NIST Reference Standard on the Empyrean on March 11, 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.

## Main Graphics



## Peak List:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Pos. [°2θ] | Height [cts] | FWHM Left [°2θ] | d-spacing [Å] | Rel. Int. [%] |
| 25.6066 | 301.45 | 0.0778 | 3.47601 | 63.73 |
| 35.1800 | 472.06 | 0.0778 | 2.54894 | 99.81 |
| 37.8064 | 220.88 | 0.0778 | 2.37768 | 46.70 |
| 41.7066 | 2.07 | 0.0778 | 2.16390 | 0.44 |
| 43.3829 | 471.24 | 0.0778 | 2.08410 | 99.63 |
| 46.2072 | 7.17 | 0.0778 | 1.96307 | 1.52 |
| 52.5796 | 239.17 | 0.0778 | 1.73917 | 50.57 |
| 57.5273 | 472.98 | 0.0778 | 1.60080 | 100.00 |
| 59.7683 | 12.15 | 0.0778 | 1.54602 | 2.57 |
| 61.1575 | 15.73 | 0.0778 | 1.51418 | 3.33 |
| 61.3299 | 35.95 | 0.0778 | 1.51034 | 7.60 |
| 66.5450 | 186.82 | 0.0778 | 1.40406 | 39.50 |
| 68.2360 | 285.94 | 0.0778 | 1.37333 | 60.45 |
| 70.4425 | 6.04 | 0.0778 | 1.33562 | 1.28 |
| 74.3263 | 7.13 | 0.0778 | 1.27515 | 1.51 |
| 76.8996 | 82.25 | 0.0778 | 1.23876 | 17.39 |
| 77.2611 | 43.67 | 0.0778 | 1.23387 | 9.23 |
| 80.4431 | 3.57 | 0.0778 | 1.19288 | 0.76 |
| 80.7237 | 31.91 | 0.0778 | 1.18944 | 6.75 |
| 83.2408 | 1.87 | 0.0778 | 1.15975 | 0.39 |
| 83.2408 | 1.87 | 0.0778 | 1.15975 | 0.39 |
| 84.3802 | 25.94 | 0.0778 | 1.14697 | 5.48 |
| 85.1638 | 1.40 | 0.0778 | 1.13841 | 0.30 |
| 86.3754 | 19.12 | 0.0778 | 1.12553 | 4.04 |
| 86.5268 | 13.73 | 0.0778 | 1.12394 | 2.90 |
| 89.0210 | 38.09 | 0.0778 | 1.09879 | 8.05 |
| 90.7328 | 9.19 | 0.0778 | 1.08247 | 1.94 |
| 91.2109 | 45.16 | 0.0778 | 1.07804 | 9.55 |
| 94.8412 | 1.03 | 0.0778 | 1.04612 | 0.22 |
| 95.2708 | 90.62 | 0.0778 | 1.04253 | 19.16 |
| 98.4147 | 12.04 | 0.0778 | 1.01746 | 2.55 |
| 101.0967 | 68.09 | 0.0778 | 0.99759 | 14.40 |
| 102.8464 | 1.52 | 0.0778 | 0.98532 | 0.32 |
| 103.3371 | 12.30 | 0.0778 | 0.98198 | 2.60 |
| 104.6601 | 0.86 | 0.0778 | 0.97316 | 0.18 |
| 109.5597 | 2.54 | 0.0778 | 0.94291 | 0.54 |
| 109.8807 | 1.72 | 0.0778 | 0.94105 | 0.36 |
| 110.8470 | 0.83 | 0.0778 | 0.93555 | 0.18 |
| 111.0087 | 21.07 | 0.0778 | 0.93464 | 4.45 |
| 114.0885 | 14.59 | 0.0778 | 0.91802 | 3.09 |
| 116.1173 | 71.58 | 0.0778 | 0.90774 | 15.13 |
| 116.6233 | 24.80 | 0.0778 | 0.90526 | 5.24 |
| 117.8685 | 40.91 | 0.0778 | 0.89928 | 8.65 |
| 120.2293 | 2.52 | 0.0778 | 0.88844 | 0.53 |
| 122.0524 | 12.80 | 0.0778 | 0.88050 | 2.71 |
| 122.0524 | 12.80 | 0.0778 | 0.88050 | 2.71 |
| 124.6130 | 16.39 | 0.0778 | 0.86996 | 3.46 |
| 127.6991 | 93.92 | 0.0778 | 0.85814 | 19.86 |
| 129.8951 | 18.64 | 0.0778 | 0.85029 | 3.94 |
| 129.8951 | 18.64 | 0.0778 | 0.85029 | 3.94 |
| 131.1198 | 39.11 | 0.0778 | 0.84612 | 8.27 |
| 132.2314 | 2.83 | 0.0778 | 0.84244 | 0.60 |
| 132.6408 | 1.93 | 0.0778 | 0.84112 | 0.41 |
| 136.0907 | 81.10 | 0.0778 | 0.83053 | 17.15 |
| 136.0907 | 81.10 | 0.0778 | 0.83053 | 17.15 |
| 139.3842 | 1.04 | 0.0778 | 0.82135 | 0.22 |

## Pattern List: (Bookmark 4)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Visible | Ref.Code | Score | Compound Name | Displ.[°2θ] | Scale Fac. | Chem. Formula |
| \* | 04-007-9906 | 70 | Aluminum Oxide | 0.000 | 0.475 | Al2 O3 |