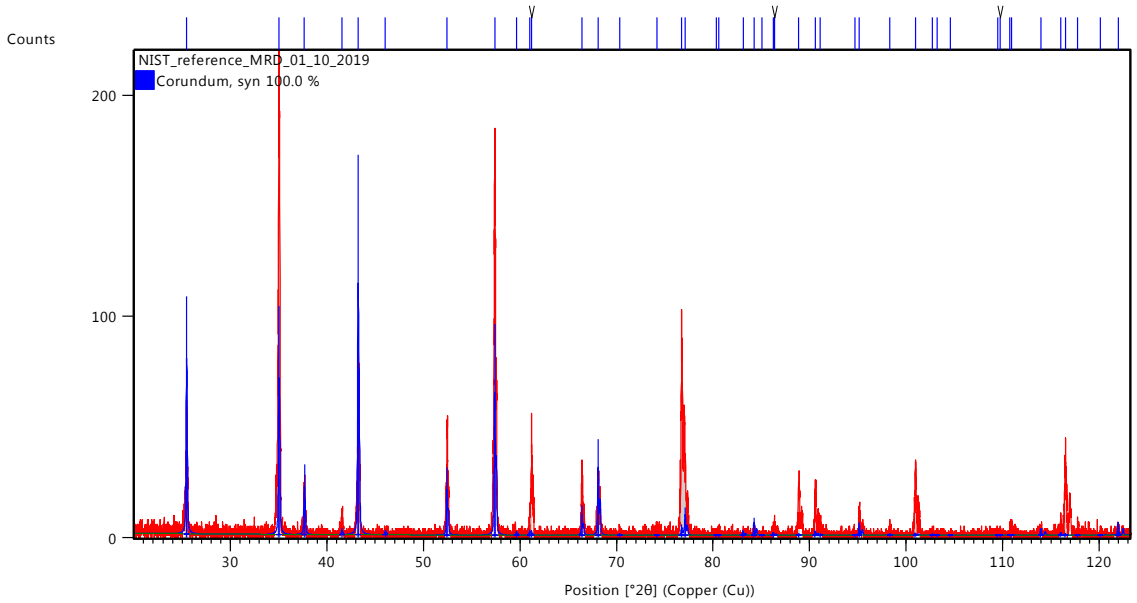
NIST Reference Standard 1976b analyzed on the MRD on January 10, 2019. Optic configuration and full peak list below. By Rietveld refinement values for a and b are 0.4759 and for c 1.2993 which are the exact values from the NIST reference values. Peak relative intensity and position also match well.

Measurement Conditions: (Bookmark 1)

Dataset Name	NIST_reference_MRD_01_10_2019
File name	C:\Users\User-1\Desktop\NIST_reference_MRD_01_10_2019.xrdml
Comment	Configuration=Mod FACTORY CONFIGURATION, Owner=User-1, Creation date=2/20/2008 4:58:19 PM Goniometer=PW3050/65 (Theta/2Theta); Minimum step size 2Theta:0.0001; Minimum step size Omega:0.0001 Sample stage=MRD Cradle; Minimum step size Phi:0.01; Minimum step size Chi:0.01; Minimum step size X:0.01; Minimum step size Y:0.01; Minimum step size Z:0.001 Diffractometer system=XPERT-PRO Measurement program=C:\PANalytical\Data Collector\Programs\NIST_reference.xrdmp, Identifier={E3CD8805-0A21-4A9C-966F-EF42940F9619} PHD Lower Level = 5.63 (keV), PHD Upper Level = 12.87 (keV)
Measurement Start Date/Time	1/10/2019 4:10:36 PM
Operator	user-1
Raw Data Origin	XRD measurement (*.XRDML)
Scan Axis	Gonio
Start Position [°2θ]	20.0050
End Position [°2θ]	123.2950
Step Size [°2θ]	0.0100
Scan Step Time [s]	0.2000
Scan Type	Continuous
Offset [°2θ]	0.0000
Divergence Slit Type	Fixed
Divergence Slit Size [°]	0.1089
Specimen Length [mm]	10.00
Receiving Slit Size [mm]	0.2000
Measurement Temperature [°C]	25.00
Anode Material	Cu
K-Alpha1 [Å]	1.54060
K-Alpha2 [Å]	1.54443
K-Beta [Å]	1.39225
K-A2 / K-A1 Ratio	0.50000
Generator Settings	40 mA, 45 kV
Diffractometer Type	0000000013030338
Diffractometer Number	0
Goniometer Radius [mm]	320.00
Dist. Focus-Diverg. Slit [mm]	100.00
Incident Beam Monochromator	No
Spinning	No

Main Graphics, Analyze View: (Bookmark 2)



Peak List: (Bookmark 3)

Pos. [°2θ]	Height [cts]	FWHM Left [°2θ]	d-spacing [Å]	Rel. Int. [%]
25.4456	62.88	0.1235	3.49763	59.97
35.0193	61.66	0.1235	2.56027	58.80
37.6525	19.32	0.1235	2.38705	18.43
41.5439	1.72	0.1235	2.17200	1.64
43.2294	104.87	0.1235	2.09114	100.00
46.0568	1.53	0.1235	1.96913	1.46
52.4303	19.57	0.1235	1.74377	18.66
57.3770	62.28	0.1235	1.60463	59.39
59.6279	1.18	0.1235	1.54932	1.12
61.0175	1.59	0.1235	1.51732	1.52
61.1764	0.88	0.1235	1.51376	0.83
66.4067	9.23	0.1235	1.40665	8.80
68.1026	29.88	0.1235	1.37569	28.50
70.3058	0.57	0.1235	1.33788	0.54
74.1850	0.00	0.1235	1.27722	0.00
76.7535	3.33	0.1235	1.24076	3.17
77.1193	8.85	0.1235	1.23578	8.44
80.3110	0.33	0.1235	1.19451	0.31
80.6018	0.13	0.1235	1.19093	0.13
83.1141	0.85	0.1235	1.16120	0.81
83.1141	0.85	0.1235	1.16120	0.81
84.2601	5.74	0.1235	1.14830	5.48
85.0461	0.16	0.1235	1.13969	0.16
86.2584	1.02	0.1235	1.12675	0.97
86.3979	0.04	0.1235	1.12529	0.04
88.8876	0.67	0.1235	1.10010	0.64

90.5924	1.76	0.1235	1.08378	1.68
91.0966	0.45	0.1235	1.07909	0.43
94.7291	0.12	0.1235	1.04706	0.11
95.1570	4.88	0.1235	1.04348	4.65
98.3109	0.56	0.1235	1.01826	0.54
100.9764	0.86	0.1235	0.99845	0.82
102.7191	0.41	0.1235	0.98620	0.39
103.2367	0.01	0.1235	0.98266	0.01
104.5544	0.10	0.1235	0.97385	0.09
109.4699	0.19	0.1235	0.94343	0.19
109.7659	0.14	0.1235	0.94171	0.14
110.7582	0.03	0.1235	0.93605	0.03
110.9074	0.26	0.1235	0.93521	0.25
113.9870	2.95	0.1235	0.91854	2.81
116.0327	1.06	0.1235	0.90816	1.01
116.4991	0.07	0.1235	0.90586	0.06
117.7898	0.05	0.1235	0.89965	0.04
120.1480	0.19	0.1235	0.88880	0.18
121.9773	2.74	0.1235	0.88082	2.61
121.9773	2.74	0.1235	0.88082	2.61

Pattern List: (Bookmark 4)

Visible	Ref.Code	Score	Compound Name	Displ.[°2θ]	Scale Fac.	Chem. Formula
*	04-013-1687	60	Aluminum Oxide	-0.098	0.778	Al2 O3