NIST Reference Standard on the Empyrean on June 18, 2019. Primary peak position and relative intensity match against the NIST reference data, and the lattice cell refinement for the a and c cells also match. The instrument is operating correctly. Data can be found in the NIST Reference Directory in the XRD data directory.

## Main Graphics, Analyze View:



## Peak List:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Pos. [°2θ] | Height [cts] | FWHM Left [°2θ] | d-spacing [Å] | Rel. Int. [%] |
| 25.6093 | 610.04 | 0.0765 | 3.47564 | 63.72 |
| 35.1820 | 955.42 | 0.0765 | 2.54880 | 99.80 |
| 37.8099 | 447.00 | 0.0765 | 2.37747 | 46.69 |
| 41.7075 | 4.18 | 0.0765 | 2.16386 | 0.44 |
| 43.3859 | 953.70 | 0.0765 | 2.08396 | 99.62 |
| 46.2106 | 14.52 | 0.0765 | 1.96293 | 1.52 |
| 52.5824 | 484.05 | 0.0765 | 1.73908 | 50.56 |
| 57.5291 | 957.32 | 0.0765 | 1.60075 | 100.00 |
| 59.7722 | 24.60 | 0.0765 | 1.54592 | 2.57 |
| 61.1613 | 31.83 | 0.0765 | 1.51410 | 3.32 |
| 61.3303 | 72.78 | 0.0765 | 1.51033 | 7.60 |
| 66.5483 | 378.10 | 0.0765 | 1.40400 | 39.50 |
| 68.2402 | 578.68 | 0.0765 | 1.37326 | 60.45 |
| 70.4455 | 12.22 | 0.0765 | 1.33557 | 1.28 |
| 74.3274 | 14.43 | 0.0765 | 1.27513 | 1.51 |
| 76.8989 | 166.50 | 0.0765 | 1.23877 | 17.39 |
| 77.2615 | 88.40 | 0.0765 | 1.23386 | 9.23 |
| 80.4452 | 7.23 | 0.0765 | 1.19286 | 0.76 |
| 80.7283 | 64.59 | 0.0765 | 1.18939 | 6.75 |
| 83.2436 | 3.78 | 0.0765 | 1.15972 | 0.39 |
| 83.2436 | 3.78 | 0.0765 | 1.15972 | 0.39 |
| 84.3844 | 52.50 | 0.0765 | 1.14693 | 5.48 |
| 85.1685 | 2.83 | 0.0765 | 1.13836 | 0.30 |
| 86.3800 | 38.70 | 0.0765 | 1.12548 | 4.04 |
| 86.5284 | 27.79 | 0.0765 | 1.12393 | 2.90 |
| 89.0209 | 77.10 | 0.0765 | 1.09880 | 8.05 |
| 90.7306 | 18.61 | 0.0765 | 1.08249 | 1.94 |
| 91.2151 | 91.40 | 0.0765 | 1.07800 | 9.55 |
| 94.8451 | 2.08 | 0.0765 | 1.04609 | 0.22 |
| 95.2741 | 183.41 | 0.0765 | 1.04251 | 19.16 |
| 98.4197 | 24.36 | 0.0765 | 1.01742 | 2.55 |
| 101.0970 | 137.83 | 0.0765 | 0.99759 | 14.40 |
| 102.8445 | 3.09 | 0.0765 | 0.98534 | 0.32 |
| 103.3418 | 24.89 | 0.0765 | 0.98195 | 2.60 |
| 104.6632 | 1.74 | 0.0765 | 0.97314 | 0.18 |
| 109.5655 | 5.14 | 0.0765 | 0.94287 | 0.54 |
| 109.8802 | 3.49 | 0.0765 | 0.94105 | 0.36 |
| 110.8527 | 1.68 | 0.0765 | 0.93551 | 0.18 |
| 111.0113 | 42.64 | 0.0765 | 0.93462 | 4.45 |
| 114.0902 | 29.54 | 0.0765 | 0.91801 | 3.09 |
| 116.1227 | 144.89 | 0.0765 | 0.90771 | 15.13 |
| 116.6188 | 50.20 | 0.0765 | 0.90528 | 5.24 |
| 117.8749 | 82.82 | 0.0765 | 0.89925 | 8.65 |
| 120.2345 | 5.11 | 0.0765 | 0.88842 | 0.53 |
| 122.0587 | 25.90 | 0.0765 | 0.88047 | 2.71 |
| 122.0587 | 25.90 | 0.0765 | 0.88047 | 2.71 |
| 124.6162 | 33.17 | 0.0765 | 0.86994 | 3.46 |
| 127.7003 | 190.12 | 0.0765 | 0.85813 | 19.86 |
| 129.8935 | 37.73 | 0.0765 | 0.85030 | 3.94 |
| 129.8935 | 37.73 | 0.0765 | 0.85030 | 3.94 |
| 131.1148 | 79.15 | 0.0765 | 0.84613 | 8.27 |
| 132.2361 | 5.72 | 0.0765 | 0.84243 | 0.60 |
| 132.6375 | 3.91 | 0.0765 | 0.84113 | 0.41 |
| 136.0968 | 164.18 | 0.0765 | 0.83051 | 17.15 |
| 136.0968 | 164.18 | 0.0765 | 0.83051 | 17.15 |
| 139.3842 | 2.10 | 0.0765 | 0.82135 | 0.22 |

## Pattern List: (Bookmark 4)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Visible | Ref. Code | Score | Compound Name | Displacement [°2Th.] | Scale Factor | Chemical Formula |
| \* | 04-007-9906 | 65 | Aluminum Oxide | 0.000 | 0.470 | Al2 O3 |