Maricopaite $Pb_7Ca_2Al_{12}Si_{36}O_{100}\cdot 32H_2O$

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$, $mm2$, or 222. As thin bundles of crystals elongated along [001]; in radial sprays, to 1 mm.

Physical Properties: *Cleavage:* {010}, imperfect. *Tenacity:* Friable. Hardness = Extremely soft. D(meas.) = 2.94 D(calc.) = 2.90

Optical Properties: Translucent to transparent. *Color:* White, colorless. *Luster:* Silky to vitreous.
Optical Class: Biaxial (–). *Orientation:* $X = a$; $Y = c$; $Z = b$. *Dispersion:* $r > v$, strong.
$\alpha = 1.563(3)$ $\beta = 1.582(3)$ $\gamma = [1.592]$ 2V(meas.) = 70(10)°

Cell Data: *Space Group:* $Cmmm$, $Cm2m$, $Cmm2$, or $C222$. $a = 19.434(2)$ $b = 19.702(2)$ $c = 7.538(1)$ Z = 1

X-ray Powder Pattern: Moon Anchor mine, Arizona, USA.
13.7 (100), 3.216 (50), 9.86 (40), 3.357 (40), 2.978 (40), 2.845 (40), 4.35 (30)

Chemistry:

	(1)
SiO_2	42.0
Al_2O_3	11.4
PbO	30.8
CaO	2.4
H_2O	11.0
Hydrocarbons	0.5
Total	98.1

(1) Moon Anchor mine, Arizona, USA; by electron microprobe, H_2O by TGA; corresponds to $Pb_{7.2}Ca_{2.2}(Al_{11.6}Si_{36.4})_{\Sigma=48.0}O_{99.6}\cdot 31.8H_2O$.

Mineral Group: Zeolite group.

Occurrence: In a hydrothermal Pb-Cu ore vein, coating and filling fractures in quartz.

Association: Cerussite, mimetite, fornacite, phoenicochroite, duftite, chrysocolla, wickenburgite, calcite, fluorite, quartz.

Distribution: From the Moon Anchor mine, near Tonopah, Maricopa Co., Arizona, USA.

Name: For Maricopa Co., Arizona, USA, where it was discovered.

Type Material: National Museum of Natural History, Washington, D.C., USA, 163247, 163248.

References: (1) Peacor, D.R., P.J. Dunn, W.B. Simmons, F.J. Wicks, and M. Raudsepp (1988) Maricopaite, a new hydrated Ca–Pb, zeolite-like silicate from Arizona. Can. Mineral., 26, 309–313. (2) (1989) Amer. Mineral., 74, 947 (abs. ref. 1). (3) Rouse, R.C. and D.R. Peacor (1994) Maricopaite, an unusual lead calcium zeolite with an interrupted mordenite-like framework and intrachannel Pb_4 tetrahedral clusters. Amer. Mineral., 79, 175–184.