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Crystal Data: Monoclinic, pseudohexagonal. Point Group: 2/m. As flattened hexagonal prisms, to 4 mm. Twinning: Cyclic, contact plane || {001}, common.

Physical Properties: Fracture: Conchoidal. Tenacity: Very brittle. Hardness = 5 D(meas.) = 2.15(4) D(calc.) = 2.15

Optical Properties: Transparent. Color: Colorless. Luster: Vitreous. Optical Class: Biaxial (-); rarely uniaxial (-). Orientation: X = c; $Z \land b = 16^{\circ}$. $\alpha = 1.531(1)$ $\beta = 1.535(1)$ $\gamma = 1.541(2)$ 2V(meas.) = 62(5)[°]

Cell Data: Space Group: $P2_1/m$, $P6_3/m$ pseudocell. a = 5.744(5) b = 5.766(5) c = 25.12(1) $\gamma = 119.72(5)^{\circ}$ Z = 1

X-ray Powder Pattern: Campomorto, Italy. 4.187 (100), 12.51 (70), 6.275 (65), 2.873 (17), 4.275 (16), 2.436 (11), 2.077 (10)

Chemistry:

(1)	(2)
18.01	18.08
25.26	24.55
25.88	27.00
0.81	
0.18	
0.07	
0.02	
23.74	
5.96	
	30.37
99.93	100.00
	$18.01 \\ 25.26 \\ 25.88 \\ 0.81 \\ 0.18 \\ 0.07 \\ 0.02 \\ 23.74 \\ 5.96$

(1) Campomorto, Italy; by electron microprobe, H_2O determined by weight loss above and below 120 °C on a separate sample; corresponds to $(Ca_{7.80}Sr_{0.12}Ba_{0.04}Na_{0.04})_{\Sigma=8.00}Al_{8.36}Si_{5.08}O_{12.64}$ (OH)_{36.12} •9.80H₂O. (3) $Ca_8Al_8Si_5O_{12}(OH)_{36}$ •10H₂O.

Occurrence: As late-forming crystals inside a small cavity in phonolite.

Association: Tobermorite, ettringite.

Distribution: Found in a quarry at Campomorto, Montalto di Castro, Lazio, Italy.

Name: For *Vertumnus*, the god worshipped by the ancient Etruscan people who inhabited the region where the mineral was found.

Type Material: Municipal Museum of Natural History, Milan, Italy; National School of Mines, Paris, France.

References: (1) Passaglia, E. and E. Galli (1977) Vertumnite, a new natural silicate. Tschermaks Mineral. Petrog. Mitt., 24, 57–66. (2) (1977) Amer. Mineral., 62, 1061 (abs. ref. 1). (3) Galli, E. and E. Passaglia (1978) Vertumnite: its crystal structure and relationship with natural and synthetic phases. Tschermaks Mineral. Petrog. Mitt., 25, 33–46. (4) Rinaldi, R., M. Sacerdoti, and E. Passaglia (1990) Strätlingite: crystal structure, chemistry, and a reexamination of its polytype vertumnite. Eur. J. Mineral., 2, 841–849.