

Crystal Data: Monoclinic. *Point Group:* $2/m$. Typically as fine-grained granular crusts, to 2 mm in diameter.

Physical Properties: Hardness = “Soft”. $D(\text{meas.}) = \text{n.d.}$ $D(\text{calc.}) = \text{n.d.}$ M.P. 360 °C.

Optical Properties: Transparent to translucent. *Color:* White.

Optical Class: [Biaxial.] $\alpha = \text{n.d.}$ $\beta = \text{n.d.}$ $\gamma = \text{n.d.}$ $2V(\text{meas.}) = \text{n.d.}$

Cell Data: *Space Group:* $P2_1/c$ (synthetic). $a = 16.510$ $b = 11.277$ $c = 3.645$
 $\beta = 98.84^\circ$ $Z = 4$

X-ray Powder Pattern: Synthetic. (ICDD 28-2012).

3.22 (100b), 6.32 (70b), 3.53 (50), 2.63 (50), 2.00 (50), 1.80 (50), 7.9 (40)

Chemistry: (1) Identification is by coincidence of X-ray diffraction pattern with that of synthetic material.

Occurrence: An uncommon component of phosphatic crusts associated with guano from seabirds or bats.

Association: Aphthitalite, biphosphammite, brushite, gypsum, monetite, syngenite, taylorite, hannayite (Murra-el-elevyn Cave, Australia); biphosphammite, archerite, aphthitalite, halite, syngenite, stercorite, oxammite, weddellite, whitlockite, mundrabillaite, newberyite, calcite (Petrogale Cave, Australia).

Distribution: From North Chincha Island, off the coast of Peru. In Australia, in Murra-el-elevyn Cave, Cocklebidy, and Petrogale Cave, near Madura, Western Australia.

Name: From the Peruvian *guan*u, for *dung*, in allusion to its mode of formation in nature.

References: (1) Bridge, P.J. (1973) Guano minerals from Murra-el-elevyn Cave, Western Australia. *Mineral. Mag.*, 39, 467–469. (2) Bridge, P.J. (1974) Guanine and uricite, two new organic minerals from Peru and Western Australia. *Mineral. Mag.*, 39, 889–890. (3) Bugg, C.E., U.T. Thewalt, and R.E. Marsh (1968) Base stacking in nucleic acid components: the crystal structures of guanine, guanosine and inosine. *Biochem. Biophysical Res. Comm.*, 33(3), 436–440.