**Pseudomeisserite-(NH4), a new mineral with a novel uranyl-sulfate linkage from the Blue Lizard mine, San Juan County, Utah, USA.**

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Supplementary material for Table 2. Powder X-ray data (*d* in Å) for pseudomeisserite-(NH4). Only calculated lines with *I* ≥ 3 are listed.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *I*obs | *d*obs |  | *d*calc | *I*calc | *h k l* |  | *I*obs | *d*obs |  | *d*calc | *I*calc | *h k l* |  | *I*obs | *d*obs |  | *d*calc | *I*calc | *h k l* |
| **76** | **12.69** |  | 12.6959 | 80 | 1 0 0 |  | 12 | 2.967 |  | 2.9674 | 18 | -1 3 3 |  |  |  |  | 2.0153 | 6 | 1 3 7 |
| **55** | **8.88** |  | 8.9034 | 61 | 0 1 1 |  |  |  |  | 2.9347 | 5 | -2 3 2 |  |  |  |  | 2.0126 | 11 | 2 1 8 |
|  |  |  | 8.6722 | 10 | -1 0 2 |  | 17 | 2.892 |  | 2.8749 | 18 | -4 1 4 |  |  |  |  | 2.0075 | 4 | 0 5 1 |
| 12 | 7.94 |  | 7.9015 | 16 | 1 1 0 |  | 29 | 2.815 | bracket | 2.8244 | 11 | 3 0 4 |  | 38 | 1.9995 | bracket | 2.0019 | 6 | 4 0 6 |
| **84** | **6.83** | bracket | 6.8972 | 30 | 0 1 2 |  | 2.8171 | 27 | -2 3 3 |  | 1.9983 | 6 | 5 2 3 |
| 6.8157 | 62 | 1 0 2 |  |  |  |  | 2.7817 | 8 | 1 1 6 |  | 1.9966 | 7 | -4 4 1 |
|  |  |  | 6.5781 | 5 | -1 1 2 |  |  |  |  | 2.7790 | 4 | -3 1 6 |  | 1.9931 | 5 | -1 4 6 |
|  |  |  | 6.3480 | 4 | 2 0 0 |  | 16 | 2.751 | bracket | 2.7616 | 8 | -1 3 4 |  | 1.9921 | 4 | -4 2 8 |
| **100** | **6.01** |  | 5.9983 | 100 | -2 0 2 |  | 2.7465 | 4 | 2 3 2 |  | 1.9879 | 13 | -6 2 1 |
|  |  |  | 5.6487 | 13 | 1 1 2 |  | 2.7393 | 15 | -4 2 2 |  | 1.9842 | 9 | -2 2 9 |
| 44 | 5.52 |  | 5.4787 | 49 | -2 1 1 |  | 24 | 2.712 | bracket | 2.7199 | 6 | 3 1 4 |  | 15 | 1.9592 | bracket | 1.9637 | 8 | 4 1 6 |
| 23 | 5.17 |  | 5.1566 | 30 | -2 1 2 |  | 2.7042 | 13 | 4 1 2 |  | 1.9539 | 6 | -5 1 8 |
| 20 | 4.799 | bracket | 4.8764 | 10 | 0 2 1 |  | 2.6922 | 9 | -4 1 5 |  |  |  |  | 1.9396 | 5 | -1 0 10 |
| 4.8334 | 7 | -1 0 4 |  | 8 | 2.664 | bracket | 2.6818 | 6 | -4 2 3 |  | 7 | 1.9254 |  | 1.9310 | 5 | -4 4 4 |
| 4.7536 | 12 | 2 0 2 |  | 2.6433 | 9 | -2 1 7 |  | 7 | 1.8806 |  | 1.8819 | 11 | 3 4 4 |
|  |  |  | 4.7229 | 8 | 0 0 4 |  | 21 | 2.585 | bracket | 2.5859 | 21 | 4 2 1 |  | 10 | 1.8502 |  | 1.8540 | 10 | 1 2 9 |
|  |  |  | 4.6903 | 5 | 1 2 0 |  | 2.5760 | 14 | 2 3 3 |  |  |  |  | 1.8300 | 7 | 2 1 9 |
| **51** | **4.593** |  | 4.5883 | 52 | -2 1 3 |  | 11 | 2.502 | bracket | 2.5057 | 7 | -5 1 3 |  |  |  |  | 1.8273 | 4 | 5 3 3 |
| **57** | **4.414** | bracket | 4.4581 | 58 | 1 2 1 |  | 2.5021 | 4 | -3 1 7 |  | 32 | 1.8171 | bracket | 1.8191 | 6 | -7 1 1 |
| 4.3595 | 35 | -1 1 4 |  | 11 | 2.453 | bracket | 2.4696 | 5 | -1 4 1 |  | 1.8175 | 6 | -5 4 2 |
|  |  |  | 4.3361 | 11 | -2 0 4 |  | 2.4671 | 6 | -3 3 4 |  | 1.8137 | 14 | 4 1 7 |
| 51 | 4.251 | bracket | 4.3007 | 6 | 2 1 2 |  | 2.4418 | 9 | 1 1 7 |  | 1.8119 | 5 | 1 5 4 |
| 4.2320 | 24 | 3 0 0 |  | 2.4355 | 6 | -5 1 4 |  | 1.8072 | 5 | 4 4 3 |
| **67** | **3.959** | bracket | 3.9919 | 19 | -2 2 1 |  | 19 | 2.368 | bracket | 2.3800 | 16 | 0 2 7 |  |  |  |  | 1.8026 | 4 | -4 4 6 |
| 3.9841 | 11 | -2 1 4 |  | 2.3702 | 5 | 5 1 1 |  | 13 | 1.7822 | bracket | 1.7907 | 7 | -7 1 5 |
| 3.9507 | 5 | 2 2 0 |  | 2.3667 | 4 | 1 4 2 |  | 1.7861 | 5 | -6 2 7 |
| 3.9375 | 57 | -1 2 3 |  | 2.3503 | 8 | -2 1 8 |  | 1.7746 | 5 | 6 0 4 |
| 14 | 3.803 |  | 3.8048 | 14 | 1 1 4 |  |  |  |  | 2.3430 | 6 | -4 3 1 |  | 16 | 1.7475 | bracket | 1.7550 | 7 | 3 3 7 |
| 20 | 3.667 | bracket | 3.7178 | 8 | -3 1 3 |  |  |  |  | 2.3262 | 5 | -2 4 2 |  | 1.7454 | 6 | -7 1 6 |
| 3.6607 | 12 | 3 1 1 |  |  |  |  | 2.3201 | 4 | -3 0 8 |  | 1.7359 | 5 | 1 5 5 |
| 3.6327 | 8 | -1 1 5 |  | 20 | 2.313 | bracket | 2.3132 | 6 | 5 0 2 |  | 1.7344 | 6 | -5 0 10 |
| 12 | 3.556 | bracket | 3.5491 | 8 | 3 0 2 |  | 2.3089 | 5 | 4 3 0 |  | 21 | 1.7045 | bracket | 1.7080 | 6 | -3 4 8 |
| 3.5386 | 12 | 0 1 5 |  | 2.3018 | 10 | 2 4 1 |  | 1.7053 | 6 | 5 4 2 |
|  |  |  | 3.3128 | 9 | 0 3 1 |  | 2.2992 | 9 | -3 2 7 |  | 1.6997 | 15 | 2 0 10 |
| 44 | 3.286 |  | 3.3020 | 41 | -3 2 1 |  |  |  |  | 2.2669 | 5 | 1 4 3 |  | 13 | 1.6616 | bracket | 1.6679 | 4 | 1 6 0 |
|  |  |  | 3.2526 | 9 | 1 3 0 |  |  |  |  | 2.2250 | 4 | 1 0 8 |  | 1.6624 | 7 | -1 2 11 |
| 41 | 3.230 | bracket | 3.2491 | 23 | -1 0 6 |  | 10 | 2.219 |  | 2.2165 | 12 | 3 1 6 |  | 1.6567 | 4 | 1 6 1 |
| 3.2399 | 12 | -1 3 1 |  |  |  |  | 2.1956 | 4 | 5 2 1 |  | 1.6554 | 7 | 6 1 5 |
| 3.2288 | 25 | 2 1 4 |  |  |  |  | 2.1729 | 4 | 1 1 8 |  | 15 | 1.6278 | bracket | 1.6343 | 5 | -1 5 7 |
|  |  |  | 3.2216 | 4 | 1 1 5 |  | 14 | 2.166 | bracket | 2.1675 | 14 | 3 4 0 |  | 1.6263 | 8 | 2 6 0 |
|  |  |  | 3.1721 | 6 | 1 3 1 |  | 2.1493 | 10 | -4 3 5 |  | 1.6255 | 5 | -6 2 9 |
| **76** | **3.135** | bracket | 3.1467 | 9 | -2 0 6 |  | 12 | 2.126 | bracket | 2.1242 | 5 | -2 3 7 |  | 1.6228 | 6 | -7 2 7 |
| 3.1368 | 68 | 2 2 3 |  | 2.1177 | 4 | -1 4 5 |  | 13 | 1.6160 | bracket | 1.6169 | 6 | 4 3 7 |
| 3.0928 | 18 | -1 1 6 |  | 2.1107 | 5 | -1 1 9 |  | 1.6111 | 4 | -3 0 12 |
| 49 | 3.022 | bracket | 3.0278 | 8 | 4 1 0 |  |  |  |  | 2.1053 | 4 | 0 3 7 |  | 1.6074 | 5 | -4 2 11 |
| 3.0247 | 22 | 0 2 5 |  | 12 | 2.045 | bracket | 2.0508 | 8 | -5 3 3 |  | 4 | 1.5870 | bracket | 1.5901 | 4 | 6 4 1 |
| 3.0173 | 8 | 1 3 2 |  | 2.0488 | 11 | -3 3 7 |  | 1.5731 | 4 | -5 5 4 |
| 3.0058 | 19 | 0 1 6 |  | 2.0200 | 6 | 3 3 5 |  | 8 | 1.5664 |  | 1.5679 | 5 | -7 3 6 |