.0474	100.0	(1 0 1)	21.943	-0.017
25.320	3.5147	27796	45.2	Anatase	3.5169	100.0	(1 0 1)	25.304	-0.016
26.660	3.3410	15614	25.4	Quartz	3.3434	100.0	(0 1 1)	26.640	-0.020
27.420	3.2501	1148	1.9	Rutile	3.2470	87.0	(1 1 0)	27.447	0.027
28.362	3.1443	6394	10.4	Cristobalite low	3.1406	11.0	(1 1 1)	28.396	0.034
29.940	2.9820	6974	11.3						
31.400	2.8466	9944	16.2	Cristobalite low	2.8496	14.6	(1 0 2)	31.366	-0.034
32.160	2.7810	822	1.3						
35.041	2.5587	1256	2.0						
36.060	2.4887	16871	27.4	Cristobalite low	2.4894	20.5	(2 0 0)	36.051	-0.009
37.761	2.3804	7719	12.5	Anatase	2.3785	29.8	(0 0 4)	37.793	0.032
38.559	2.3330	2728	4.4	Anatase	2.3326	10.0	(1 1 2)	38.566	0.007
39.380	2.2862	2661	4.3	Quartz	2.2813	11.3	(1 0 2)	39.467	0.087
42.561	2.1224	4306	7.0	Cristobalite low	2.1204	5.0	(2 1 1)	42.604	0.043
43.840	2.0634	748	1.2	Rutile	2.0540	14.0	(2 1 0)	44.051	0.212
44.801	2.0214	3317	5.4	Cristobalite low	2.0237	4.0	(2 0 2)	44.746	-0.054
46.040	1.9698	5846	9.5	Quartz	1.9797	5.8	(2 0 1)	45.796	-0.244
47.040	1.9302	3177	5.2	Cristobalite low	1.9353	9.4	(1 1 3)	46.910	-0.130
48.000	1.8938	13894	22.6	Anatase	1.8925	53.2	(2 0 0)	48.036	0.036
48.519	1.8748	5637	9.2	Cristobalite low	1.8747	9.9	(2 1 2)	48.520	0.001
49.380	1.8441	574	0.9						
50.160	1.8172	3222	5.2	Quartz	1.8179	25.8	(1 1 2)	50.141	-0.019
51.899	1.7603	668	1.1	Cristobalite low	1.7602	0.9	(2 2 0)	51.903	0.003
52.360	1.7459	2001	3.3	Cristobalite low	1.7602	0.9	(2 2 0)	51.903	-0.457
52.800	1.7324	807	1.3	Cristobalite low	1.7376	1.6	(0 0 4)	52.632	-0.168
53.960	1.6979	8798	14.3	Cristobalite low	1.6959	5.3	(2 0 3)	54.028	0.067
55.060	1.6665	8284	13.5	Anatase	1.6665	37.8	(2 1 1)	55.060	0.000
56.181	1.6359	869	1.4	Cristobalite low	1.6405	1.0	(1 0 4)	56.010	-0.171
57.000	1.6143	4382	7.1	Cristobalite low	1.6142	8.0	(3 0 1)	57.006	0.005
60.140	1.5373	3878	6.3	Cristobalite low	1.5355	6.1	(3 1 1)	60.219	0.079
61.463	1.5074	1139	1.9						
62.000	1.4956	5701	9.3	Cristobalite low	1.4976	6.8	(3 0 2)	61.910	-0.090
62.700	1.4806	6896	11.2	Anatase	1.4809	32.2	(2 0 4)	62.684	-0.016
63.717	1.4594	943	1.5	Quartz	1.4529	4.6	(1 1 3)	64.036	0.318
64.060	1.4524	1357	2.2	Rutile	1.4528	19.0	(3 1 0)	64.040	-0.020
65.060	1.4325	2925	4.8	Cristobalite low	1.4341	5.6	(3 1 2)	64.977	-0.083
65.560	1.4227	2123	3.4	Rutile	1.4243	4.0	(2 2 1)	65.479	-0.080
66.780	1.3997	1437	2.3	Cristobalite low	1.4016	3.5	(2 2 3)	66.678	-0.101
67.900	1.3793	1399	2.3	Cristobalite low	1.3808	0.3	(3 2 0)	67.814	-0.086
68.720	1.3648	3079	5.0	Anatase	1.3642	16.6	(1 1 6)	68.755	0.035
69.284	1.3551	247	0.4	Cristobalite low	1.3544	2.7	(3 2 1)	69.326	0.042
70.380	1.3366	4746	7.7	Anatase	1.3382	17.7	(2 2 0)	70.286	-0.094
72.560	1.3018	1970	3.2	Cristobalite low	1.3022	5.9	(3 1 3)	72.534	-0.026
73.800	1.2829	3112	5.1	Cristobalite low	1.2832	6.0	(3 2 2)	73.778	-0.021
75.060	1.2645	3387	5.5	Anatase	1.2647	28.9	(2 1 5)	75.045	-0.015
75.839	1.2534	1515	2.5	Quartz	1.2559	8.6	(3 0 2)	75.661	-0.178
76.200	1.2484	1197	1.9	Anatase	1.2507	7.9	(3 0 1)	76.032	-0.168
77.080	1.2363	908	1.5	Cristobalite low	1.2366	2.0	(2 2 4)	77.060	-0.020
77.860	1.2259	1942	3.2	Cristobalite low	1.2252	3.0	(4 0 1)	77.911	0.051
78.340	1.2196	581	0.9						
79.300	1.2072	2011	3.3	Cristobalite low	1.2075	4.0	(4 1 0)	79.274	-0.027

Additional File 2: Selected listings of XRD results

79.900	1.1996	710	1.2	Quartz	1.1998	9.3	(2 1 3)	79.884	-0.017
81.120	1.1846	2232	3.6	Quartz	1.1840	8.1	(1 1 4)	81.171	0.051
81.701	1.1777	1659	2.7	Cristobalite low	1.1791	4.1	(2 1 5)	81.579	-0.122
82.680	1.1662	2458	4.0	Anatase	1.1663	15.8	(2 2 4)	82.672	-0.009
83.039	1.1621	1311	2.1	Anatase	1.1607	6.5	(3 1 2)	83.153	0.114
83.582	1.1559	651	1.1	Cristobalite low	1.1571	1.4	(3 3 1)	83.473	-0.109
85.322	1.1367	374	0.6	Cristobalite low	1.1406	0.7	(4 1 2)	84.960	-0.362
86.439	1.1249	566	0.9	Cristobalite low	1.1282	0.4	(1 0 6)	86.117	-0.322
86.840	1.1207	449	0.7						
87.600	1.1129	783	1.3	Cristobalite low	1.1118	1.5	(3 3 2)	87.709	0.109
89.100	1.0980	3326	5.4	Cristobalite low	1.0993	3.7	(4 2 1)	88.973	-0.127

Also possibly with wollastonite per the following:

Peak ID Extended Report (63 Peaks, Max P/N = 123.8)

[NMAI217453-000-01a.asc] , Created by AreaMax

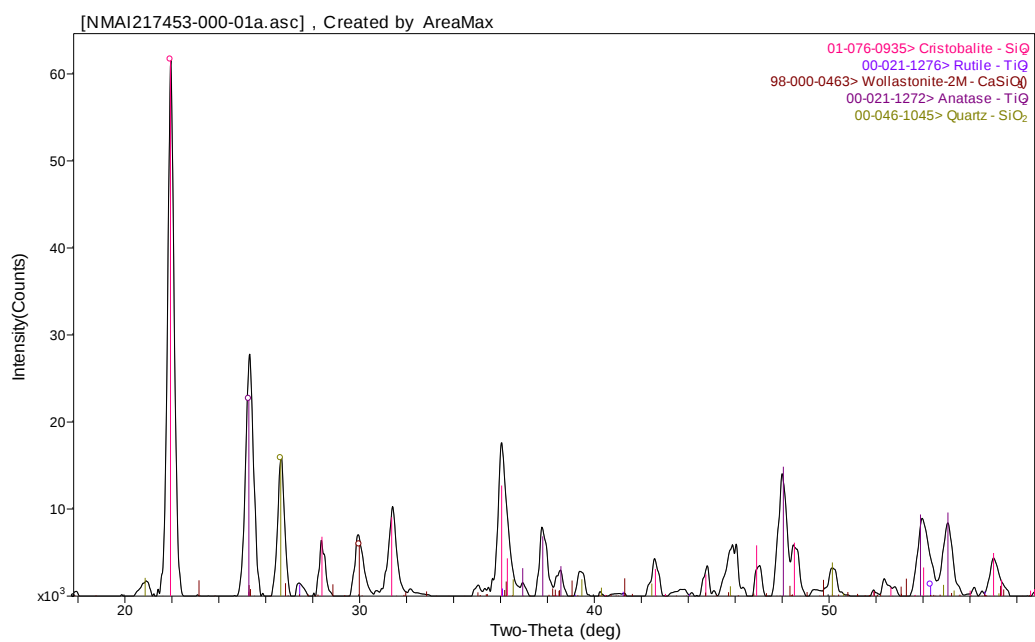
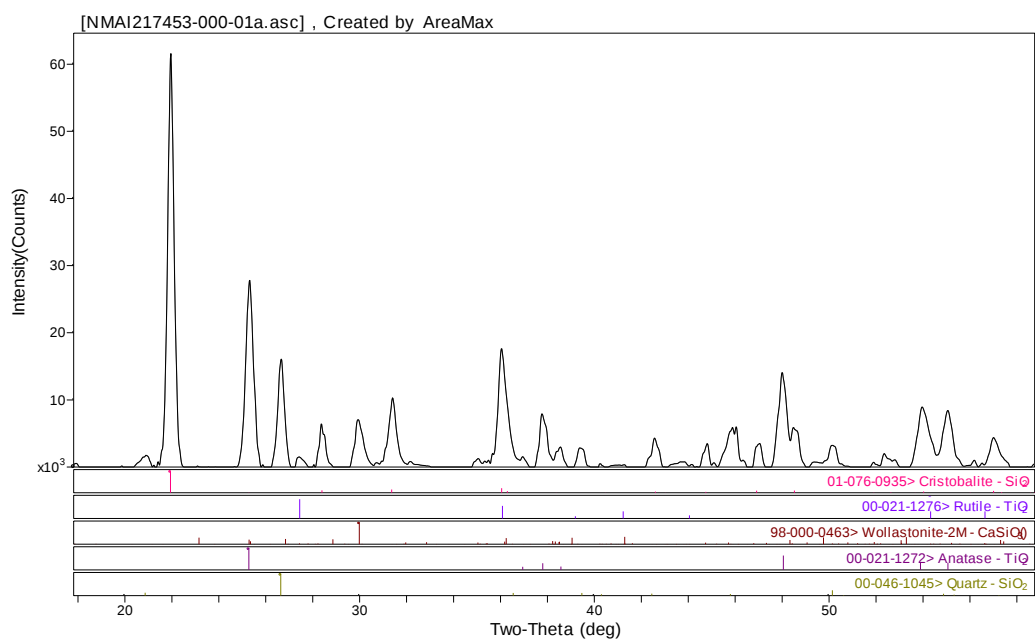
PEAK: 25(pts)/Parabolic Filter, Threshold=3.0, Cutoff=0.1%, BG=3/1.0, Peak-Top=Summit

2-Theta	d(Å)	Height	Height%	Phase ID	d(Å)	I%	(h k l)	2-Theta	Delta
12.321	7.1779	505	0.8	Wollastonite-2M	7.0380	0.2	(0 0 1)	12.567	0.246
15.541	5.6974	449	0.7						
17.920	4.9459	546	0.9	Wollastonite-2M	4.9614	1.9	(2 0 1)	17.863	-0.057
20.900	4.2468	1618	2.6	Quartz	4.2550	13.0	(1 0 0)	20.860	-0.041
21.960	4.0443	61447	100.0	Cristobalite	4.0474	100.0	(1 0 1)	21.943	-0.017
25.320	3.5147	27690	45.1	Wollastonite-2M	3.5105	13.0	(4 0 -1)	25.350	0.031
26.660	3.3410	15956	26.0	Quartz	3.3435	100.0	(1 0 1)	26.640	-0.020
27.420	3.2501	1393	2.3	Wollastonite-2M	3.2482	3.2	(0 2 1)	27.436	0.016
28.362	3.1443	6282	10.2	Cristobalite	3.1406	11.0	(1 1 1)	28.396	0.034
29.940	2.9820	6974	11.3	Wollastonite-2M	2.9778	100.0	(3 2 0)	29.984	0.044
31.400	2.8466	10231	16.6	Wollastonite-2M	2.8478	0.2	(2 1 2)	31.386	-0.014
32.160	2.7810	756	1.2	Wollastonite-2M	2.7976	7.7	(3 2 -1)	31.964	-0.196
36.060	2.4887	16871	27.5	Cristobalite	2.4894	20.5	(2 0 0)	36.051	-0.009
37.761	2.3804	7719	12.6	Anatase	2.3780	30.0	(0 0 4)	37.801	0.040
38.559	2.3330	2787	4.5	Anatase	2.3320	15.0	(1 1 2)	38.576	0.016
39.380	2.2862	2661	4.3	Quartz	2.2815	12.0	(1 0 2)	39.465	0.085
42.561	2.1224	4257	6.9	Cristobalite	2.1204	5.0	(2 1 1)	42.604	0.043
43.840	2.0634	748	1.2	Wollastonite-2M	2.0646	0.4	(7 1 -1)	43.814	-0.025
44.801	2.0214	3452	5.6	Cristobalite	2.0237	4.0	(2 0 2)	44.746	-0.054
46.040	1.9698	5953	9.7	Wollastonite-2M	1.9664	1.0	(2 3 -2)	46.125	0.085
47.040	1.9302	3492	5.7	Cristobalite	1.9353	9.4	(1 1 3)	46.910	-0.130
48.000	1.8938	14042	22.9	Wollastonite-2M	1.8936	0.3	(3 2 -3)	48.006	0.006
48.519	1.8748	5669	9.2	Cristobalite	1.8748	9.9	(2 1 2)	48.520	0.001
49.380	1.8441	726	1.2	Wollastonite-2M	1.8364	0.7	(8 1 -1)	49.600	0.220
50.160	1.8172	3201	5.2	Wollastonite-2M	1.8179	3.1	(1 4 0)	50.141	-0.019
51.899	1.7603	686	1.1	Cristobalite	1.7602	0.9	(2 2 0)	51.903	0.003
52.360	1.7460	2001	3.3	Wollastonite-2M	1.7511	3.4	(2 0 -4)	52.195	-0.165
52.800	1.7324	807	1.3	Wollastonite-2M	1.7345	0.2	(5 1 3)	52.732	-0.068
53.960	1.6979	8798	14.3	Cristobalite	1.6959	5.3	(2 0 3)	54.028	0.067
55.060	1.6665	8284	13.5	Anatase	1.6665	42.0	(2 1 1)	55.061	0.001
56.181	1.6359	869	1.4	Wollastonite-2M	1.6393	0.8	(3 3 -3)	56.055	-0.126
57.000	1.6143	4305	7.0	Cristobalite	1.6142	8.0	(3 0 1)	57.006	0.005
60.140	1.5373	3878	6.3	Wollastonite-2M	1.5378	3.0	(9 2 -1)	60.119	-0.021
61.463	1.5074	1139	1.9	Wollastonite-2M	1.5072	0.2	(6 2 3)	61.471	0.008
62.000	1.4956	5701	9.3	Cristobalite	1.4976	6.8	(3 0 2)	61.910	-0.090
62.700	1.4806	6896	11.2	Anatase	1.4808	33.0	(2 0 4)	62.690	-0.010

Additional File 2: Selected listings of XRD results

63.717	1.4594	943	1.5	Wollastonite-2M	1.4602	0.6	(5 2-4)	63.679	-0.038
64.060	1.4524	1357	2.2	Rutile	1.4528	19.0	(3 1 0)	64.040	-0.020
65.060	1.4325	3125	5.1	Wollastonite-2M	1.4335	9.1	(2 4-3)	65.007	-0.053
65.560	1.4227	2331	3.8	Wollastonite-2M	1.4228	0.8	(2 3-4)	65.555	-0.005
66.780	1.3997	1632	2.7	Wollastonite-2M	1.3988	4.5	(6 4-2)	66.827	0.047
67.900	1.3793	2064	3.4	Cristobalite	1.3808	0.3	(3 2 0)	67.814	-0.086
68.720	1.3648	4574	7.4	Anatase	1.3641	15.0	(1 1 6)	68.762	0.042
69.280	1.3552	2029	3.3	Wollastonite-2M	1.3546	0.4	(10,2,-2)	69.313	0.032
70.380	1.3366	4746	7.7	Wollastonite-2M	1.3361	0.9	(5 4-3)	70.411	0.031
72.560	1.3018	1929	3.1	Cristobalite	1.3022	5.9	(3 1 3)	72.534	-0.026
73.800	1.2829	3275	5.3	Cristobalite	1.2833	6.0	(3 2 2)	73.778	-0.021
75.060	1.2645	3686	6.0	Anatase	1.2649	28.0	(2 1 5)	75.031	-0.029
75.839	1.2534	1647	2.7	Wollastonite-2M	1.2517	0.4	(10,3,-2)	75.959	0.119
76.200	1.2484	1328	2.2	Anatase	1.2509	11.0	(3 0 1)	76.019	-0.181
77.080	1.2363	1039	1.7	Wollastonite-2M	1.2365	2.3	(7 2 4)	77.063	-0.017
77.860	1.2259	1988	3.2	Cristobalite	1.2252	3.0	(4 0 1)	77.911	0.051
78.340	1.2196	627	1.0	Wollastonite-2M	1.2194	0.4	(0 3 5)	78.352	0.013
79.300	1.2072	2011	3.3	Cristobalite	1.2075	4.0	(4 1 0)	79.274	-0.027
79.900	1.1996	879	1.4	Quartz	1.1998	6.0	(2 1 3)	79.884	-0.017
81.120	1.1846	2232	3.6	Quartz	1.1840	6.0	(1 1 4)	81.173	0.052
81.701	1.1777	1958	3.2	Wollastonite-2M	1.1764	1.4	(10,4,0)	81.811	0.110
82.680	1.1662	2701	4.4	Anatase	1.1664	18.0	(2 2 4)	82.661	-0.019
83.039	1.1621	1263	2.1	Wollastonite-2M	1.1612	0.3	(2 1-6)	83.113	0.074
86.439	1.1249	566	0.9	Wollastonite-2M	1.1239	0.5	(13,2,0)	86.527	0.088
86.840	1.1207	449	0.7	Wollastonite-2M	1.1214	0.3	(1 2-6)	86.773	-0.068
87.600	1.1129	783	1.3	Wollastonite-2M	1.1122	2.6	(3 2-6)	87.668	0.068
89.100	1.0980	3195	5.2	Wollastonite-2M	1.0981	0.3	(4 5-4)	89.096	-0.004

Additional File 2: Selected listings of XRD results



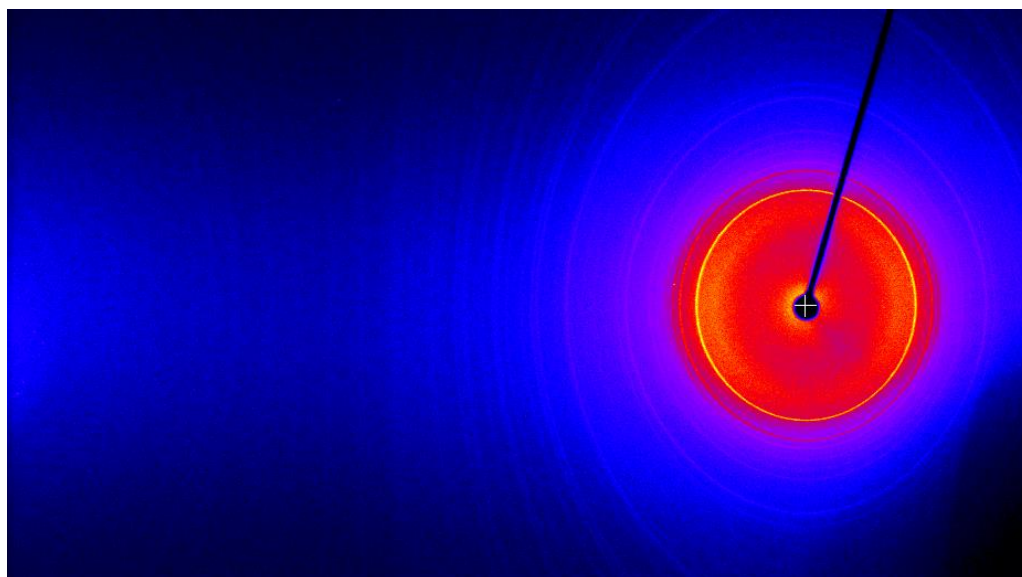
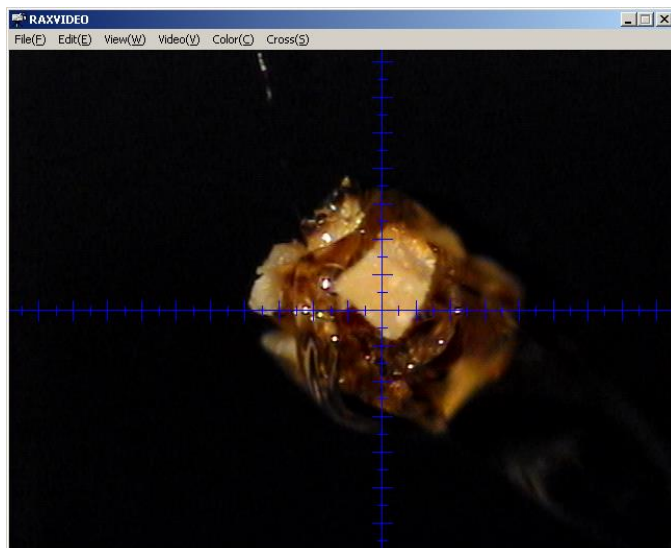
Additional File 2: Selected listings of XRD results

No. 12 Owner/Qero ID: NMAI 10/5860; Stylistic Period: Transitional Inka/Early Colonial

Sample: white pigment

Rigaku file: NMAI105860-000-04b.asc (repeat of NMAI105860-000-04.asc with separate aliquot and for 15 minutes)

Cu K α rad; 46 kV, 40 mA; 800 μ m collimator; osc on ω -10° – 30° at 1°/sec; osc on ϕ -180° - 0° at 3°/sec; 15 minute exp.



Additional File 2: Selected listings of XRD results

Peak ID Extended Report (63 Peaks, Max P/N = 144.1)

[NMAI105860-000-04b.asc] , Created by AreaMax

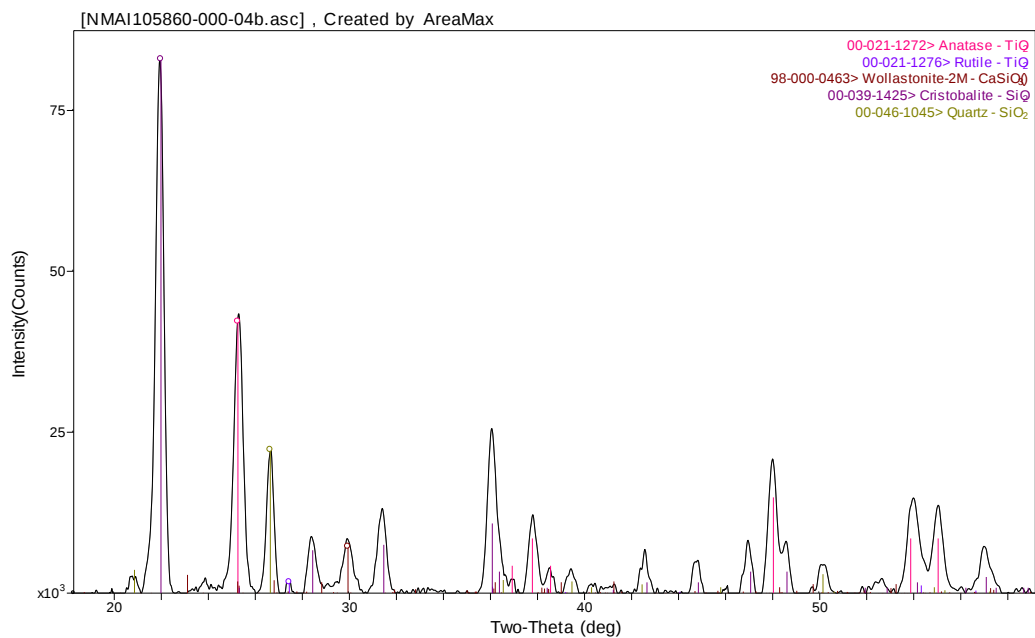
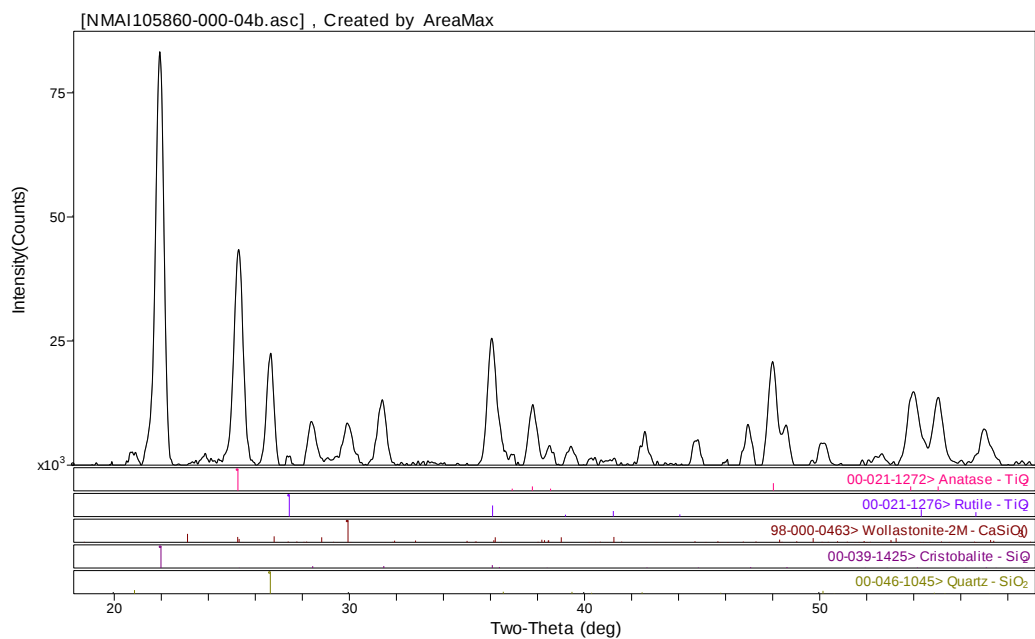
PEAK: 25-pts/Parabolic Filter, Threshold=3.0, Cutoff=0.1%, BG=3/1.0, Peak-Top=Summit

2-Theta	d(Å)	Height	Height%	Phase ID	d(Å)	I%	(h k l)	2-Theta	Delta
20.760	4.2753	1909	2.3	Quartz	4.2557	16.7	(1 0 0)	20.856	0.096
21.940	4.0479	83106	100.0	Cristobalite \$GA	4.0381	100.0	(1 0 1)	21.994	0.054
25.300	3.5174	42581	51.2	Anatase	3.5169	100.0	(1 0 1)	25.304	0.004
26.660	3.3410	22803	27.4	Quartz	3.3439	100.0	(1 0 1)	26.636	-0.023
27.400	3.2524	2526	3.0	Rutile	3.2470	87.0	(1 1 0)	27.447	0.047
28.400	3.1401	7902	9.5	Cristobalite \$GA	3.1345	10.8	(1 1 1)	28.452	0.052
29.920	2.9840	7285	8.8						
31.400	2.8466	13598	16.4	Cristobalite \$GA	2.8406	14.6	(1 0 2)	31.468	0.069
36.040	2.4900	25767	31.0	Rutile	2.4870	57.0	(1 0 1)	36.086	0.046
37.760	2.3805	11777	14.2	Anatase	2.3785	29.8	(0 0 4)	37.793	0.032
38.559	2.3330	3137	3.8	Anatase	2.3326	10.0	(1 1 2)	38.566	0.007
39.380	2.2862	2925	3.5	Quartz	2.2817	9.7	(0 1 2)	39.461	0.081
40.339	2.2340	936	1.1	Quartz	2.2369	4.6	(1 1-1)	40.286	-0.053
41.279	2.1853	1138	1.4	Rutile	2.1880	32.0	(1 1 1)	41.226	-0.053
42.560	2.1224	6916	8.3	Quartz	2.1279	7.9	(2 0 0)	42.446	-0.114
44.780	2.0223	2983	3.6	Cristobalite \$GA	2.0191	4.0	(2 0 2)	44.855	0.075
45.918	1.9747	6134	7.4	Quartz	1.9800	4.6	(0 2 1)	45.789	-0.129
46.960	1.9333	6559	7.9	Cristobalite \$GA	1.9290	9.4	(1 1 3)	47.071	0.111
48.000	1.8938	22145	26.6	Anatase	1.8925	53.2	(2 0 0)	48.036	0.036
48.560	1.8733	8685	10.5	Cristobalite \$GA	1.8707	9.9	(2 1 2)	48.632	0.073
50.120	1.8186	4847	5.8	Quartz	1.8181	20.4	(1 1-2)	50.133	0.013
50.880	1.7932	562	0.7	Quartz	1.8020	0.7	(0 0 3)	50.614	-0.266
51.842	1.7622	959	1.2	Cristobalite \$GA	1.7578	0.9	(2 2 0)	51.981	0.140
52.640	1.7373	2139	2.6	Cristobalite \$GA	1.7306	1.6	(0 0 4)	52.861	0.220
53.960	1.6979	14238	17.1	Anatase	1.7001	37.7	(1 0 5)	53.885	-0.075
55.060	1.6665	13133	15.8	Anatase	1.6665	37.8	(2 1 1)	55.060	0.000
56.021	1.6402	533	0.6	Cristobalite \$GA	1.6344	1.0	(1 0 4)	56.238	0.217
57.000	1.6143	7338	8.8	Cristobalite \$GA	1.6117	8.0	(3 0 1)	57.102	0.102
60.080	1.5387	6297	7.6	Quartz	1.5417	17.1	(2 1-1)	59.952	-0.129
62.000	1.4956	8021	9.7	Cristobalite \$GA	1.4947	6.8	(3 0 2)	62.040	0.040
62.720	1.4802	10634	12.8	Rutile	1.4797	19.0	(0 0 2)	62.742	0.022
64.059	1.4524	1001	1.2	Rutile	1.4528	19.0	(3 1 0)	64.040	-0.020
65.000	1.4336	5674	6.8	Cristobalite \$GA	1.4314	5.6	(3 1 2)	65.113	0.113
65.640	1.4212	2178	2.6	Cristobalite \$GA	1.4203	3.7	(2 0 4)	65.688	0.048
66.800	1.3993	1558	1.9	Cristobalite \$GA	1.3983	3.5	(2 2 3)	66.857	0.057
67.780	1.3814	2557	3.1	Quartz	1.3823	11.6	(1 2-2)	67.734	-0.046
68.280	1.3725	5748	6.9	Quartz	1.3721	15.1	(3 0 1)	68.304	0.024
68.600	1.3669	5460	6.6	Cristobalite \$GA	1.3657	5.9	(2 1 4)	68.672	0.072
69.623	1.3493	497	0.6	Rutile	1.3465	25.0	(1 1 2)	69.790	0.166
70.360	1.3370	7872	9.5	Anatase	1.3382	17.7	(2 2 0)	70.286	-0.074
72.580	1.3015	3665	4.4	Cristobalite \$GA	1.2993	5.9	(3 1 3)	72.722	0.142
73.800	1.2829	4436	5.3	Cristobalite \$GA	1.2810	6.0	(3 2 2)	73.930	0.130
75.020	1.2651	5865	7.1	Anatase	1.2647	28.9	(2 1 5)	75.045	0.025
75.840	1.2534	2071	2.5	Quartz	1.2561	6.1	(0 3 2)	75.649	-0.191
76.803	1.2401	222	0.3	Cristobalite \$GA	1.2429	0.3	(4 0 0)	76.595	-0.208
77.180	1.2350	2050	2.5	Cristobalite \$GA	1.2332	2.0	(2 2 4)	77.310	0.130
77.880	1.2256	2653	3.2	Cristobalite \$GA	1.2234	3.0	(4 0 1)	78.049	0.169
79.280	1.2074	3153	3.8	Cristobalite \$GA	1.2058	4.0	(4 1 0)	79.408	0.128
79.860	1.2001	1531	1.8	Quartz	1.2000	6.4	(2 1-3)	79.870	0.010
81.140	1.1844	2639	3.2	Quartz	1.1842	5.6	(1 1-4)	81.157	0.017
81.680	1.1779	2285	2.7	Quartz	1.1803	6.8	(3 1 0)	81.477	-0.203
82.241	1.1713	690	0.8	Cristobalite \$GA	1.1718	2.8	(3 3 0)	82.194	-0.047

Additional File 2: Selected listings of XRD results

82.720	1.1657	4586	5.5	Anatase	1.1663	15.8	(2 2 4)	82.672	-0.048
86.501	1.1242	352	0.4	Cristobalite \$GA	1.1238	0.4	(1 0 6)	86.535	0.035
87.560	1.1133	600	0.7	Rutile	1.1143	5.0	(4 1 0)	87.463	-0.096
87.940	1.1095	601	0.7	Cristobalite \$GA	1.1099	1.5	(3 3 2)	87.894	-0.046
89.120	1.0978	4760	5.7	Cristobalite \$GA	1.0976	3.3	(4 2 1)	89.139	0.019

Additional File 2: Selected listings of XRD results



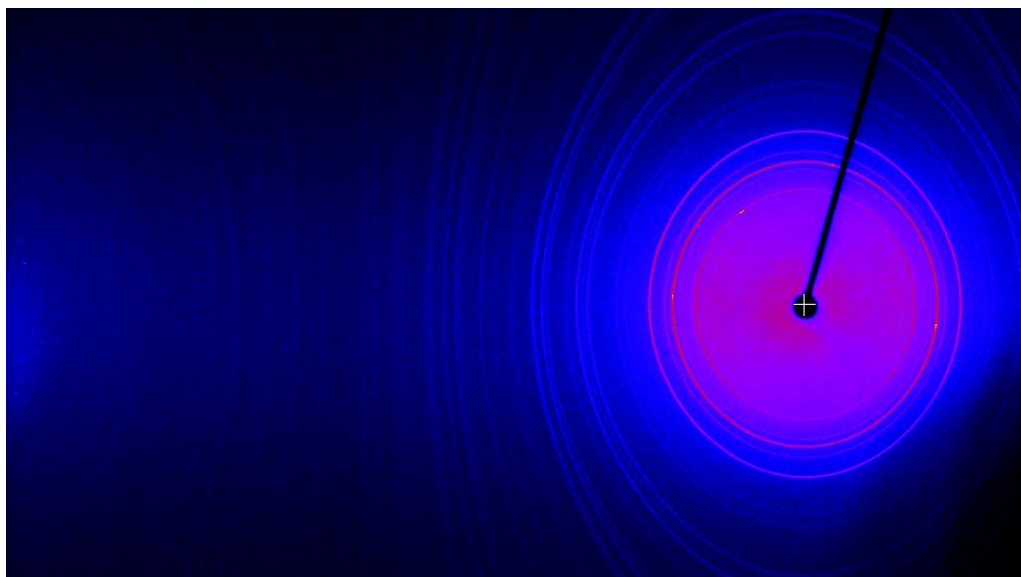
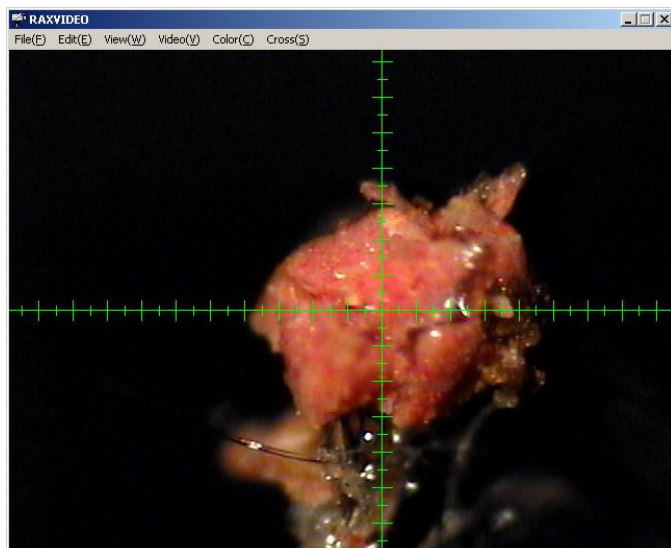
Additional File 2: Selected listings of XRD results

No. 15 Owner/Qero ID: NMAI 10/5860; Stylistic Period: Transitional Inka/Early Colonial

Sample: pink pigment from nose

File: NMAI_105860_000_pink1.asc

Cu K α rad; 46 kV, 40 mA; 800 μ m collimator; osc on ω -10° – 20° at 1°/sec; osc on ϕ -180° - 0° at 3°/sec; 10 minute exp.; with Ambroid



Additional File 2: Selected listings of XRD results

Peak ID Extended Report (60 Peaks, Max P/N = 149.1)

[NMAI_105860_000_pink1.asc] , Created by AreaMax

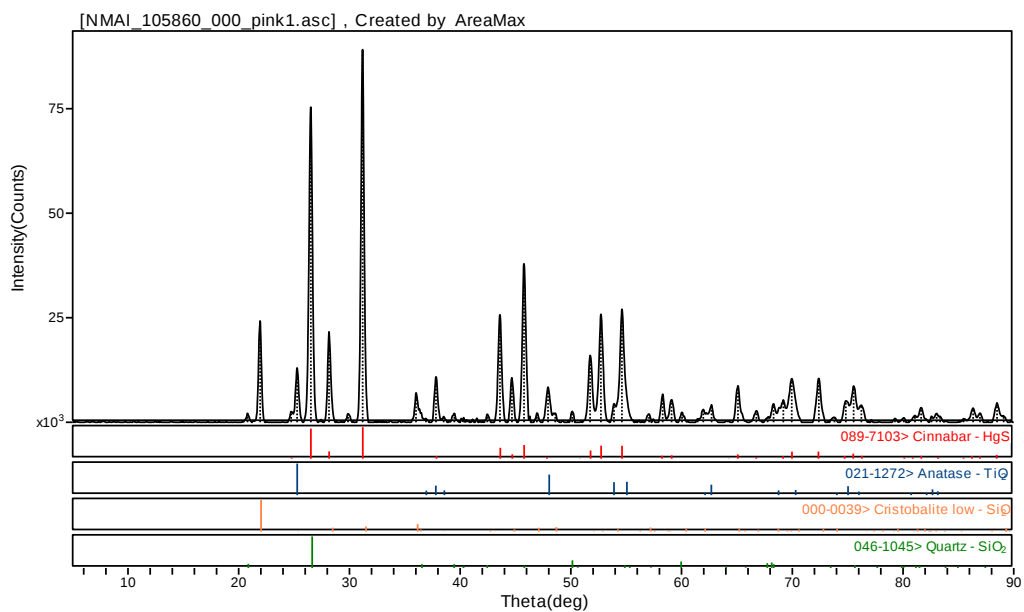
PEAK: 25-pts/Parabolic Filter, Threshold=3.0, Cutoff=0.1%, BG=3/1.0, Peak-Top=Summit

2-Theta	d(Å)	Height	Height%	Phase ID	d(Å)	I%	(h k l)	2-Theta	Delta
7.801	11.3243	256	0.3						
20.800	4.2671	2138	2.4	Quartz	4.2550	13.0	(1 0 0)	20.860	0.060
21.940	4.0480	24230	27.2	Cristobalite low	4.0335	100.0	(1 0 1)	22.019	0.079
24.740	3.5957	2545	2.9	Cinnabar	3.5905	2.8	(1 0 0)	24.776	0.036
25.280	3.5201	12952	14.5	Anatase	3.5200	100.0	(1 0 1)	25.281	0.001
26.520	3.3584	75281	84.5	Cinnabar	3.3585	95.3	(0 1 1)	26.518	-0.001
27.440	3.2477	496	0.6						
28.160	3.1663	21555	24.2	Cinnabar	3.1657	22.9	(0 0 3)	28.166	0.006
29.880	2.9878	1823	2.0						
31.199	2.8645	89043	100.0	Cinnabar	2.8640	100.0	(1 0 2)	31.205	0.006
36.021	2.4913	6968	7.8	Cristobalite low	2.4820	23.3	(2 0 0)	36.161	0.140
36.918	2.4328	717	0.8	Anatase	2.4310	14.0	(1 0 3)	36.947	0.028
37.820	2.3768	10723	12.0	Anatase	2.3780	30.0	(0 0 4)	37.801	-0.019
38.520	2.3352	1318	1.5	Cristobalite low	2.3363	0.4	(2 0 1)	38.503	-0.018
39.480	2.2807	1971	2.2	Quartz	2.2815	12.0	(1 0 2)	39.465	-0.015
40.292	2.2366	739	0.8	Quartz	2.2361	6.0	(1 1 1)	40.300	0.008
40.597	2.2204	492	0.6						
42.460	2.1272	1831	2.1	Quartz	2.1277	9.0	(2 0 0)	42.450	-0.010
43.600	2.0742	25554	28.7	Cinnabar	2.0730	34.4	(1 1 0)	43.627	0.027
44.680	2.0266	10567	11.9	Cinnabar	2.0253	13.7	(1 1 1)	44.709	0.029
45.780	1.9804	37515	42.1	Cinnabar	1.9804	43.1	(0 1 4)	45.779	-0.001
46.941	1.9341	1941	2.2	Cristobalite low	1.9277	11.9	(1 1 3)	47.106	0.165
47.940	1.8961	8249	9.3	Cinnabar	1.8999	4.2	(1 1 2)	47.839	-0.101
48.600	1.8719	2139	2.4	Cristobalite low	1.8684	13.8	(2 1 2)	48.694	0.095
50.120	1.8186	2505	2.8	Quartz	1.8180	24.0	(1 1 2)	50.139	0.018
51.740	1.7654	15967	17.9	Cinnabar	1.7640	25.6	(2 0 1)	51.783	0.043
52.720	1.7349	25503	28.6	Cinnabar	1.7342	41.2	(1 1 3)	52.740	0.020
53.900	1.6996	4210	4.7	Anatase	1.6999	41.0	(1 0 5)	53.891	-0.010
54.620	1.6789	26586	29.9	Cinnabar	1.6790	40.8	(0 2 2)	54.619	-0.001
57.079	1.6123	1762	2.0	Cristobalite low	1.6093	12.5	(3 0 1)	57.195	0.116
58.300	1.5814	6373	7.2	Cinnabar	1.5828	9.1	(0 0 6)	58.242	-0.058
59.100	1.5619	5222	5.9	Cinnabar	1.5616	10.2	(2 0 3)	59.111	0.011
60.040	1.5397	2360	2.7	Quartz	1.5415	20.0	(2 1 1)	59.960	-0.080
61.460	1.5074	762	0.9						
61.960	1.4965	3028	3.4	Anatase	1.4930	9.0	(2 1 3)	62.120	0.160
62.719	1.4802	4158	4.7	Anatase	1.4808	33.0	(2 0 4)	62.690	-0.030
65.100	1.4317	8675	9.7	Cinnabar	1.4320	13.2	(2 0 4)	65.085	-0.015
66.760	1.4001	2624	2.9	Cinnabar	1.4004	4.6	(1 1 5)	66.739	-0.021
67.782	1.3814	1034	1.2	Quartz	1.3821	15.0	(2 1 2)	67.744	-0.038
68.320	1.3718	4295	4.8	Quartz	1.3719	12.0	(3 0 1)	68.318	-0.002
69.199	1.3565	2271	2.6	Cinnabar	1.3571	7.8	(2 1 0)	69.167	-0.032
69.960	1.3436	10409	11.7	Cinnabar	1.3435	21.9	(1 2 1)	69.971	0.011
72.400	1.3042	10446	11.7	Cinnabar	1.3048	22.3	(2 1 2)	72.361	-0.039
73.820	1.2826	897	1.0	Anatase	1.2795	6.0	(1 0 7)	74.031	0.211
74.840	1.2677	5028	5.6	Cinnabar	1.2691	8.3	(0 1 7)	74.738	-0.102
75.540	1.2576	7289	8.2	Cinnabar	1.2580	15.8	(1 1 6)	75.512	-0.029
76.240	1.2478	3707	4.2	Cinnabar	1.2473	9.0	(2 1 3)	76.277	0.037
77.142	1.2355	593	0.7	Cristobalite low	1.2321	3.4	(2 2 4)	77.396	0.254
79.280	1.2074	887	1.0	Cristobalite low	1.2088	0.9	(2 0 5)	79.174	-0.106
80.080	1.1974	974	1.1	Quartz	1.1978	3.0	(2 2 1)	80.046	-0.034
81.080	1.1851	1330	1.5	Cristobalite low	1.1861	1.0	(4 1 1)	80.996	-0.085
81.640	1.1784	3278	3.7	Cinnabar	1.1782	9.0	(1 2 4)	81.655	0.015

Additional File 2: Selected listings of XRD results

82.580	1.1673	1345	1.5	Cristobalite low	1.1681	1.8	(4 0 2)	82.512	-0.069
83.040	1.1620	2014	2.3	Cristobalite low	1.1625	4.2	(3 1 4)	82.998	-0.041
83.359	1.1584	1391	1.6	Cinnabar	1.1606	5.0	(0 3 2)	83.170	-0.189
85.480	1.1350	848	1.0	Cinnabar	1.1352	2.3	(1 1 7)	85.462	-0.018
86.340	1.1259	3375	3.8	Cinnabar	1.1271	7.7	(1 0 8)	86.223	-0.117
86.960	1.1194	2168	2.4	Cinnabar	1.1195	7.1	(0 3 3)	86.954	-0.006
88.500	1.1039	4607	5.2	Cinnabar	1.1042	11.6	(2 1 5)	88.469	-0.031
89.099	1.0980	1461	1.6	Cristobalite low	1.0960	6.0	(4 2 1)	89.311	0.212

Additional File 2: Selected listings of XRD results



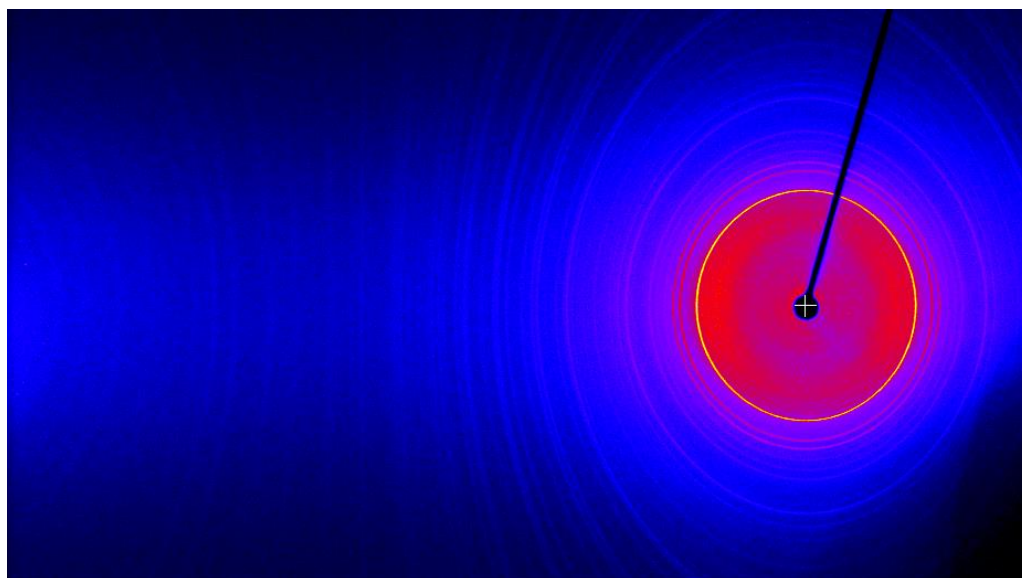
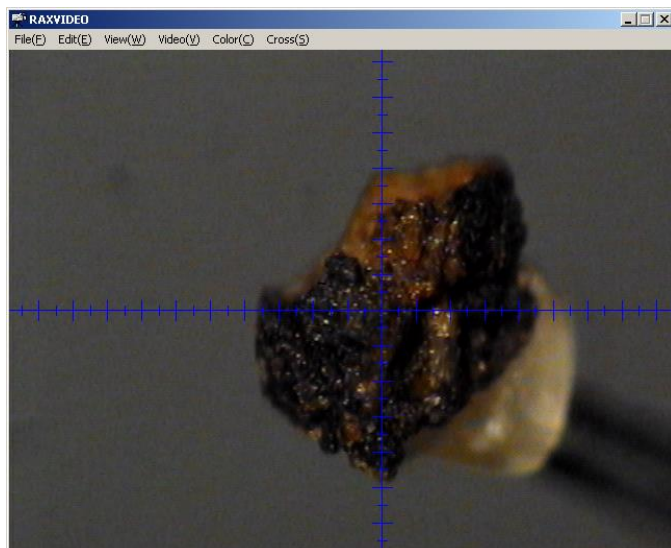
Additional File 2: Selected listings of XRD results

No. 16 Owner/Qero ID: NMAI 20/0236 Stylistic Period: Transitional Inka/Early Colonial

Sample: white pigment (large dirty white chunk mounted as is)

Rigaku file: NMAI200236-000a.asc

Cu K α rad; 46 kV, 40 mA; 800 μ m collimator; osc on ω -10° – 30° at 1°/sec; osc on ϕ -180° - 0° at 3°/sec; 15 minute exp.



Additional File 2: Selected listings of XRD results

Peak ID Extended Report (66 Peaks, Max P/N = 204.8)

[NMAI200236-000a.asc] , Created by AreaMax

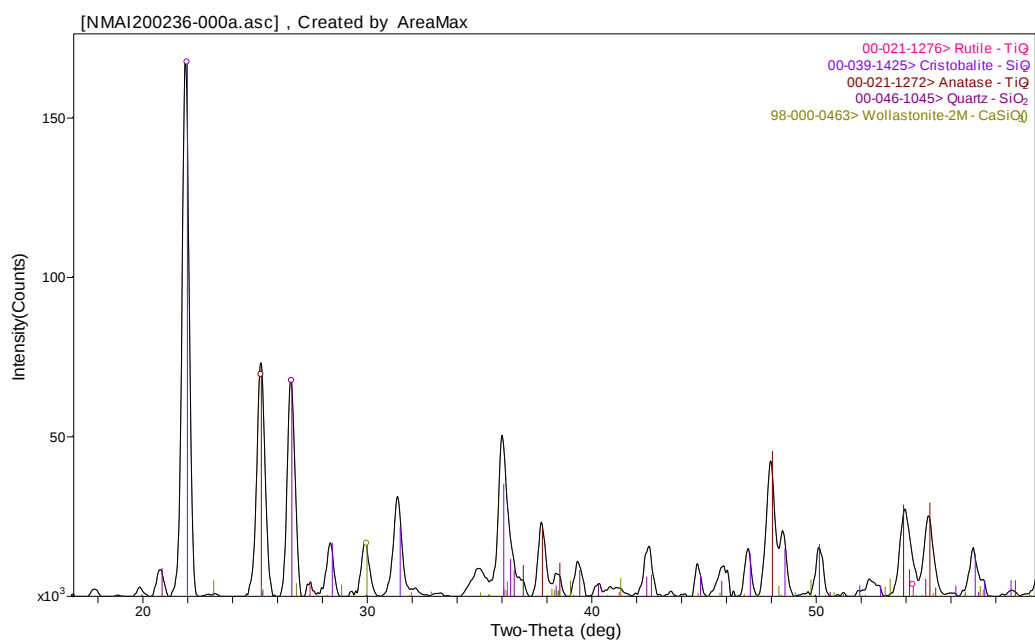
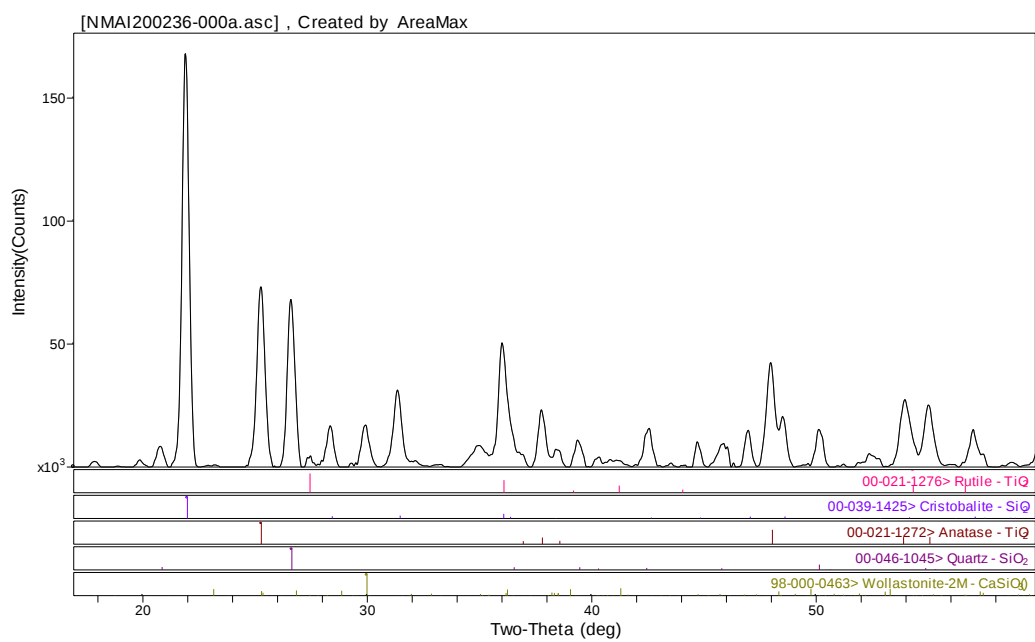
PEAK: 27-pts/Parabolic Filter, Threshold=3.0, Cutoff=0.1%, BG=3/1.0, Peak-Top=Summit

2-Theta	d(Å)	Height	Height%	Phase ID	d(Å)	I%	(h k l)	2-Theta	Delta
20.760	4.2752	8014	4.8	Quartz	4.2551	14.8	(1 0 0)	20.859	0.099
21.900	4.0552	167931	100.0	Cristobalite low	4.0474	100.0	(1 0 1)	21.943	0.043
23.162	3.8370	844	0.5						
25.260	3.5229	73247	43.6	Cristobalite low	3.5205	0.8	(1 1 0)	25.278	0.018
26.600	3.3484	67779	40.4	Quartz	3.3434	100.0	(0 1 1)	26.640	0.040
27.477	3.2435	3598	2.1	Rutile	3.2470	87.0	(1 1 0)	27.447	-0.030
28.340	3.1466	15920	9.5	Cristobalite low	3.1406	11.0	(1 1 1)	28.396	0.056
29.920	2.9840	17084	10.2						
31.340	2.8519	31201	18.6	Cristobalite low	2.8496	14.6	(1 0 2)	31.366	0.026
32.140	2.7828	2301	1.4						
33.279	2.6901	797	0.5						
34.980	2.5630	8755	5.2						
36.000	2.4927	46218	27.5	Cristobalite low	2.4894	20.5	(2 0 0)	36.051	0.050
36.900	2.4340	4588	2.7	Anatase	2.4309	8.0	(1 0 3)	36.949	0.049
37.760	2.3805	22953	13.7	Anatase	2.3785	29.8	(0 0 4)	37.793	0.033
38.420	2.3411	6484	3.9	Cristobalite low	2.3436	0.2	(2 0 1)	38.378	-0.042
39.361	2.2873	10641	6.3	Quartz	2.2813	11.3	(1 0 2)	39.467	0.107
40.320	2.2350	3915	2.3	Quartz	2.2365	5.3	(1 1 1)	40.292	-0.028
40.820	2.2088	2859	1.7	Cristobalite low	2.2265	0.2	(2 1 0)	40.481	-0.339
41.139	2.1924	2438	1.5	Rutile	2.1880	32.0	(1 1 1)	41.226	0.087
42.560	2.1225	15634	9.3	Cristobalite low	2.1204	5.0	(2 1 1)	42.604	0.044
43.521	2.0778	1445	0.9	Cristobalite low	2.1005	0.4	(1 0 3)	43.028	-0.493
44.700	2.0257	10047	6.0	Cristobalite low	2.0237	4.0	(2 0 2)	44.746	0.046
45.879	1.9763	9462	5.6	Quartz	1.9797	5.8	(2 0 1)	45.796	-0.083
46.960	1.9333	14584	8.7	Cristobalite low	1.9353	9.4	(1 1 3)	46.910	-0.050
47.960	1.8953	41956	25.0	Anatase	1.8925	53.2	(2 0 0)	48.036	0.076
48.500	1.8755	20436	12.2	Cristobalite low	1.8747	9.9	(2 1 2)	48.520	0.020
50.120	1.8186	15081	9.0	Quartz	1.8179	25.8	(1 1 2)	50.141	0.021
51.880	1.7609	1767	1.1	Cristobalite low	1.7602	0.9	(2 2 0)	51.903	0.022
52.360	1.7459	5387	3.2	Cristobalite low	1.7602	0.9	(2 2 0)	51.903	-0.457
52.799	1.7324	3240	1.9	Cristobalite low	1.7376	1.6	(0 0 4)	52.632	-0.167
53.960	1.6979	27153	16.2	Cristobalite low	1.6959	5.3	(2 0 3)	54.028	0.068
55.000	1.6682	24565	14.6	Anatase	1.6665	37.8	(2 1 1)	55.060	0.060
55.999	1.6408	790	0.5	Cristobalite low	1.6405	1.0	(1 0 4)	56.010	0.011
57.000	1.6143	15254	9.1	Cristobalite low	1.6142	8.0	(3 0 1)	57.006	0.006
57.440	1.6030	5155	3.1	Cristobalite low	1.6053	3.0	(2 1 3)	57.349	-0.091
58.720	1.5711	1826	1.1	Cristobalite low	1.5703	1.3	(2 2 2)	58.753	0.033
60.100	1.5383	16285	9.7	Cristobalite low	1.5355	6.1	(3 1 1)	60.219	0.120
61.960	1.4965	19712	11.7	Cristobalite low	1.4976	6.8	(3 0 2)	61.910	-0.050
62.660	1.4814	19339	11.5	Anatase	1.4809	32.2	(2 0 4)	62.684	0.024
64.120	1.4512	3302	2.0	Rutile	1.4528	19.0	(3 1 0)	64.040	-0.081
65.000	1.4336	9708	5.8	Cristobalite low	1.4341	5.6	(3 1 2)	64.977	-0.023
65.519	1.4235	6842	4.1	Rutile	1.4243	4.0	(2 2 1)	65.479	-0.040
66.760	1.4001	3666	2.2	Cristobalite low	1.4016	3.5	(2 2 3)	66.678	-0.082
67.760	1.3818	6745	4.0	Quartz	1.3821	16.1	(1 2 2)	67.745	-0.015
68.380	1.3708	17425	10.4	Cristobalite low	1.3698	5.9	(2 1 4)	68.435	0.055
70.320	1.3376	14597	8.7	Anatase	1.3382	17.7	(2 2 0)	70.286	-0.034
72.600	1.3011	8080	4.8	Cristobalite low	1.3022	5.9	(3 1 3)	72.534	-0.067
73.720	1.2841	11092	6.6	Cristobalite low	1.2832	6.0	(3 2 2)	73.778	0.058
75.040	1.2648	10891	6.5	Anatase	1.2647	28.9	(2 1 5)	75.045	0.004
75.840	1.2534	4146	2.5	Quartz	1.2559	8.6	(3 0 2)	75.661	-0.179
77.140	1.2355	2530	1.5	Cristobalite low	1.2366	2.0	(2 2 4)	77.060	-0.080

Additional File 2: Selected listings of XRD results

77.860	1.2259	4728	2.8	Cristobalite low	1.2252	3.0	(4 0 1)	77.911	0.051
79.240	1.2079	6232	3.7	Cristobalite low	1.2075	4.0	(4 1 0)	79.274	0.034
79.980	1.1986	4580	2.7	Quartz	1.1978	2.6	(2 2 1)	80.044	0.065
81.080	1.1851	7166	4.3	Cristobalite low	1.1861	4.1	(3 2 3)	80.995	-0.085
81.620	1.1786	5887	3.5	Cristobalite low	1.1791	4.1	(2 1 5)	81.579	-0.042
82.720	1.1657	7649	4.6	Anatase	1.1663	15.8	(2 2 4)	82.672	-0.048
83.920	1.1521	1891	1.1	Quartz	1.1530	6.2	(1 3 1)	83.838	-0.082
86.599	1.1232	1040	0.6	Cristobalite low	1.1282	0.4	(1 0 6)	86.117	-0.482
87.720	1.1117	3042	1.8	Cristobalite low	1.1118	1.5	(3 3 2)	87.709	-0.011
89.080	1.0982	10064	6.0	Cristobalite low	1.0993	3.7	(4 2 1)	88.973	-0.107

Additional File 2: Selected listings of XRD results



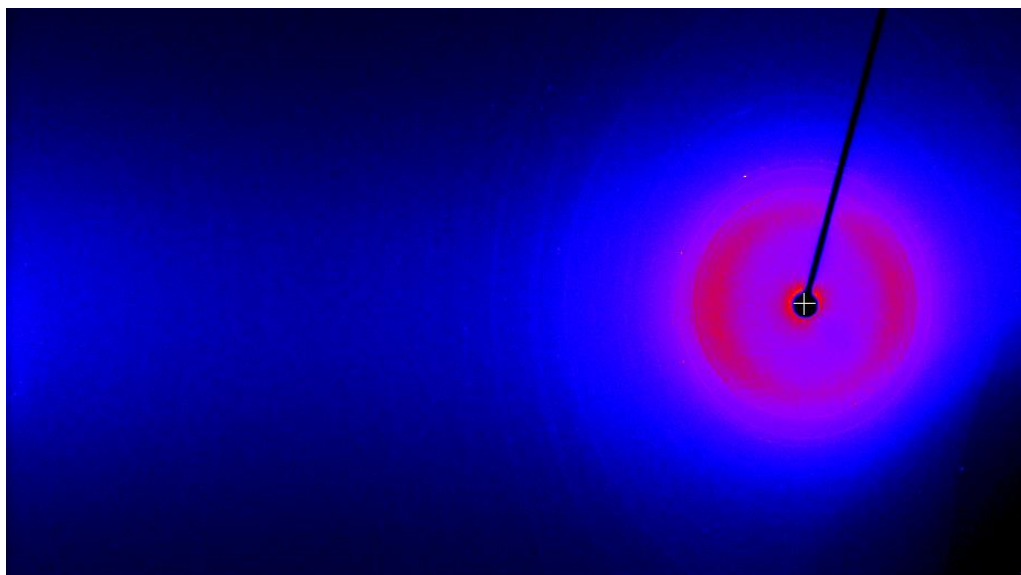
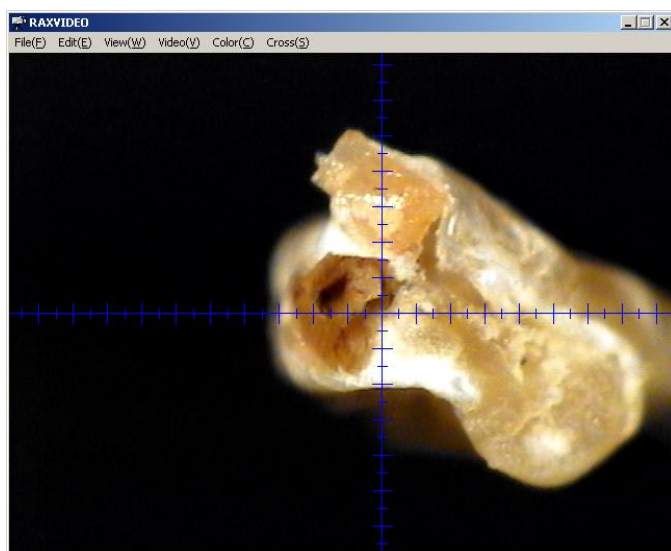
Additional File 2: Selected listings of XRD results

No. 17 Owner/Qero ID: NMAI 25/1492 Stylistic Period: Transitional Inka/Early Colonial

Sample: white pigment (small fragments mounted as is)

Rigaku file: NMAI251492-000-02a.asc

Cu K α rad; 46 kV, 40 mA; 800 μ m collimator; osc on ω -10° – 30° at 1°/sec; osc on ϕ -180° - 0° at 3°/sec; 15 minute exp.



Additional File 2: Selected listings of XRD results

Peak ID Extended Report (75 Peaks, Max P/N = 77.9)

[NMAI251492-000-02a.asc] , Created by AreaMax

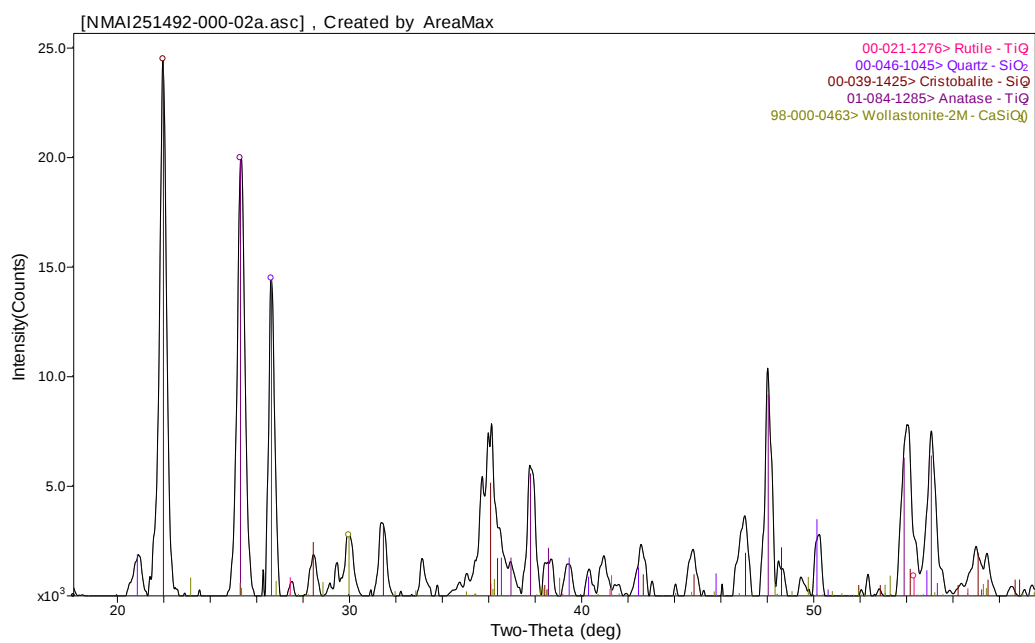
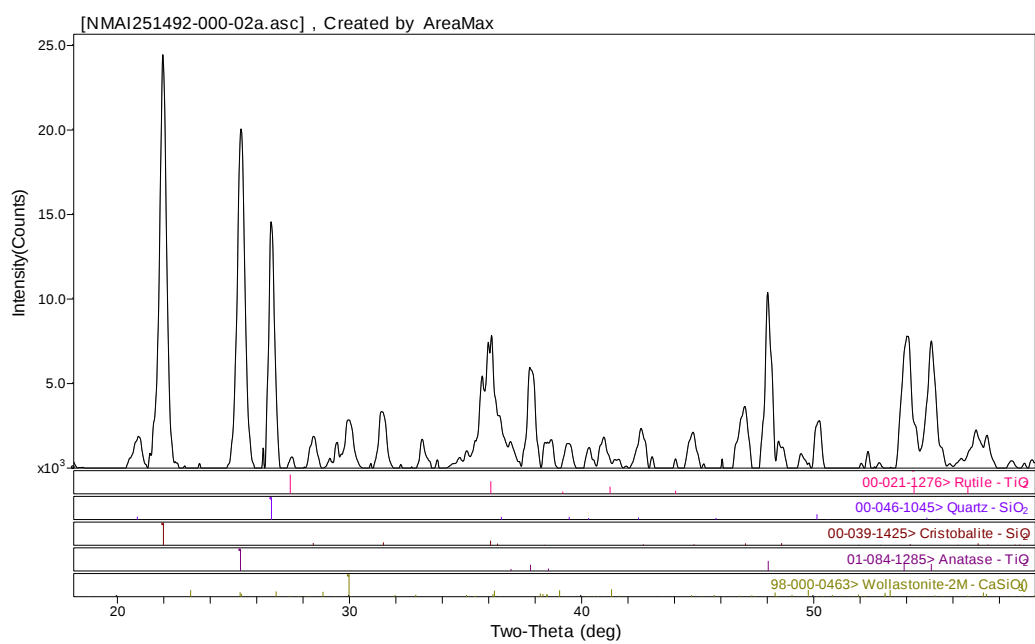
PEAK: 23-pts/Parabolic Filter, Threshold=3.0, Cutoff=0.1%, BG=3/1.0, Peak-Top=Summit

2-Theta	d(Å)	Height	Height%	Phase ID	d(Å)	I%	(h k l)	2-Theta	Delta
10.301	8.5804	751	3.1						
17.320	5.1159	374	1.5						
17.621	5.0292	555	2.3						
17.941	4.9402	903	3.7						
20.901	4.2468	1882	7.7	Quartz	4.2551	14.8	(1 0 0)	20.859	-0.041
21.960	4.0442	24362	100.0	Cristobalite low	4.0474	100.0	(1 0 1)	21.943	-0.018
25.320	3.5146	20056	82.3	Anatase	3.5169	100.0	(1 0 1)	25.304	-0.017
26.620	3.3459	14405	59.1	Quartz	3.3434	100.0	(0 1 1)	26.640	0.020
27.520	3.2385	614	2.5	Rutile	3.2470	87.0	(1 1 0)	27.447	-0.073
28.460	3.1337	1810	7.4	Cristobalite low	3.1406	11.0	(1 1 1)	28.396	-0.064
29.159	3.0601	538	2.2						
29.477	3.0278	1455	6.0						
29.960	2.9801	2776	11.4						
31.380	2.8484	3345	13.7	Cristobalite low	2.8496	14.6	(1 0 2)	31.366	-0.014
33.121	2.7025	1703	7.0						
34.758	2.5789	452	1.9						
35.041	2.5587	1023	4.2						
35.720	2.5116	4997	20.5	Cristobalite low	2.4894	20.5	(2 0 0)	36.051	0.331
36.120	2.4847	7079	29.1	Rutile	2.4870	57.0	(1 0 1)	36.086	-0.034
36.940	2.4314	1285	5.3	Anatase	2.4309	8.0	(1 0 3)	36.949	0.009
37.780	2.3793	5679	23.3	Anatase	2.3785	29.8	(0 0 4)	37.793	0.013
38.699	2.3248	1473	6.0	Anatase	2.3326	10.0	(1 1 2)	38.566	-0.133
39.440	2.2829	1360	5.6	Quartz	2.2813	11.3	(1 0 2)	39.467	0.028
40.320	2.2350	1132	4.6	Quartz	2.2365	5.3	(1 1 1)	40.292	-0.028
40.960	2.2016	1834	7.5	Rutile	2.1880	32.0	(1 1 1)	41.226	0.266
41.600	2.1692	465	1.9						
42.579	2.1215	2327	9.6	Cristobalite low	2.1204	5.0	(2 1 1)	42.604	0.024
44.800	2.0214	2124	8.7	Cristobalite low	2.0237	4.0	(2 0 2)	44.746	-0.054
47.040	1.9302	3239	13.3	Cristobalite low	1.9353	9.4	(1 1 3)	46.910	-0.130
48.020	1.8931	10388	42.6	Anatase	1.8925	53.2	(2 0 0)	48.036	0.016
48.518	1.8748	1465	6.0	Cristobalite low	1.8747	9.9	(2 1 2)	48.520	0.002
50.240	1.8145	2810	11.5	Quartz	1.8179	25.8	(1 1 2)	50.141	-0.099
52.042	1.7558	279	1.1	Cristobalite low	1.7602	0.9	(2 2 0)	51.903	-0.140
52.340	1.7466	975	4.0	Cristobalite low	1.7602	0.9	(2 2 0)	51.903	-0.437
52.821	1.7318	324	1.3	Cristobalite low	1.7376	1.6	(0 0 4)	52.632	-0.189
54.020	1.6961	7766	31.9	Cristobalite low	1.6959	5.3	(2 0 3)	54.028	0.007
55.060	1.6665	7398	30.4	Anatase	1.6665	37.8	(2 1 1)	55.060	0.000
56.360	1.6311	457	1.9	Rutile	1.6237	35.0	(2 2 0)	56.642	0.282
57.000	1.6143	2260	9.3	Cristobalite low	1.6142	8.0	(3 0 1)	57.006	0.006
57.460	1.6025	1847	7.6	Cristobalite low	1.6053	3.0	(2 1 3)	57.349	-0.111
59.080	1.5624	289	1.2	Cristobalite low	1.5703	1.3	(2 2 2)	58.753	-0.327
59.401	1.5547	463	1.9	Cristobalite low	1.5581	0.3	(1 1 4)	59.257	-0.143
60.040	1.5397	3759	15.4	Quartz	1.5415	22.8	(1 2 1)	59.961	-0.079
62.000	1.4956	3110	12.8	Cristobalite low	1.4976	6.8	(3 0 2)	61.910	-0.090
62.700	1.4806	6777	27.8	Anatase	1.4809	32.2	(2 0 4)	62.684	-0.016
64.080	1.4520	1893	7.8	Rutile	1.4528	19.0	(3 1 0)	64.040	-0.041
65.000	1.4336	1762	7.2	Cristobalite low	1.4341	5.6	(3 1 2)	64.977	-0.022
65.520	1.4235	1113	4.6	Rutile	1.4243	4.0	(2 2 1)	65.479	-0.041
66.820	1.3989	929	3.8	Cristobalite low	1.4016	3.5	(2 2 3)	66.678	-0.142
67.761	1.3818	2044	8.4	Quartz	1.3821	16.1	(1 2 2)	67.745	-0.016
68.740	1.3645	2515	10.3	Anatase	1.3642	16.6	(1 1 6)	68.755	0.015
69.159	1.3572	1577	6.5	Rutile	1.3598	41.0	(3 0 1)	69.010	-0.149

Additional File 2: Selected listings of XRD results

69.501	1.3514	587	2.4	Cristobalite low	1.3491	1.8	(3 0 3)	69.634	0.133
70.439	1.3357	3486	14.3	Anatase	1.3382	17.7	(2 2 0)	70.286	-0.153
72.032	1.3100	338	1.4	Rutile	1.3041	4.0	(3 1 1)	72.409	0.377
72.560	1.3018	752	3.1	Cristobalite low	1.3022	5.9	(3 1 3)	72.534	-0.027
73.860	1.2820	1108	4.5	Cristobalite low	1.2832	6.0	(3 2 2)	73.778	-0.081
75.120	1.2636	3531	14.5	Anatase	1.2647	28.9	(2 1 5)	75.045	-0.075
75.840	1.2534	1338	5.5	Quartz	1.2559	8.6	(3 0 2)	75.661	-0.179
76.180	1.2487	1406	5.8	Anatase	1.2507	7.9	(3 0 1)	76.032	-0.148
77.641	1.2288	786	3.2	Quartz	1.2284	4.8	(2 2 0)	77.672	0.031
77.960	1.2245	413	1.7	Cristobalite low	1.2252	3.0	(4 0 1)	77.911	-0.048
79.380	1.2062	362	1.5	Cristobalite low	1.2075	4.0	(4 1 0)	79.274	-0.106
79.959	1.1989	881	3.6	Quartz	1.1998	9.3	(2 1 3)	79.884	-0.075
81.220	1.1834	988	4.1	Quartz	1.1840	8.1	(1 1 4)	81.171	-0.049
81.760	1.1770	1590	6.5	Cristobalite low	1.1791	4.1	(2 1 5)	81.579	-0.181
82.382	1.1696	725	3.0	Rutile	1.1702	14.0	(3 2 1)	82.334	-0.047
82.820	1.1646	2697	11.1	Anatase	1.1663	15.8	(2 2 4)	82.672	-0.148
83.500	1.1568	473	1.9	Cristobalite low	1.1571	1.4	(3 3 1)	83.473	-0.027
84.101	1.1501	353	1.4	Rutile	1.1483	10.0	(4 0 0)	84.260	0.159
84.677	1.1437	301	1.2	Quartz	1.1407	0.9	(2 0 4)	84.955	0.278
85.021	1.1400	1176	4.8	Cristobalite low	1.1406	0.7	(4 1 2)	84.960	-0.061
85.534	1.1344	465	1.9						
88.679	1.1021	1222	5.0	Cristobalite low	1.1003	5.1	(1 1 6)	88.863	0.184
89.240	1.0967	1556	6.4	Cristobalite low	1.0964	3.0	(4 0 3)	89.262	0.021

Additional File 2: Selected listings of XRD results



Additional File 2: Selected listings of XRD results

No. 18 Owner/Qero ID: MMA 1994.35.13

Stylistic Period: Colonial

Sample: white pigment

Rigaku file: 1994_35_13-white1.asc

Peak ID Extended Report (73 Peaks, Max P/N = 109.7)

[1994_35_13-white1.asc] , Created by AreaMax

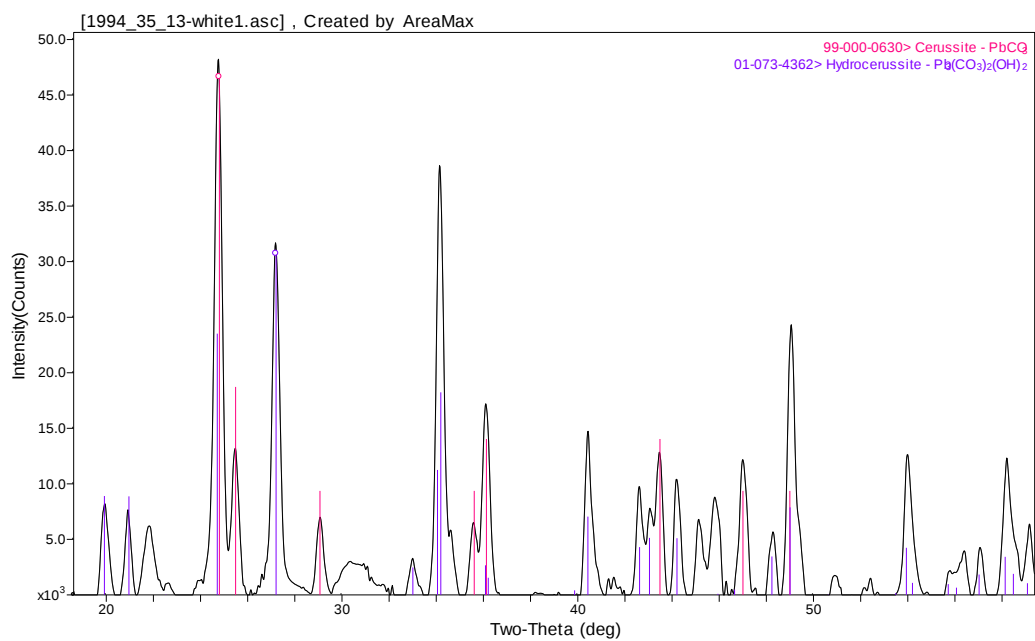
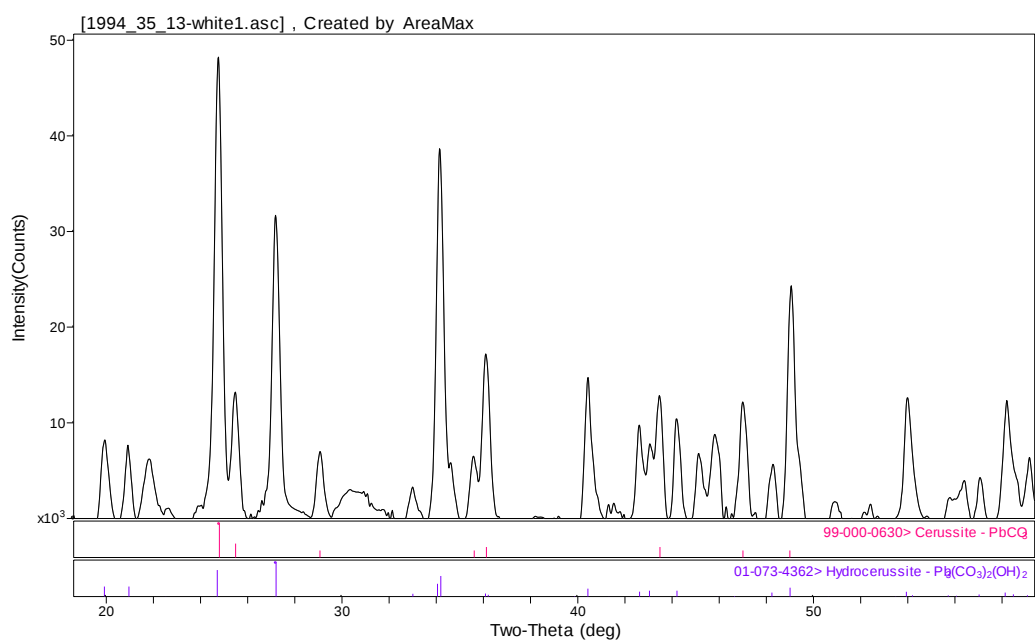
PEAK: 25(pts)/Parabolic Filter, Threshold=3.0, Cutoff=0.1%, BG=3/1.0, Peak-Top=Centroid Fit

2-Theta	d(Å)	Height	Height%	Phase ID	d(Å)	I%	(h k l)	2-Theta	Delta
5.518	16.0033	2233	4.6						
7.322	12.0642	661	1.4						
9.202	9.6028	988	2.1						
11.134	7.9405	764	1.6	Hydrocerussite	7.8726	3.3	(0 0 3)	11.230	0.096
12.899	6.8576	650	1.3						
19.941	4.4489	7890	16.4	Hydrocerussite	4.4535	28.8	(1 0 1)	19.920	-0.021
20.925	4.2419	7542	15.7	Hydrocerussite	4.2345	28.7	(0 1 2)	20.962	0.037
21.830	4.0680	6086	12.6						
22.622	3.9274	954	2.0	Hydrocerussite	3.9434	0.1	(0 0 6)	22.529	-0.093
23.937	3.7145	1229	2.6						
24.757	3.5933	48165	100.0	Cerussite	3.5873	100.0		24.799	0.042
25.474	3.4938	13133	27.3	Cerussite	3.4926	40.0		25.483	0.009
27.192	3.2769	31625	65.7	Hydrocerussite	3.2754	100.0	(0 1 5)	27.204	0.012
29.074	3.0689	6913	14.4	Cerussite	3.0699	20.0		29.064	-0.010
30.363	2.9415	2944	6.1						
30.918	2.8899	2750	5.7						
31.753	2.8158	873	1.8						
33.002	2.7120	2858	5.9	Hydrocerussite	2.7118	8.0	(1 0 7)	33.004	0.003
34.153	2.6232	38441	79.8	Hydrocerussite	2.6203	59.1	(1 1 0)	34.192	0.039
34.659	2.5861	4987	10.4						
35.599	2.5199	6307	13.1	Cerussite	2.5193	20.0		35.608	0.009
36.106	2.4856	17202	35.7	Cerussite	2.4843	30.0		36.126	0.019
40.446	2.2284	14322	29.7	Hydrocerussite	2.2291	22.8	(2 0 2)	40.433	-0.013
41.571	2.1706	1202	2.5	Hydrocerussite	2.1833	0.1	(1 1 6)	41.319	-0.252
42.628	2.1192	9699	20.1	Hydrocerussite	2.1193	13.9	(0 2 4)	42.626	-0.002
43.073	2.0983	7758	16.1	Hydrocerussite	2.0996	16.6	(1,0,10)	43.047	-0.027
43.453	2.0809	12796	26.6	Cerussite	2.0792	30.0		43.490	0.038
44.221	2.0465	10359	21.5	Hydrocerussite	2.0469	16.5	(2 0 5)	44.212	-0.009
45.163	2.0060	6745	14.0						
45.842	1.9779	8635	17.9	Hydrocerussite	1.9735	0.3	(0,0,12)	45.948	0.106
47.018	1.9311	12129	25.2	Cerussite	1.9314	20.0		47.009	-0.009
48.266	1.8840	5620	11.7	Hydrocerussite	1.8850	11.2	(0 2 7)	48.238	-0.028
49.062	1.8553	24276	50.4	Hydrocerussite	1.8571	25.5	(1 1 9)	49.011	-0.051
50.924	1.7918	1753	3.6	Hydrocerussite	1.8015	0.1	(2 0 8)	50.629	-0.294
52.397	1.7448	1477	3.1						
54.011	1.6964	12622	26.2	Hydrocerussite	1.6984	13.7	(1 2 2)	53.942	-0.069
55.843	1.6450	2070	4.3	Hydrocerussite	1.6484	3.1	(2 1 4)	55.720	-0.123
56.366	1.6310	3943	8.2						
57.079	1.6123	4244	8.8	Hydrocerussite	1.6136	5.9	(1 2 5)	57.029	-0.050
58.213	1.5836	12300	25.5	Hydrocerussite	1.5855	11.1	(0,1,14)	58.137	-0.076
59.155	1.5606	6347	13.2	Hydrocerussite	1.5624	3.4	(2,0,11)	59.078	-0.077
60.477	1.5296	8497	17.6	Hydrocerussite	1.5307	10.7	(2 1 7)	60.429	-0.047
61.246	1.5122	2965	6.2	Hydrocerussite	1.5136	3.3	(3 0 0)	61.182	-0.064
61.737	1.5013	2576	5.3						

Additional File 2: Selected listings of XRD results

62.511	1.4846	5084	10.6	Hydrocerussite	1.4866	5.0	(0 3 3)	62.418	-0.093
63.062	1.4730	3445	7.2						
64.283	1.4479	2600	5.4						
65.279	1.4282	1116	2.3						
66.031	1.4137	1922	4.0	Hydrocerussite	1.4134	1.0	(3 0 6)	66.049	0.018
66.756	1.4001	613	1.3						
67.418	1.3880	1938	4.0	Hydrocerussite	1.3899	2.4	(2,1,10)	67.311	-0.108
69.297	1.3549	2524	5.2	Hydrocerussite	1.3568	3.2	(2,0,14)	69.183	-0.114
70.139	1.3406	1990	4.1	Hydrocerussite	1.3423	3.0	(1,2,11)	70.041	-0.099
70.904	1.3280	3442	7.1	Hydrocerussite	1.3322	0.3	(0,1,17)	70.648	-0.256
71.499	1.3185	1486	3.1	Hydrocerussite	1.3161	1.2	(0,0,18)	71.644	0.145
72.155	1.3081	9566	19.9	Hydrocerussite	1.3110	3.4	(2 2 0)	71.969	-0.186
72.487	1.3029	4555	9.5						
73.170	1.2924	3630	7.5	Hydrocerussite	1.2933	2.9	(2 2 3)	73.111	-0.060
73.930	1.2810	2763	5.7						
74.861	1.2674	2032	4.2						
76.026	1.2508	4324	9.0	Hydrocerussite	1.2495	2.6	(2,1,13)	76.117	0.091
76.672	1.2419	3154	6.5	Hydrocerussite	1.2403	1.5	(0,2,16)	76.785	0.112
78.778	1.2139	2802	5.8	Hydrocerussite	1.2174	1.9	(3 1 5)	78.509	-0.269
79.808	1.2008	5699	11.8	Hydrocerussite	1.2014	5.0	(0,3,12)	79.760	-0.048
80.894	1.1874	1909	4.0	Hydrocerussite	1.1878	0.3	(2,0,17)	80.857	-0.037
81.543	1.1796	5401	11.2	Hydrocerussite	1.1806	4.2	(1 3 7)	81.459	-0.084
82.235	1.1714	2311	4.8	Hydrocerussite	1.1736	3.4	(2 2 9)	82.045	-0.190
83.288	1.1592	1838	3.8	Hydrocerussite	1.1592	0.5	(3 1 8)	83.291	0.003
84.027	1.1509	2157	4.5						
86.054	1.1289	2150	4.5	Hydrocerussite	1.1282	1.0	(0,0,21)	86.116	0.062
86.883	1.1202	2236	4.6	Hydrocerussite	1.1213	2.4	(2,1,16)	86.781	-0.102
87.581	1.1131	1049	2.2	Hydrocerussite	1.1123	0.5	(1,3,10)	87.663	0.082
88.539	1.1035	1389	2.9	Hydrocerussite	1.1042	0.6	(0 4 5)	88.467	-0.072

Additional File 2: Selected listings of XRD results



No. 19 Owner/Qero ID: MMA 1994.35.17

Stylistic Period: Colonial

Sample: white pigment

Rigaku file: 1994.35.17-white1.asc

Peak ID Extended Report (74 Peaks, Max P/N = 107.3)

[1994.35.17-white1.asc] , Created by AreaMax

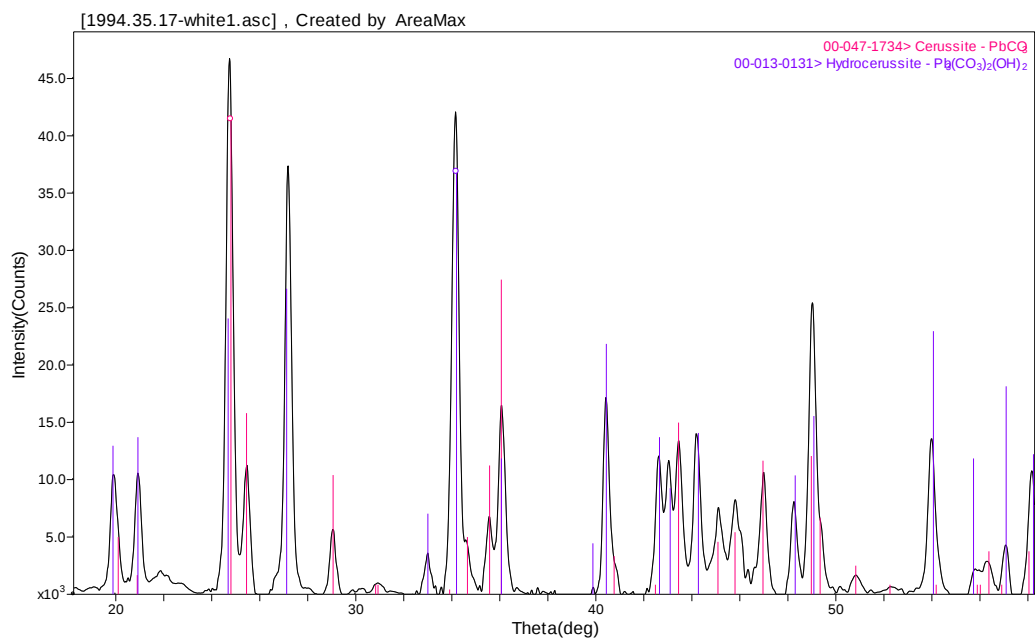
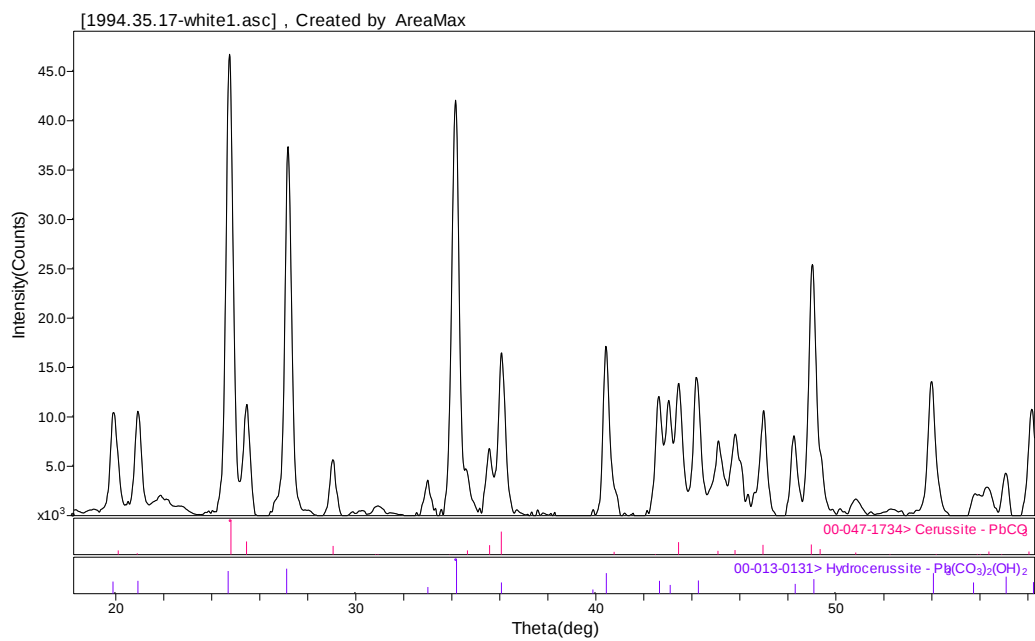
PEAK: 25(pts)/Parabolic Filter, Threshold=3.0, Cutoff=0.1%, BG=3/1.0, Peak-Top=Summit

Theta	d(Å)	Height	Height%	Phase ID	d(Å)	I%	(h k l)	Theta	Delta
11.300	7.8245	572	1.2	Hydrocerussite	7.7727	2.0	(0 0 3)	11.375	0.076
18.339	4.8338	364	0.8						
19.080	4.6476	416	0.9						
19.900	4.4579	10206	22.0	Hydrocerussite	4.4611	35.0	(1 0 1)	19.886	-0.014
20.920	4.2428	10344	22.3	Hydrocerussite	4.2420	37.0	(0 1 2)	20.925	0.004
21.879	4.0590	1830	3.9						
22.720	3.9107	858	1.8						
24.740	3.5957	46389	100.0	Hydrocerussite	3.6042	65.0	(1 0 4)	24.681	-0.059
25.460	3.4957	11126	24.0	Cerussite	3.4973	38.0	(0 2 1)	25.448	-0.012
27.180	3.2783	37241	80.3	Hydrocerussite	3.2852	72.0	(0 1 5)	27.121	-0.059
28.020	3.1818	471	1.0						
29.040	3.0723	5615	12.1	Cerussite	3.0709	25.0	(0 0 2)	29.054	0.013
29.879	2.9880	343	0.7						
30.261	2.9512	475	1.0						
30.920	2.8897	943	2.0	Cerussite	2.8892	2.0	(0 1 2)	30.926	0.006
32.999	2.7122	3553	7.7	Hydrocerussite	2.7118	19.0	(1 0 7)	33.004	0.005
34.160	2.6227	42041	90.6	Hydrocerussite	2.6200	100.0	(1 1 0)	34.196	0.036
34.638	2.5875	4426	9.5	Cerussite	2.5866	12.0	(2 0 0)	34.652	0.014
35.560	2.5225	6746	14.5	Cerussite	2.5216	27.0	(1 1 2)	35.574	0.013
36.080	2.4874	16430	35.4	Hydrocerussite	2.4883	32.0	(1 1 3)	36.066	-0.014
36.737	2.4444	497	1.1						
40.420	2.2297	17129	36.9	Hydrocerussite	2.2289	59.0	(2 0 2)	40.436	0.016
42.620	2.1196	12038	25.9	Hydrocerussite	2.1181	37.0	(0 2 4)	42.652	0.032
43.040	2.0999	11648	25.1	Hydrocerussite	2.0971	25.0	(1,0,10)	43.099	0.059
43.460	2.0806	13359	28.8	Cerussite	2.0811	36.0	(2 2 1)	43.449	-0.011
44.181	2.0483	13979	30.1	Hydrocerussite	2.0442	38.0	(2 0 5)	44.273	0.092
45.101	2.0086	7541	16.3	Cerussite	2.0092	11.0	(0 4 1)	45.088	-0.013
45.800	1.9795	8221	17.7	Cerussite	1.9795	13.0	(2 0 2)	45.802	0.002
47.000	1.9318	10607	22.9	Cerussite	1.9332	28.0	(1 3 2)	46.963	-0.037
48.260	1.8843	8059	17.4	Hydrocerussite	1.8825	28.0	(0 2 7)	48.307	0.047
49.020	1.8568	25405	54.8	Cerussite	1.8583	29.0	(1 1 3)	48.978	-0.042
50.180	1.8166	664	1.4						
50.840	1.7945	1649	3.6	Cerussite	1.7949	6.0	(2 2 2)	50.827	-0.013
52.280	1.7484	637	1.4	Cerussite	1.7492	2.0	(0 4 2)	52.256	-0.024
53.980	1.6973	13543	29.2	Hydrocerussite	1.6948	62.0	(1 2 2)	54.065	0.085
55.800	1.6462	2187	4.7	Hydrocerussite	1.6479	32.0	(2 1 4)	55.736	-0.064
56.320	1.6322	2850	6.1	Cerussite	1.6307	9.0	(3 1 1)	56.378	0.058
57.080	1.6123	4264	9.2	Hydrocerussite	1.6120	49.0	(1 2 5)	57.092	0.012
58.160	1.5849	10743	23.2	Hydrocerussite	1.5830	33.0	(0,1,14)	58.235	0.075
58.518	1.5760	4666	10.1	Hydrocerussite	1.5750	17.0	(1,1,12)	58.559	0.041
59.120	1.5614	4508	9.7	Hydrocerussite	1.5610	17.0	(2,0,11)	59.135	0.015
60.460	1.5300	7880	17.0	Hydrocerussite	1.5291	51.0	(2 1 7)	60.498	0.039
61.200	1.5132	2524	5.4	Hydrocerussite	1.5121	35.0	(3 0 0)	61.250	0.050

Additional File 2: Selected listings of XRD results

61.720	1.5017	1684	3.6	Cerussite	1.5028	7.0	(2 2 3)	61.673	-0.047
62.480	1.4853	5694	12.3	Hydrocerussite	1.4841	35.0	(3 0 3)	62.532	0.052
62.980	1.4747	2893	6.2	Cerussite	1.4747	10.0	(0 4 3)	62.980	0.000
64.160	1.4504	2040	4.4	Cerussite	1.4511	5.0	(1 1 4)	64.124	-0.036
65.160	1.4305	727	1.6	Cerussite	1.4303	3.0	(1 5 2)	65.170	0.010
66.100	1.4124	1366	2.9	Cerussite	1.4182	3.0	(0 6 0)	65.796	-0.304
67.360	1.3890	1515	3.3	Hydrocerussite	1.3873	19.0	(2,1,10)	67.457	0.097
69.240	1.3558	1807	3.9	Hydrocerussite	1.3523	19.0	(1,1,15)	69.446	0.206
70.160	1.3403	1175	2.5	Hydrocerussite	1.3393	20.0	(1,2,11)	70.218	0.057
70.860	1.3288	1864	4.0	Cerussite	1.3293	5.0	(3 3 2)	70.829	-0.032
72.060	1.3096	4423	9.5	Hydrocerussite	1.3084	60.0	(2 2 0)	72.136	0.076
73.160	1.2926	2349	5.1	Hydrocerussite	1.2914	61.0	(2 2 3)	73.237	0.077
74.860	1.2674	1030	2.2	Cerussite	1.2690	3.0	(1 5 3)	74.746	-0.114
76.020	1.2509	4006	8.6	Hydrocerussite	1.2504	63.0	(3 1 2)	76.052	0.032
76.740	1.2409	2347	5.1	Cerussite	1.2436	3.0	(2 6 0)	76.544	-0.196
77.479	1.2309	495	1.1						
78.224	1.2211	416	0.9						
78.640	1.2156	2750	5.9	Cerussite	1.2143	3.0	(4 2 1)	78.741	0.101
79.780	1.2011	5852	12.6						
80.300	1.1946	1214	2.6	Cerussite	1.1930	3.0	(4 0 2)	80.437	0.137
80.880	1.1875	1574	3.4	Cerussite	1.1889	6.0	(3 5 1)	80.771	-0.109
81.520	1.1798	4983	10.7	Cerussite	1.1808	6.0	(0 2 5)	81.441	-0.079
82.040	1.1737	2593	5.6						
83.440	1.1575	1276	2.7	Cerussite	1.1621	3.0	(1 7 1)	83.037	-0.403
83.821	1.1532	1020	2.2	Cerussite	1.1528	3.0	(2 6 2)	83.858	0.037
84.281	1.1481	897	1.9	Cerussite	1.1488	3.0	(4 2 2)	84.217	-0.064
86.100	1.1284	1685	3.6	Cerussite	1.1271	3.0	(3 5 2)	86.226	0.125
86.800	1.1211	1428	3.1	Cerussite	1.1224	3.0	(2 4 4)	86.675	-0.125
87.480	1.1141	418	0.9	Cerussite	1.1137	3			

Additional File 2: Selected listings of XRD results



Additional File 2: Selected listings of XRD results

No. 20 Owner/Qero ID: MMA 1994.35.26

Stylistic Period: Colonial

Sample: white pigment

Rigaku file: 1994_35_26-white1.asc

Peak ID Extended Report (69 Peaks, Max P/N = 96.8)

[1994_35_26-white1.asc] , Created by AreaMax

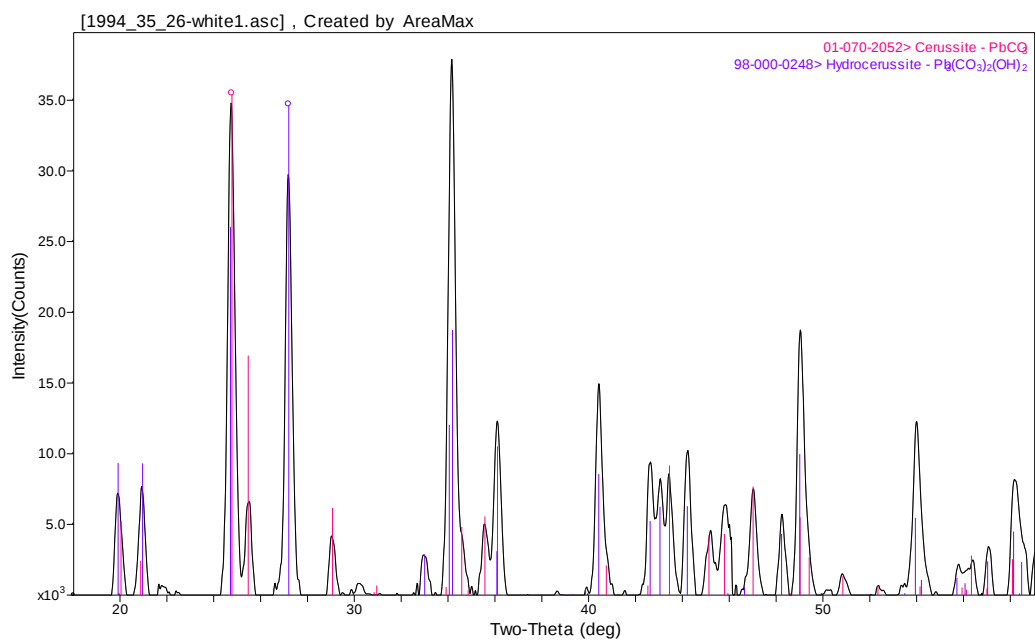
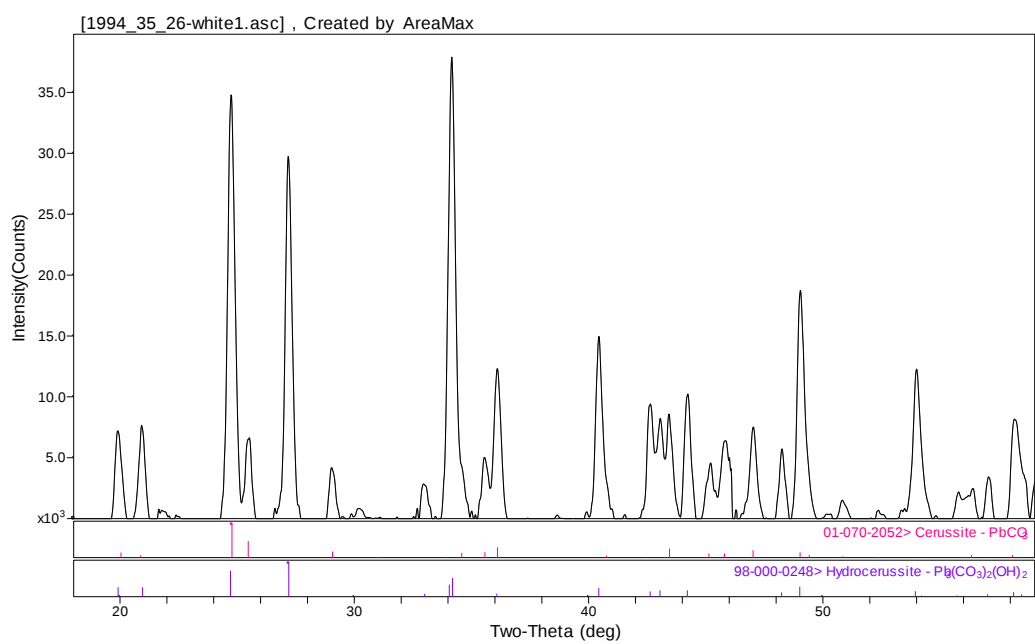
PEAK: 25(pts)/Parabolic Filter, Threshold=3.0, Cutoff=0.1%, BG=3/1.0, Peak-Top=Centroid Fit

2-Theta	d(Å)	Height	Height%	Phase ID	d(Å)	I%	(h k l)	2-Theta	Delta
19.929	4.4516	6980	18.5	Hydrocerussite	4.4535	26.8	(1 0 1)	19.920	-0.008
20.934	4.2401	7442	19.7	Hydrocerussite	4.2345	26.7	(0 1 2)	20.962	0.028
21.783	4.0767	531	1.4						
24.748	3.5946	34355	91.1	Cerussite	3.5900	100.0	(1 1 1)	24.780	0.032
25.488	3.4919	6197	16.4	Cerussite	3.4939	47.5	(0 2 1)	25.473	-0.015
27.195	3.2764	29737	78.9	Hydrocerussite	3.2755	100.0	(0 1 5)	27.204	0.008
29.063	3.0700	4098	10.9	Cerussite	3.0691	17.3	(0 0 2)	29.072	0.009
30.224	2.9546	798	2.1						
32.986	2.7133	2472	6.6	Hydrocerussite	2.7118	8.2	(1 0 7)	33.004	0.019
34.162	2.6225	37702	100.0	Hydrocerussite	2.6203	53.8	(1 1 0)	34.192	0.030
35.582	2.5210	4971	13.2	Cerussite	2.5216	15.6	(1 1 2)	35.574	-0.008
36.106	2.4856	12251	32.5	Cerussite	2.4853	29.5	(1 3 0)	36.111	0.005
40.448	2.2283	14878	39.5	Hydrocerussite	2.2291	24.6	(2 0 2)	40.433	-0.015
42.656	2.1179	9342	24.8	Hydrocerussite	2.1193	15.0	(0 2 4)	42.625	-0.030
43.057	2.0991	8159	21.6	Hydrocerussite	2.0996	17.9	(1,0,10)	43.046	-0.010
43.434	2.0817	8503	22.6	Cerussite	2.0810	25.7	(2 2 1)	43.450	0.016
44.233	2.0460	10157	26.9	Hydrocerussite	2.0469	18.0	(2 0 5)	44.212	-0.021
45.196	2.0046	4497	11.9	Cerussite	2.0071	11.9	(0 4 1)	45.137	-0.059
45.856	1.9773	6295	16.7	Cerussite	1.9796	12.1	(2 0 2)	45.798	-0.058
47.034	1.9305	7438	19.7	Cerussite	1.9311	21.5	(1 3 2)	47.018	-0.016
48.264	1.8841	5645	15.0	Hydrocerussite	1.8851	12.4	(0 2 7)	48.238	-0.026
49.053	1.8556	18724	49.7	Cerussite	1.8566	15.4	(1 1 3)	49.025	-0.028
50.223	1.8151	339	0.9	Cerussite	1.8250	0.4	(2 3 1)	49.931	-0.292
50.860	1.7939	1507	4.0	Cerussite	1.7942	3.7	(2 2 2)	50.848	-0.012
52.421	1.7441	680	1.8	Cerussite	1.7462	1.8	(0 4 2)	52.351	-0.070
53.347	1.7159	695	1.8	Hydrocerussite	1.7116	0.4	(2 1 1)	53.491	0.144
54.008	1.6965	12278	32.6	Hydrocerussite	1.6984	15.7	(1 2 2)	53.942	-0.066
55.832	1.6453	2074	5.5	Cerussite	1.6424	1.5	(2 4 0)	55.938	0.107
56.354	1.6313	2483	6.6	Cerussite	1.6317	7.8	(3 1 1)	56.341	-0.013
57.073	1.6124	3096	8.2	Hydrocerussite	1.6136	6.8	(1 2 5)	57.029	-0.045
58.207	1.5837	7773	20.6	Hydrocerussite	1.5855	12.9	(0,1,14)	58.137	-0.070
58.560	1.5750	3659	9.7	Hydrocerussite	1.5769	6.7	(1,1,12)	58.482	-0.078
59.136	1.5610	3449	9.1	Cerussite	1.5612	6.4	(1 5 1)	59.127	-0.008
60.491	1.5293	7376	19.6	Hydrocerussite	1.5307	12.5	(2 1 7)	60.429	-0.062
61.273	1.5116	2488	6.6	Hydrocerussite	1.5136	3.9	(3 0 0)	61.181	-0.092
61.746	1.5011	1464	3.9	Cerussite	1.5016	4.3	(2 2 3)	61.724	-0.022
62.523	1.4843	5232	13.9	Hydrocerussite	1.4849	1.3	(1 2 8)	62.496	-0.027
63.067	1.4728	2215	5.9	Cerussite	1.4745	4.1	(3 3 0)	62.989	-0.078
64.266	1.4482	2173	5.8	Cerussite	1.4493	2.8	(1 1 4)	64.215	-0.051
64.595	1.4416	921	2.4	Cerussite	1.4427	1.4	(0 2 4)	64.541	-0.054
65.364	1.4265	904	2.4	Cerussite	1.4286	1.9	(1 5 2)	65.258	-0.106
66.007	1.4142	1718	4.6	Hydrocerussite	1.4134	1.1	(3 0 6)	66.048	0.041
66.346	1.4078	822	2.2	Hydrocerussite	1.4077	0.9	(1,0,16)	66.353	0.006
67.203	1.3919	1082	2.9	Hydrocerussite	1.3899	3.0	(2,1,10)	67.311	0.108

Additional File 2: Selected listings of XRD results

67.467	1.3871	1401	3.7	Cerussite	1.3898	0.1	(1 2 4)	67.317	-0.150
69.252	1.3556	1763	4.7	Hydrocerussite	1.3568	4.0	(2,0,14)	69.183	-0.069
70.128	1.3408	1610	4.3	Hydrocerussite	1.3423	3.7	(1,2,11)	70.040	-0.088
70.861	1.3288	1514	4.0	Cerussite	1.3289	5.2	(3 3 2)	70.851	-0.010
72.056	1.3096	4344	11.5	Hydrocerussite	1.3110	3.3	(2 2 0)	71.969	-0.087
72.419	1.3039	2550	6.8	Cerussite	1.3039	5.2	(2 1 4)	72.423	0.004
73.181	1.2922	2192	5.8	Hydrocerussite	1.2933	3.7	(2 2 3)	73.111	-0.070
73.922	1.2811	1035	2.7	Cerussite	1.2805	4.0	(2 4 3)	73.962	0.040
74.941	1.2662	986	2.6	Cerussite	1.2671	3.5	(1 5 3)	74.879	-0.061
76.001	1.2512	4392	11.6	Hydrocerussite	1.2525	6.1	(3 1 2)	75.902	-0.099
76.713	1.2413	2668	7.1	Cerussite	1.2423	2.7	(0 4 4)	76.643	-0.070
77.283	1.2336	822	2.2	Hydrocerussite	1.2321	0.8	(1 3 4)	77.394	0.111
78.628	1.2158	2205	5.8	Cerussite	1.2144	2.6	(0 1 5)	78.735	0.107
79.782	1.2011	5320	14.1	Hydrocerussite	1.2014	4.9	(0,3,12)	79.760	-0.022
80.933	1.1869	1066	2.8	Hydrocerussite	1.1878	0.3	(2,0,17)	80.857	-0.076
81.536	1.1796	4302	11.4	Cerussite	1.1788	1.9	(0 2 5)	81.603	0.068
82.079	1.1732	2312	6.1	Hydrocerussite	1.1736	3.2	(2 2 9)	82.044	-0.034
83.317	1.1589	1221	3.2	Hydrocerussite	1.1592	0.7	(3 1 8)	83.291	-0.026
84.025	1.1509	1312	3.5	Cerussite	1.1514	2.5	(2 6 2)	83.981	-0.044
84.442	1.1463	628	1.7	Cerussite	1.1468	0.5	(3 0 4)	84.394	-0.048
85.024	1.1399	538	1.4						
86.046	1.1290	2014	5.3	Hydrocerussite	1.1282	0.1	(0,0,21)	86.116	0.070
86.927	1.1198	2026	5.4	Cerussite	1.1209	0.6	(3 4 3)	86.818	-0.109
87.479	1.1141	653	1.7	Hydrocerussite	1.1152	0.5	(4 0 4)	87.377	-0.102
88.673	1.1022	587	1.6	Cerussite					

Additional File 2: Selected listings of XRD results



Additional File 2: Selected listings of XRD results

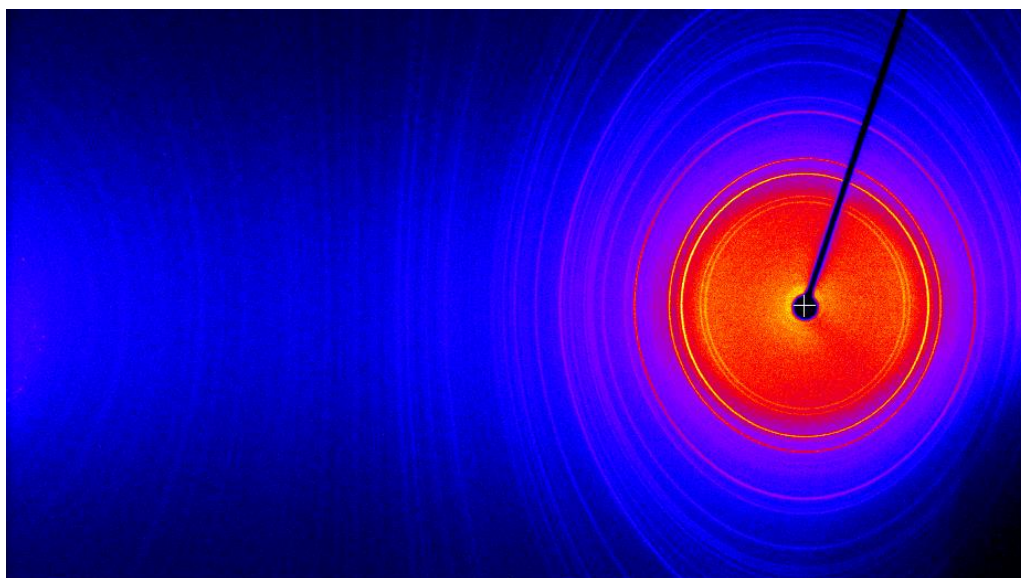
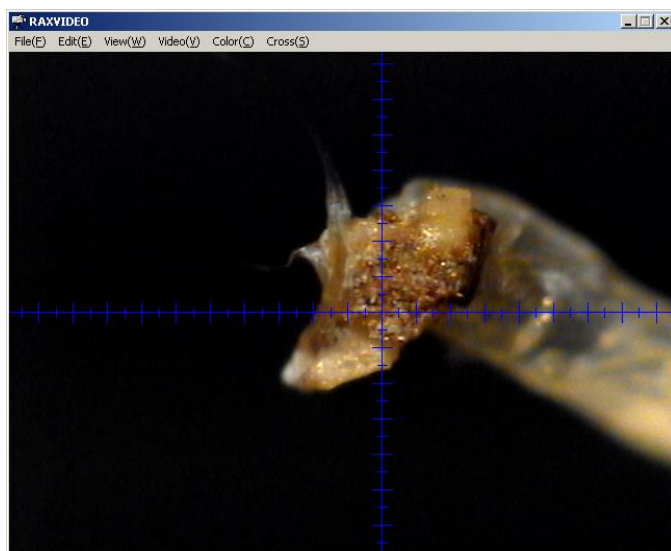
No. 21 Owner/Qero ID: Private Collection 3

Stylistic Period: Colonial

Sample: cream-white pigment from white lozenge in top register Topkapu

Rigaku file: Kasser1.asc

Cu K α rad; 46 kV, 40 mA; 800 μ m collimator; osc on ω -10° – 30° at 1°/sec; osc on ϕ -180° - 0° at 3°/sec; 15 minute exp.



Additional File 2: Selected listings of XRD results

Peak ID Extended Report (65 Peaks, Max P/N = 161.9)

[Kasser1.asc] , Created by AreaMax

PEAK: 25-pts/Parabolic Filter, Threshold=3.0, Cutoff=0.1%, BG=3/1.0, Peak-Top=Summit

2-Theta	d(Å)	Height	Height%	Phase ID	d(Å)	I%	(h k l)	2-Theta	Delta
14.320	6.1801	1970	1.9						
19.920	4.4536	18768	17.9	Hydrocerussite	4.4700	35.0	(1 0 1)	19.846	-0.074
20.920	4.2428	19446	18.5	Cerussite	4.2460	5.9	(0 2 0)	20.905	-0.016
21.880	4.0588	3164	3.0						
24.740	3.5957	104839	100.0	Cerussite	3.5882	100.0	(1 1 1)	24.793	0.052
25.479	3.4930	24379	23.3	Cerussite	3.4925	48.5	(0 2 1)	25.484	0.004
26.611	3.3470	6808	6.5						
27.180	3.2782	91367	87.2	Hydrocerussite	3.2900	72.0	(0 1 5)	27.081	-0.099
29.040	3.0723	9424	9.0	Cerussite	3.0705	20.8	(0 0 2)	29.058	0.018
30.200	2.9569	7167	6.8						
30.879	2.8934	4173	4.0	Cerussite	2.8875	2.6	(0 1 2)	30.944	0.065
32.161	2.7810	3709	3.5						
32.961	2.7153	7589	7.2	Hydrocerussite	2.7150	19.0	(1 0 7)	32.964	0.004
34.140	2.6242	98727	94.2	Hydrocerussite	2.6230	100.0	(1 1 0)	34.156	0.016
35.541	2.5239	13123	12.5	Cerussite	2.5220	23.5	(1 1 2)	35.568	0.027
36.081	2.4873	36113	34.4	Cerussite	2.4839	38.0	(0 2 2)	36.133	0.052
40.420	2.2298	39539	37.7	Hydrocerussite	2.2310	59.0	(2 0 2)	40.396	-0.024
42.600	2.1205	27357	26.1	Hydrocerussite	2.1200	37.0	(0 2 4)	42.612	0.011
43.040	2.0999	25988	24.8	Hydrocerussite	2.0990	25.0	(1,0,10)	43.059	0.019
43.440	2.0815	25880	24.7	Cerussite	2.0801	44.0	(0 3 2)	43.470	0.030
44.200	2.0474	28563	27.2	Hydrocerussite	2.0460	38.0	(2 0 5)	44.233	0.033
45.140	2.0069	11825	11.3	Cerussite	2.0065	18.4	(0 4 1)	45.151	0.011
45.780	1.9804	16072	15.3	Cerussite	1.9795	22.7	(2 0 2)	45.801	0.021
47.000	1.9318	20471	19.5	Cerussite	1.9311	37.9	(1 3 2)	47.017	0.017
48.240	1.8850	19024	18.1	Hydrocerussite	1.8840	28.0	(0 2 7)	48.267	0.026
49.020	1.8568	57712	55.0	Cerussite	1.8576	31.9	(1 1 3)	48.998	-0.022
50.880	1.7932	4652	4.4	Cerussite	1.7941	7.4	(2 2 2)	50.852	-0.029
52.479	1.7422	2197	2.1	Cerussite	1.7462	3.3	(0 4 2)	52.350	-0.129
53.980	1.6973	29477	28.1	Hydrocerussite	1.6960	62.0	(1 2 2)	54.025	0.045
55.820	1.6456	5190	5.0	Hydrocerussite	1.6490	32.0	(2 1 4)	55.696	-0.124
56.340	1.6317	8463	8.1	Cerussite	1.6310	17.4	(3 1 1)	56.366	0.027
57.060	1.6128	10234	9.8	Hydrocerussite	1.6130	49.0	(1 2 5)	57.052	-0.009
58.160	1.5849	25355	24.2	Hydrocerussite	1.5840	33.0	(0,1,14)	58.195	0.035
59.120	1.5614	11922	11.4	Cerussite	1.5608	12.2	(1 5 1)	59.143	0.023
60.480	1.5295	20258	19.3	Hydrocerussite	1.5300	51.0	(2 1 7)	60.458	-0.021
61.221	1.5128	6257	6.0	Hydrocerussite	1.5130	35.0	(3 0 0)	61.210	-0.011
61.720	1.5017	4408	4.2	Cerussite	1.5020	10.5	(2 2 3)	61.706	-0.014
62.480	1.4853	12520	11.9	Hydrocerussite	1.4850	35.0	(3 0 3)	62.492	0.012
63.000	1.4742	6043	5.8	Cerussite	1.4739	12.2	(3 3 0)	63.019	0.019
64.219	1.4492	3974	3.8	Cerussite	1.4503	6.4	(1 1 4)	64.163	-0.057
65.280	1.4282	1828	1.7	Cerussite	1.4285	4.0	(1 5 2)	65.261	-0.019
66.000	1.4143	3025	2.9	Cerussite	1.4153	3.3	(0 6 0)	65.947	-0.053
67.399	1.3883	4258	4.1	Hydrocerussite	1.3880	19.0	(2,1,10)	67.417	0.018
69.240	1.3558	5020	4.8	Hydrocerussite	1.3530	19.0	(1,1,15)	69.406	0.166
70.120	1.3410	3903	3.7	Hydrocerussite	1.3400	20.0	(1,2,11)	70.178	0.058
70.840	1.3291	4670	4.5	Cerussite	1.3287	13.5	(3 3 2)	70.863	0.022
71.399	1.3200	1330	1.3	Cerussite	1.3206	7.3	(2 0 4)	71.365	-0.035
72.020	1.3102	10165	9.7	Hydrocerussite	1.3090	60.0	(2 2 0)	72.096	0.075
73.140	1.2929	6169	5.9	Hydrocerussite	1.2920	61.0	(2 2 3)	73.197	0.057
73.880	1.2817	3524	3.4	Cerussite	1.2807	10.1	(2 4 3)	73.948	0.067
74.880	1.2671	4660	4.4	Cerussite	1.2673	8.2	(1 5 3)	74.862	-0.018
76.000	1.2512	12133	11.6	Hydrocerussite	1.2510	63.0	(3 1 2)	76.012	0.012

Additional File 2: Selected listings of XRD results

76.620	1.2426	7654	7.3	Cerussite	1.2419	5.5	(2 6 0)	76.667	0.047
77.440	1.2315	1788	1.7	Cerussite	1.2277	0.3	(3 4 2)	77.723	0.283
78.660	1.2154	5402	5.2	Cerussite	1.2140	8.0	(4 2 1)	78.767	0.107
79.780	1.2011	12380	11.8	Cerussite	1.1968	0.3	(2 3 4)	80.128	0.348
80.941	1.1868	2071	2.0	Cerussite	1.1878	6.0	(3 5 1)	80.855	-0.086
81.520	1.1798	10464	10.0	Cerussite	1.1798	6.4	(0 2 5)	81.519	-0.001
82.060	1.1734	5708	5.4						
83.301	1.1591	2654	2.5	Cerussite	1.1599	4.0	(1 7 1)	83.226	-0.074
84.000	1.1512	3557	3.4	Cerussite	1.1513	5.9	(2 6 2)	83.988	-0.012
85.260	1.1374	1487	1.4	Cerussite	1.1369	2.2	(3 1 4)	85.304	0.044
86.000	1.1295	6145	5.9	Cerussite	1.1263	1.9	(0 3 5)	86.300	0.300
86.840	1.1207	3708	3.5	Cerussite	1.1214	1.9	(2 4 4)	86.776	-0.064
88.400	1.1049	1514	1.4	Cerussite	1.1054	1.0	(4 4 0)	88.349	-0.051

Additional File 2: Selected listings of XRD results

