

**NEW MINERALS APPROVED IN 1999 BY THE COMMISSION ON NEW MINERALS
AND MINERAL NAMES, INTERNATIONAL MINERALOGICAL ASSOCIATION**

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The information given here is provided by the Commission on New Minerals and Mineral Names (CNMMN), International Mineralogical Association (IMA) for comparative purposes and as a service to mineralogists working on new species. Each mineral is described in the following format:

IMA Number
Chemical Formula (any relationship to other minerals; structure analysis)
Crystal system, space group
unit-cell parameters
Color; luster; diaphaneity
Optical properties
Strongest lines in the X-ray powder diffraction pattern [*d* in Å(*l*)]

The names of these approved species are considered confidential information until the authors have published their descriptions or released information themselves. No other information will be released by the Commission.

1999 PROPOSALS

IMA No. **99-002**

(Mg, Mn²⁺)₂(Sb_{0.5}Mn³⁺_{0.5})O₄

Related to
the spinel group

Trigonal: $R\bar{3}$ or $R3$

a 16.196, *c* 14.948 Å

Dark red; subadamantine; translucent

In reflected light: grey, internal reflections orange-red, anisotropy weak. *R*: 10.4% (470 nm), 10.0% (546 nm), 9.9% (589 nm), 9.8% (650 nm)
4.24(28), 3.052(33), 2.608(100), 2.162(28), 1.665(30), 1.527(39)

IMA No. **99-003**

Hg¹⁺₃(CO₃)(OH)•2H₂O Polymorph of peterbaylissite;
new structure-type

Monoclinic: $P2_1/c$

a 6.760, *b* 9.580, *c* 10.931 Å, β 105.53°

Pale greenish yellow; vitreous; transparent (before irradiation by X-rays)

7.09(70), 5.40(30), 5.32(40), 4.62(90), 2.831(100), 2.767(100), 2.391(40)

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IMA No. **99-005**Na₂Mg₅(PO₄)₄•7H₂OProbably Na-analogue
of rimkorolite; structureMonoclinic: *P*₂₁/*c**a* 8.324, *b* 12.926, *c* 17.519 Å, β 102.03(1)°

Colorless, yellowish, greenish; vitreous; transparent

Biaxial (+), α 1.538, β 1.540, γ 1.543, 2*V*(meas.) 70°,
2*V*(calc.) 78.6°10.31(33), 8.56(100), 3.496(23), 3.314(23), 3.020(28),
2.849(33), 2.675(25)IMA No. **99-006**Na₃(La,Ce,Ca)₃(CO₃)₅ La-analogue of remondite-(Ce)Monoclinic: *P*₂₁*a* 10.49, *b* 6.417, *c* 10.50(1) Å, β 119.8(1)°

Bright orange-yellow; vitreous; translucent

Biaxial (-), α 1.615, β 1.619, γ 1.622, 2*V*(meas.) 80°,
2*V*(calc.) 82°5.28(5), 3.70(7), 3.036(9), 2.623(10), 2.143(8),
2.041(6), 1.939(6)IMA No. **99-007**Ca(H₂AsO₄)₂

New structure-type for minerals

Triclinic: *P*₁*a* 8.5485, *b* 7.6973, *c* 5.7198 Å, α 92.59, β 109.87, γ
109.92°

White or colorless; vitreous; translucent

Biaxial, α 1.602, γ 1.658

3.974(72), 3.700(60), 3.558(100), 3.101(82), 3.041(62),
2.666(52), 2.173(48)IMA No. **99-008**Ca(Ni,Fe,Co)₂(AsO₄)₂(OH,H₂O)₂Isotypy with
tsumcorite; structureMonoclinic: *C*₂/*m**a* 9.005, *b* 6.205, *c* 7.411 Å, β 115.31°Brown to yellow; vitreous; small fragments are trans-
parentBiaxial (+), α 1.80(calc.), β 1.81, γ 1.87, 2*V*(meas.) 40°,
strong pleochroism4.938(34), 3.393(83), 3.182(87), 2.962(100), 2.703(72),
2.538(78), 1.697(57)IMA No. **99-009**BaFe²⁺₂Fe³⁺₂(PO₄)₃(OH)₃Fe²⁺-analogue
of perloffite; structureMonoclinic: *P*₂₁/*m**a* 9.199, *b* 12.359, *c* 5.004 Å, β 100.19°

Greenish black; vitreous; opaque

Biaxial (-), α 1.817, β 1.829, γ 1.837, 2*V*(meas.) ~80-
85°, 2*V*(calc.) 78.0°, pleochroism9.1(3), 5.11(2), 4.573(4), 3.159(10), 3.091(4), 2.983(5),
2.749(5)IMA No. **99-010**Cu₂(NO₃)(OH)₃Dimorph of gerhardtite;
new structure-typeMonoclinic: *P*₂₁*a* 5.596, *b* 6.079, *c* 6.925 Å, β 94.67°

Dark emerald green; vitreous; transparent

Biaxial (+), α 1.700, β 1.715, γ 1.738, 2*V*(meas.) 81°,
2*V*(calc.) 79°, pleochroism6.91(100), 3.457(90), 2.669(80), 2.462(80), 2.250(50),
2.154(40), 2.078(50)IMA No. **99-011**(Ca,K,Ba,Na)₃₋₄Mn₂₄(Si,Al)₄₀(O,OH)₁₁₂•21H₂O

Ganophyllite group

Monoclinic: *P*₂₁/*a**a* 16.64, *b* 27.11, *c* 25.35 Å, β 98.74°

Colorless to pale yellowish brown; vitreous to pearly

Biaxial (-), β 1.61, 2*V*(meas.) < 15°12.6(vvs), 3.46(m), 3.13(s), 2.84(s), 2.69(vs), 2.60(s),
2.46(s)IMA No. **99-012**Ba₄(Mn,Fe,Al)₄O₃(OH)₃(Si₄O₁₂)[Si₂O₃(OH)₄]Cl

New structure-type

Tetragonal: *I*₄/*mmm**a* 14.215, *c* 6.126 Å

Deep green; vitreous; transparent

Uniaxial (+), ε 1.765, ω 1.745, pleochroic

10.15(m), 5.63(m), 4.417(m), 3.319(s), 3.011(vs),
2.619(s), 2.577(m)IMA No. **99-013**

FeTiP

Anti-PbCl₂ structureOrthorhombic: *Pnma**a* 6.007, *b* 3.602, *c* 6.897 Å

Cream white; metallic; opaque

2.307(47), 2.301(100), 2.188(88), 2.147(31), 1.938(45),
1.923(34), 1.801(45) calculated patternIMA No. **99-014**(Cs,K)Al₄Be₄(B,Be)₁₂O₂₈

Cs-analogue of rhodizite

Cubic: *P*₄₃*m**a* 7.3205 Å

Colorless to white to yellow; vitreous; transparent

Isotropic, *n* 1.6933.28(35), 2.990(100), 2.441(50), 2.208(30), 2.113(70),
1.957(35), 1.776(40)IMA No. **99-015**BaSi₂O₅•4H₂O

Double-chain silicate; structure

Orthorhombic: *Pnma**a* 5.0453, *b* 9.044, *c* 18.366 Å

Colorless to white; vitreous to pearly; transparent

Biaxial (+), α 1.537, β 1.538, γ 1.541, 2*V*(meas.) 59.2°,
2*V*(calc.) 60.1°9.19(30), 5.068(100), 4.054(85), 2.974(45), 2.706(60),
2.327(40), 2.257(75)

IMA No. 99-016Ba(Ti₇Fe²⁺)O₁₆ Hollandite group; structureTetragonal: *I4/m**a* 10.219, *c* 2.963 Å

Black; adamantine; opaque

In reflected light: grey. *R*: 16% (470 nm), 15% (546 nm), 16% (589 nm), 16% (650 nm)

3.231(41), 3.231(100), 2.486(55), 2.235(57), 1.901(38), 1.598(39), 1.405(34) calculated pattern

IMA No. 99-017Na₂(□,Na,Mn)Zr[Si₆O₁₂(OH,O)₆] Lovozerite group; structureMonoclinic: *Cm**a* 10.589, *b* 10.217, *c* 7.355 Å, β 92.91°

Dark cherry-red to dark reddish brown; vitreous; transparent

Biaxial (–), α 1.546, β 1.574, γ 1.575, 2*V*(meas.) <10°, 2*V*(calc.) 21°

7.37(44), 5.29(100), 3.674(32), 3.329(74), 3.238(100), 2.981(39), 2.553(37)

IMA No. 99-018Ca_{0.2}(H₂O)₂CrS₂ Close to schöllhorniteTrigonal: *Rm*, *R3m* or *R32**a* 3.326, *c* 33.29 Å

Coal-black; submetallic; opaque

In reflected light: grey. *R*_{max} and *R*_{min}: 15.8–14.5% (460 nm), 17.6–15.7% (540 nm), 18.2–17.2% (580 nm), 18.6–16.6% (640 nm)

11.1(100) 5.56(10) 3.700(4) 2.719(5) 2.464(4) 2.180(49)

IMA No. 99-019(Sb,As)₂MoO₆ New structure-typeMonoclinic: *C2/c**a* 18.076, *b* 5.920, *c* 5.083 Å, β 96.97°

White; vitreous and silky; translucent

Biaxial, *n* (calc.) 2.15

5.622(65), 3.376(39), 3.104(61), 2.990(100), 2.960(100), 2.104(42), 1.962(32)

IMA No. 99-020NaY(CO₃)₂•6H₂O New structure-typeTriclinic: *P1**a* 6.2592, *b* 13.0838, *c* 13.2271 Å, α 91.13, β 103.55, γ 90.19°

Colorless to white; vitreous, sometimes pearly; translucent to transparent

Biaxial (+), α 1.480, β 1.498, γ 1.571, 2*V*(meas.) 53°, 2*V*(calc.) 55°

12.81(100), 6.45(70), 4.456(60), 4.291(60), 3.267(25), 2.869(30), 2.571(60)

IMA No. 99-021Bi³⁺₂₄Cr⁶⁺₈O₅₇(OH)₆(H₂O)₃ New structure-typeHexagonal: *P31c**a* 15.067, *c* 15.293 Å

Yellow to dirty yellow-brown; resinous; transparent

In reflected light: grey; internal reflections, yellow. *R*_{min} and *R*_{max}: 17.9–18.6% (470 nm), 16.45–17.0% (546 nm), 16.0–16.5% (589 nm), 15.7–16.2% (650 nm) 7.65(50), 3.812(40), 3.382(100), 2.681(70), 2.175(40), 2.106(40), 1.701(50)**IMA No. 99-022**(Cu,Ca,Fe)₁₀Bi(AsO₄)₄(OH)₁₁•2H₂O Chemically related to mixiteTetragonal: *P4₂/nmm**a* 9.961, *c* 29.19 Å

Olive green to grass green; resinous to dull; translucent

Uniaxial (–), ω 1.785, ε 1.705, pleochroism

14.6(100), 7.04(50), 6.34(70), 5.07(50), 3.518(40), 3.494(40), 3.146(60), 2.535(50)

IMA No. 99-023Cu₂HgSe₂ Possibly related to Ag₂HgS₂Monoclinic: *P2₁/n**a* 7.492, *b* 4.177, *c* 7.239 Å, β 114.20(5)°

Dark grey; metallic; opaque

In reflected light: white. *R*_{min} and *R*_{max}: 15.15–22.0% (470 nm), 13.3–20.15% (546 nm), 12.7–19.8% (589 nm), 12.3–19.25% (650 nm)

3.991(70), 3.576(50), 3.534(50), 3.414(50), 2.730(100), 2.223(70), 2.072(50)

IMA No. 99-024KCrMg(Si₄O₁₀)(OH)₂ Cr-analogue of celadonite; structureMonoclinic: *C2**a* 5.267, *b* 9.101, *c* 10.162 Å, β 100.67°

Emerald-green to dark green; vitreous to dull silky; transparent

Biaxial (–), α 1.605, β 1.648, γ 1.654, 2*V*(meas.) 12°, 2*V*(calc.) 40°, pleochroism

4.54(93), 4.36(40), 3.638(64), 3.097(51), 2.588(100), 2.583(36), 2.409(87)

IMA No. 99-025Fe²⁺Al₃(BO₃)(SiO₄)O₂ Fe²⁺-analogue of grandidierite; structureOrthorhombic: *Pbmn**a* 10.363, *b* 11.129, *c* 5.769 Å

Blue; vitreous; transparent

Biaxial (–), α 1.631, β 1.654, γ 1.656, 2*V*(meas.) 31.5°, 2*V*(calc.) 32.5°

5.57(m), 5.21(vs), 5.05(vvs), 3.73(m), 3.51(m), 2.97(s), 2.90(m), 2.79(s), 2.18(s)

IMA No. **99-026**BaFe₃Al₂Si₂O₁₀(OH)₂Fe²⁺-analogue of
kinoshitalite; structureMonoclinic: *C2/m**a* 5.389, *b* 9.337, *c* 10.054 Å, β 100.53°

Dark green; vitreous; translucent

Biaxial (-), β 1.680, 2*V*(meas.) 20°2.662(100), 2.640(100), 2.181(40), 2.170(40),
1.659(25), 1.554(30), 1.547(30), 1.529(25)IMA No. **99-027**Bi(Co,Ni)₂(AsO₄)₂(OH,H₂O)₂Tsumcorite
group; structureMonoclinic: *C2/m**a* 9.005, *b* 6.211, *c* 7.440 Å, β 115.19°

Brown; subadamantine; transparent

Biaxial (+), α 1.93(calc.), β 1.95, γ 1.98, 2*V*(meas.) 75°
4.589(61), 4.418(33), 3.193(100), 2.971(92), 2.820(61),
2.702(57), 2.528(42), 2.498(62), 1.869(37)IMA No. **99-028**Bi(Ni,Co)₂(AsO₄)₂(OH,H₂O)₂Tsumcorite
group; structureMonoclinic: *C2/m**a* 8.995, *b* 6.207, *c* 7.462 Å, β 115.00°

Olive-green to brown; subadamantine; translucent

Biaxial (-), α 1.94(calc.), β 1.95, γ 1.97, 2*V*(meas.) 77°
4.586(40), 3.196(100), 2.980(72), 2.821(44), 2.507(47),
1.702(57)IMA No. **99-029**Pb(Co,Fe)₂(AsO₄)₂(OH,H₂O)₂Tsumcorite
group; structureMonoclinic: *C2/m**a* 9.097, *b* 6.313, *c* 7.555 Å, β 115.08°

Brown to red-brown; subadamantine; transparent

Biaxial (+), α 1.92(calc.), β 1.94, γ 1.98, 2*V*(meas.) 77°
4.656(87), 4.462(96), 3.243(100), 3.010(58), 2.868(50),
2.733(47), 2.550(40)IMA No. **99-030**Ca(Cu,Zn)(Fe,Zn)(AsO₄)₂(OH,H₂O)₂Tsumcorite
groupTriclinic: *P1̄**a* 5.457, *b* 5.539, *c* 7.399 Å, α 68.43, β 68.90, γ 69.44°

Yellow; vitreous to subadamantine; transparent

Biaxial (+), α 1.83, β 1.834(calc.), γ 1.89, 2*V*(meas.)
30°4.953(22), 3.416(100), 3.186(40), 2.927(64), 2.832(26),
2.700(30), 2.533(30), 2.468(25)IMA No. **99-031**Na₆(Mn,Fe²⁺)Al₄Si₈O₂₆Mn-analogue of
naujakasite; structureMonoclinic: *C2/m**a* 15.033, *b* 8.001, *c* 10.478 Å, β 113.51°

Blue; vitreous; transparent

Biaxial (-), α 1.539, β 1.551, γ 1.554, 2*V*(meas.) 54°,
2*V*(calc.) 53°3.995(65), 3.623(92), 3.552(56), 3.485(58), 3.450(31),
3.362(33), 3.120(30), 3.068(100), 2.797(30), 2.613(39)IMA No. **99-032**K₂NaMn₇(Nb,Zr)₂Si₈O₂₆(OH)₅Astrophyllite
group; structureTriclinic: *P1̄**a* 5.4303, *b* 11.924, *c* 11.747 Å, α 112.927, β 94.750,
γ 103.175°

Beige to brown; vitreous; transparent

Biaxial (+), α 1.718, β 1.733, γ 1.750(calc.), 2*V*(meas.)
87°10.71(100), 4.405(20), 3.536(50), 3.294(20), 2.783(40),
2.677(30), 2.587(40), 2.503(20)IMA No. **99-034**PbCr³⁺₂(CO₃)₂(OH)₄•H₂O Cr-analogue of dundasite
Orthorhombic: *Pbmm*, *Pbmm* or *Pbn2₁**a* 9.079, *b* 16.321, *c* 5.786 Å

Pale grey to pinkish violet; earthy to pearly; translucent

Biaxial (-), α 1.704, β 1.802, γ 1.842, 2*V*(calc.) 62°
7.94(10), 4.686(5b), 4.373(3), 3.633(7), 3.279(4),
2.690(4), 2.405(3), 2.101(3b), 1.781(3)IMA No. **99-035**SiO₂Polymorphic relation with
quartz; structureMonoclinic: *I2/a**a* 8.758, *b* 4.876, *c* 10.715 Å, β 90.08°

Grey; dull; transparent

n (mean) 1.5264.43(9), 3.391(58), 3.335(100), 3.117(13), 1.830(11),
1.370(10)IMA No. **99-036**Na(Mn³⁺,Fe³⁺)(PO₄)(OH)•2H₂OMonoclinic: *P2₁/n**a* 5.3757, *b* 19.955, *c* 5.3750 Å, β 108.915°

Dark brown to black; vitreous; translucent

9.43(10), 4.977(6), 4.102(3), 3.344(7), 2.663(8),
2.537(4)IMA No. **99-039**(K,Na,Ca)(Al₇Si₁₇O₄₈)•22H₂OK-analogue of
gmelinite; structureHexagonal: *P6₃/mmc**a* 13.696, *c* 10.203 Å

Colorless; vitreous; transparent

Uniaxial (-), ε 1.472, ω 1.477

11.9(80), 7.8(50), 5.16(70), 4.11(100), 3.27(70),
2.971(80), 2.852(80), 2.709(100), 2.085(50), 1.817(80)

IMA No. **99-040**

$\text{Sr}[\text{Al}_2\text{Si}_4\text{O}_{12}] \cdot 6\text{H}_2\text{O}$ Sr-analogue of chabazite
 Trigonal: *Rm*
 a 13.715, c 15.09 Å
 Colorless; vitreous; transparent
 Uniaxial (+), ε 1.503, ω 1.507
 9.38(8), 5.55(6), 4.34(7), 2.92(10), 2.50(5), 1.697(7)

IMA No. **99-041**

$\text{Na}_2\text{Zr}(\text{Si}_4\text{O}_{11}) \cdot 2\text{H}_2\text{O}$ Zr-analogue of
 penkvilksite-1M; structure
 Monoclinic: *P2₁/c*
 a 9.144, b 8.818, c 7.537 Å, β 113.22°
 Colorless; vitreous; translucent to transparent
 Biaxial (–), α 1.570, β 1.588, γ 1.594, $2V(\text{meas.})$ 60°,
 $2V(\text{calc.})$ 60°
 8.40(10), 5.38(9), 4.00(8), 3.401(9), 2.902(9), 2.772(7),
 2.691(9), 2.190(7)

IMA No. **99-042**

$\text{Cu}_2\text{Pb}_6\text{Bi}_8\text{S}_{19}$ Structure related to juninite
 Monoclinic: *C2/m*
 a 27.6367, b 4.0499, c 20.7409 Å, β 131.258°
 Grey; metallic; opaque
 In reflected light: white. R_{\min} and R_{\max} : 41.7–43.7% (470 nm),
 40.4–41.9% (546 nm), 39.7–41.1% (589 nm),
 39.2–40.3% (650 nm)
 3.777(s), 3.507(s), 3.382(s), 2.918(s), 2.096(s), 2.062(s),
 2.031(s), 1.744(s)

IMA No. **99-043**

$\text{NiBi}^{3+}\text{As}^{5+}\text{O}_5$ New structure-type
 Triclinic: *P $\bar{1}$*
 a 6.7127, b 6.8293, c 5.2345 Å, α 107.625, β 95.409,
 γ 111.158°
 Orange- to gold-brown; adamantine; transparent
 In reflected light: grey. R_{\min} and R_{\max} : 12.8–13.1% (470 nm),
 12.4–12.6% (546 nm), 12.2–12.5% (589 nm),
 12.0–12.4% (650 nm)
 5.94(100), 3.233(100), 3.067(60), 3.047(50), 2.116(50),
 2.095(40), 1.659(40)

IMA No. **99-045**

$\text{Na}_4(\text{UO}_2)(\text{CO}_3)_3$
 Triclinic: *P1* or *P $\bar{1}$*
 a 9.280, b 9.295, c 12.864 Å, α 90.293, β 91.124, γ
 119.548°
 Pale yellow to beige; diaphaneity not given; opaque
 $n(\text{calc.})$ 1.583
 8.022(84), 5.080(58), 5.024(61), 4.967(65), 4.639(100),
 4.019(45), 3.221(55), 2.618(60)

IMA No. **99-046**

$\text{Na}_{15}\text{Ca}_6\text{Fe}_3\text{Zr}_3\text{NbSi}_{25}\text{O}_{73}(\text{O},\text{OH},\text{H}_2\text{O})_3\text{Cl}_2$
 Fe-analogue of kentbrooksit; structure
 Trigonal: *R3m*
 a 14.2099, c 30.067 Å

Reddish brown to red; vitreous; transparent
 Uniaxial (–), ε 1.622, ω 1.619
 7.104(38), 5.694(50), 4.300(43), 3.955(31), 3.391(51),
 3.207(31), 3.155(31), 2.968(100), 2.847(98)

IMA No. **99-047**

As A polymorph of As
 Orthorhombic: *Pmn2₁* or *P2₁nm*
 a 3.633, b 10.196, c 10.314 Å
 Lead grey; metallic; opaque
 In reflected light: white with greenish blue tint, anisotropic
 dark brown to dark greenish grey. R_{\min} and R_{\max} :
 45.7–50.8% (470 nm), 44.0–49.6% (546 nm), 42.7–
 48.5% (589 nm), 41.9–46.8% (650 nm)
 5.17(100), 4.60(24), 3.259(58), 2.840(27), 2.580(22),
 2.299(23), 1.794(26)

IMA No. **99-048**

$\text{KFe}^{2+}_3\text{AlSi}_3\text{O}_{10}\text{F}_2$ F-analogue of annite;
 structure
 Monoclinic: *C2/m*
 a 5.370, b 9.289, c 10.154 Å, β 100.49°
 Iron black; submetallic; translucent
 Biaxial (–), α 1.596, β 1.648, γ 1.648, $2V(\text{meas.})$ ~0°,
 $2V(\text{calc.})$ 0°
 10.09(100), 5.02(13), 3.336(56), 3.160(10), 2.933(10),
 2.649(10), 2.507(10), 2.004(10), 1.671(10)

IMA No. **99-049**

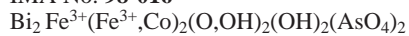
AgSbS_2 Polymorphic relationship with
 miargyrite and cuboargyrite; structure
 Triclinic: *P $\bar{1}$*
 a 7.766, b 8.322, c 8.814 Å, α 100.62, β 104.03, γ
 90.22(2)°
 Iron black to greyish black; metallic; opaque
 In reflected light: white with red internal reflections,
 anisotropic white through dark blue to brown. R_{\min} and
 R_{\max} : 31.3–39.6% (470 nm), 29.2–37.3% (546 nm),
 27.8–36.1% (589 nm), 26.2–33.0% (650 nm)

IMA No. **99-050**

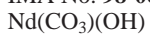
$\text{NaMg}_3\text{V}_6(\text{Si}_6\text{O}_{18})(\text{BO}_3)_3(\text{OH})_4$ Tourmaline
 group; structure
 Trigonal: *R3m*
 a 16.12, c 7.39 Å
 Dark green to black; pitch like; translucent to opaque
 Uniaxial (–), ω 1.786, ε 1.729
 6.54(9), 4.04(8), 3.57(7), 3.04(9), 2.62(10), 2.07(9)

IMA No. **99-051**

NbBO_4 Nb-analogue of behierite; structure
 Tetragonal: *I4₁/amd*
 a 6.206(5), c 5.487 Å
 Greyish pink; vitreous; transparent
 Uniaxial (+), n 2.30
 4.115(100), 3.110(84), 2.481(36), 2.328(49), 1.939(29),
 1.598(42) calculated pattern

IMA No. **98-016**Triclinic: $P\bar{1}$
 a 4.551, b 6.146, c 9.002 Å, α 95.41, β 99.28, γ 92.89°

Brown; adamantine; translucent to transparent

 Biaxial (–), α 2.02, β (calc.) 2.08, γ 2.12, $2V$ (meas.) 65°
 8.864(35), 3.772(90), 3.539(100), 3.495(73), 2.913(73),
 2.797(51), 2.674(43)
IMA No. **98-063**

Ancylite group; structure

Orthorhombic: $Pmcn$
 a 4.981, b 8.524, c 7.259 Å

Pale pinkish purple to white; vitreous; transparent

Biaxial, α 1.698, γ 1.780
 5.52(70), 4.30(72), 4.26(84), 3.68(84), 3.34(100),
 2.93(89), 2.65(72), 2.34(88), 1.892(78)