

Viséite**Ca₁₀Al₂₄(SiO₄)₆(PO₄)₁₄(O, F)₁₃•72H₂O(?)**

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Crystal Data: Cubic or pseudocubic. *Point Group:* n.d. As a botryoidal coating, consisting of concentric layers of tiny spherulites; also massive.

Physical Properties: *Tenacity:* Friable. Hardness = 3–4 D(meas.) = 2.20
D(calc.) = 2.17

Optical Properties: Transparent to translucent. *Color:* White, pale yellow, pale blue, blue; in transmitted light, colorless. *Luster:* Vitreous, chalky.
Optical Class: Isotropic. $n = 1.530$

Cell Data: *Space Group:* n.d. $a = 13.65$ $Z = [1]$

X-ray Powder Pattern: Visé, Belgium.

2.92 (100), 1.740 (60), 3.46 (50), 5.68 (40), 1.886 (30), 2.20 (20), 1.196 (20)

Chemistry:

	(1)	(2)	(3)
SiO ₂	9.93	7.97	8.13
Al ₂ O ₃	26.15	26.82	27.59
FeO		0.74	
MnO		0.01	
MgO		0.12	
CaO	14.79	12.53	12.64
Na ₂ O	1.77	0.02	
K ₂ O		0.14	
F	0.67	1.29	
H ₂ O	26.11	[28.28]	29.24
P ₂ O ₅	20.49	21.54	22.40
–O = F ₂	[0.28]	[0.54]	
Total	[99.63]	[100.00]	100.00

- (1) Visé, Belgium; average of four analyses, original total given as 99.91%; probably contained admixed “opal.” (2) Do.; by electron microprobe, average of seven analyses, H₂O by difference.
(3) Ca₁₀Al₂₄(SiO₄)₆(PO₄)₁₄O₁₃•72H₂O.

Occurrence: Presumably as a secondary mineral in phosphatic sedimentary rocks, and from the weathering or low-temperature hydrothermal alteration of aluminous skarn deposits.

Association: Delvauxite, trolleite, “opal.”

Distribution: From Visé, Liège, Belgium. In the USA, at the Champion mine, near Laws, Mono Co., California.

Name: For the locality where the mineral was discovered, Visé, Belgium.

Type Material: University of Liège, Liège, Belgium, 9574–9476; National Museum of Natural History, Washington, D.C., USA, 106364.

References: (1) Mélon, J. (1943) La viséite, nouvelle espèce minérale. *Ann. Soc. Geol. Belg.*, 66, 53–56 (in French). (2) (1945) *Amer. Mineral.*, 30, 548 (abs. ref. 1). (3) McConnell, D. (1952) Viséite, a zeolite with the analcime structure and containing linked SiO₂, PO₄ and H_xO₄ groups. *Amer. Mineral.*, 37, 609–617. (4) Dunn, P.J. and D.E. Appleman (1977) Perhamite, a new calcium aluminum silico-phosphate mineral, and a re-examination of viséite. *Mineral. Mag.*, 41, 437–442.