Crystal Data: Orthorhombic (synthetic). *Point Group:* $2/m\ 2/m\ 2/m$. Small indistinct flat crystals.

Physical Properties: Hardness = n.d. D(meas.) = n.d. D(calc.) = 1.83 Soluble in H_2O, forming a struvite residue.

Optical Properties: Transparent. *Color:* Colorless.
Optical Class: Biaxial (+) (synthetic). *Orientation:* $Z = a$; OAP = {001}. $\alpha = 1.508(2)$ $\beta = 1.515(2)$ $\gamma = 1.523(2)$ 2V(meas.) = ~90° 2V(calc.) = 86°

Cell Data: *Space Group: Pbca* (probable; synthetic). $a = 11.47$ $b = 23.63$ $c = 8.62$ $Z = 8$

X-ray Powder Pattern: Synthetic.
5.94 (100), 2.97 (43), 5.21 (37), 2.80 (29), 3.02 (22), 3.46 (21), 4.31 (19)

Chemistry:

	(1)	(2)
P_2O_5	43.88	43.76
FeO	0.20	
MnO	0.05	
MgO	12.17	12.42
$(NH_4)_2O$	16.15	16.05
H_2O	27.55	27.77
Total	100.00	100.00

(1) Skipton lava tube caves, Australia. (2) $(NH_4)_2Mg(PO_3OH)_2 \cdot 4H_2O$.

Occurrence: Rarely formed in drier portions of bat guano, by the reaction of NH_4 from guano with Mg in surrounding rocks.

Association: Struvite, newberyite (Skipton lava tube caves, Australia).

Distribution: In the Skipton lava tube caves, 40 km southwest of Ballarat, Victoria, Australia. From Chaos Cave, Transvaal, South Africa.

Name: To honor Professor Arnulf Schertel (1841–1902), mineralogist, Freiberg Mining Academy, Freiberg, Germany.

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