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| Ag ₂ [CO ₃] | <i>hP</i> 21 | (189) <i>P</i> -62 <i>m</i> – kjgfd |
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Ag₂CO₃ α [1]

Structural features: Triangle-mesh Ag layers in h stacking; CO₃ trigonal units in trigonal voids (perpendicular to [001], in part in orientational disorder).

Norby P. et al. (2002) [1]

Ag₂CO₃

a = 0.90924, *c* = 0.33249 nm, *c/a* = 0.366, *V* = 0.2380 nm³, *Z* = 3

| site | Wyck. | sym. | <i>x</i> | <i>y</i> | <i>z</i> | occ. | atomic environment |
|------|------------|---------------------|----------|----------|----------|------|--|
| O1 | 6 <i>k</i> | <i>m</i> .. | 0.2176 | 0.5141 | 1/2 | 0.5 | single atom C |
| O2 | 6 <i>j</i> | <i>m</i> .. | 0.0797 | 0.1614 | 0 | | non-coplanar triangle O ₂ C |
| Ag3 | 3 <i>g</i> | <i>m</i> 2 <i>m</i> | 0.6799 | 0 | 1/2 | | trigonal prism O ₆ |
| Ag4 | 3 <i>f</i> | <i>m</i> 2 <i>m</i> | 0.351 | 0 | 0 | | trigonal prism O ₆ |
| C5 | 2 <i>d</i> | -6.. | 1/3 | 2/3 | 1/2 | | coplanar triangle O ₃ |
| C6 | 1 <i>a</i> | -62 <i>m</i> | 0 | 0 | 0 | | coplanar hexagon O ₆ |

Experimental: powder, diffractometer, X-rays, synchrotron, *R*_p = 0.055, *T* = 476 K

Remarks: Phase stable at *T* > ~470 K. Fifteen other trigonal and hexagonal space groups were tested and rejected.

References: [1] Norby P., Dinnebier R., Fitch A.N. (2002), *Inorg. Chem.* 41, 3628-3637.