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НОВЫЕ МИНЕРАЛЫ, УТВЕРЖДЕННЫЕ КНМНМ ММА В 1999 г.

J. D. GRICE, G. FERRARIS. 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, I. M. A. for comparative purposes and as a service to mineralogists working on new species.

Each mineral is described in the following format:

IMA No.

Chemical Formula (any relationship to other minerals; structure analysis)

Crystal system, space group unit cell parameters

Colour; lustre; diaphaneity

Optical properties

Strongest lines in the X-ray powder diffraction pattern

The names of these approved species are considered confidential information until the authors have published their descriptions or released information themselves.

1999 PROPOSALS

IMA No. 99-002

(Mg, Mn²⁺)₂(Sb_{0.5}Mn_{0.5})O₄ Related to the spinel group

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

a 16.196, c 14.948 Å

Dark red; sub-adamantine; translucent

In reflected light: grey, internal reflections orange-red, anisotropy weak. R : 10.4% (470 nm), 10% (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

Hg₃⁺(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)

IMA No. 99-005

Na₂Mg₅(PO₄)₄ · 7H₂O Probably Na-analogue of rimkorolite; structure

Monoclinic: $P2_1/c$

a 8.324, b 12.926, c 17.519 Å, β 102.03(1)

Colourless, yellowish, greenish; vitreous; transparent

Biaxial (+), α 1.538, β 1.540, γ 1.543, 2V(meas) 70, 2V(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: $P2_1$

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, 2V(meas) 80°, 2V(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: $P1$

a 8.5485, b 7.6973, c 5.7198 Å, α 92.59, β 109.87, γ 109.92°

White or colourless; 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)₂ Isotypy with tsumcorite; structure

Monoclinic: $C2/m$

a 9.005, b 6.205, c 7.411 Å, β 115.31°

Brown to yellow; vitreous; small fragments are transparent

Biaxial (+), α 1.80(calc), β 1.81, γ 1.87, 2V(meas) 40°, strong pleochroism
4.938(34), 3.393(83), 3.182(87), 2.962(100), 2.703(72), 2.538(78), 1.697(57)

IMA No. 99-009

BaFe₂²⁺Fe₃³⁺(PO₄)₃(OH)₃ Fe²⁺-analogue of perlofite; structure

Monoclinic: $P2_1/m$

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, 2V(meas) ~80–85°, 2V(calc) 78.0°, pleochroism
9.1(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)₃ Dimorph of gerhardite; new structure-type

Monoclinic: $P2_1$

a 5.596, b 6.079, c 6.925, β 94.67°

Dark emerald green; vitreous; transparent

Biaxial (+), α 1.700, β 1.715, γ 1.738, 2V(meas) 81°, 2V(calc) 79°, pleochroism
6.91(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: $P2_1/a$

a 16.64, b 27.11, c 25.35 Å, β 98.74°

Colourless to pale yellowish brown; vitreous to pearly

Biaxial (-), β 1.61, 2V(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: $I4/mmm$

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 structure

Orthorhombic: $Pnma$

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 pattern

IMA No. 99-014

(Cs,K)Al₄Be₄(B,Be)₁₂O₂₈ Cs-analogue of rhodizite

Cubic: $P\bar{4}3m$

a 7.3205 Å

Colourless to white to yellow; vitreous; transparent

Isotropic, η 1.693

3.28(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

Colourless to white; vitreous to pearly; transparent
Biaxial (+), α 1.537, β 1.538, γ 1.541, 2V(meas) 59.2°, 2V(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. 99-016

Ba(Ti₇Fe²⁺)O₁₆ Hollandite group; structure
Tetragonal: *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. 99-017

Na₂(□Na,Mn)Zr[Si₆O₁₂(OH,O)₆L] Lovozerite group; structure
Monoclinic: *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, 2V(meas): < 10°, 2V(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. 99-018

Ca_{0.2}(H₂O)₂CrS₂
Trigonal: *R3m*, *R3m* or *R32* Close to schöllhornite
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-type
Monoclinic: *C2/c*
a 18.076, *b* 5.920, *c* 5.083 Å, β 96.97°
White; vitreous and silky; translucent
Biaxial, η (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. 99-020

NaY(CO₃)₂ · 6H₂O New structure-type
Triclinic: *P1*
a 6.2592, *b* 13.0838, *c* 13.2271 Å, α 91.13, β 103.55, γ 90.19°
Colourless to white; vitreous, sometimes pearly; translucent to transparent
Biaxial (+), α 1.480, β 1.498, γ 1.571, 2V(meas) 53°, 2V(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. 99-021

Bi₂Cr₈O₅₇(OH)₆(H₂O)₃ New structure-type
Hexagonal: *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 mixite
Tetragonal: *P4₂/nmn*
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. 99-023

Cu₂HgSe₂ Possibly related to Ag₂HgS₂
Monoclinic: *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. 99-024

KCrMg(Si₄O₁₀)(OH)₂ Cr-analogue of celadonite; structure
Monoclinic: *C2*
a 5.267, *b* 9.101, *c* 10.162, β 100.67°
Emerald-green to dark-green; vitreous to dull silky; transparent
Biaxial (-), α 1.605, β 1.648, γ 1.654, 2V(meas) 12°, 2V(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. 99-025

Fe²⁺Al₃(BO₃)(SiO₄)O₂ Fe²⁺-analogue of grandierite; structure
Orthorhombic: *Pbnm*
a 10.363, *b* 11.129, *c* 5.769 Å
Blue; vitreous; transparent
Biaxial (-), α 1.631, β 1.654, γ 1.656, 2V(meas) 31.5°, 2V(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)₂ Fe²⁺-analogue of kinoshitalite; structure
Monoclinic: *C2/m*
a 5.389, *b* 9.337, *c* 10.054 Å, β 100.53°
Dark green; vitreous; translucent
Biaxial (-), β 1.680, 2V(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)₂ Tsumcorite group; structure
Monoclinic: *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, 2V(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

$\text{Bi}(\text{Ni},\text{Co})_2(\text{AsO}_4)_2(\text{OH},\text{H}_2\text{O})_2$ Tsumcorite group; structure
Monoclinic: $C2/m$
 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, $2V(\text{meas})$ 77°
4.586(40), 3.196(100), 2.980(72), 2.821(44), 2.507(47), 1.702(57)

IMA No. 99-029

$\text{Pb}(\text{Co},\text{Fe})_2(\text{AsO}_4)_2(\text{OH},\text{H}_2\text{O})_2$ Tsumcorite group; structure
Monoclinic: $C2/m$
 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, $2V(\text{meas})$ 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

$\text{Ca}(\text{Cu},\text{Zn})(\text{Fe},\text{Zn})(\text{AsO}_4)_2(\text{OH},\text{H}_2\text{O})_2$ Tsumcorite group
Triclinic: $P\bar{1}$
 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, $2V(\text{meas})$ 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

$\text{Na}_6(\text{Mn},\text{Fe}^{2+})\text{Al}_4\text{Si}_8\text{O}_{26}$ Mn-analogue of naujakasite; structure
Monoclinic: $C2/m$
 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, $2V(\text{meas})$ 54°, $2V(\text{calc})$ 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

$\text{K}_2\text{NaMn}_7(\text{Nb},\text{Zr})_2\text{Si}_8\text{O}_{26}(\text{OH})_5$ Astrophyllite group; structure
Triclinic: $P\bar{1}$
 a 5.4303, b 11.924, c 11.747 Å, α 112.927, β 94.750, γ 103.1175
Beige to brown; vitreous; transparent
Biaxial (+), α 1.718, β 1.733, γ 1.750(calc), $2V(\text{meas})$ 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

$\text{PbCr}_2^{3+}(\text{CO}_3)_2(\text{OH})_4 \cdot \text{H}_2\text{O}$ Cr-analogue of dundasite
Orthorhombic: $Pbnm$, $Pbmm$ or $Pbn2_1$
 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, $2V(\text{calc})$ 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

SiO_2 Polymorph of quartz; structure
Monoclinic: $I2/a$
 a 8.758, b 4.876, c 10.715 Å, β 90.08°
Grey; dull; transparent
 η (mean) 1.526
4.43(9), 3.391(58), 3.335(100), 3.117(13), 1.830(11), 1.370(10)

IMA No. 99-036

$\text{Na}(\text{Mn}^{3+},\text{Fe}^{3+})(\text{PO}_4)(\text{OH}) \cdot 2(\text{H}_2\text{O})$
Monoclinic: $P2_1/n$
 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

$(\text{K},\text{Na},\text{Ca})(\text{Al}_7\text{Si}_{17}\text{O}_{48}) \cdot 22\text{H}_2\text{O}$ K-analogue of gmelinite; structure
Hexagonal: $P6_3/mmc$
 a 13.696, c 10.203 Å
Colourless; 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: $R\bar{3}m$
 a 13.715, c 15.09 Å
Colourless; vitreous; transparent
Biaxial (+), 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: $P2_1/c$
 a 9.144, b 8.818, c 7.537 Å, β 113.22°
Colourless; 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

$\text{Cu}_2\text{Pb}_6\text{Bi}_8\text{S}_{19}$
Monoclinic: $C2/m$ Structure related to junonite
 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
Triclinic: $P\bar{1}$
 a 6.7127, b 6.8293, c 5.2345, 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**
Na₄(UO₂)(CO₃)₃
Triclinic: *P1* or *P1̄*
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
 η (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**
Na₁₅Ca₆Fe₃Zr₃NbSi₂₅O₇₃(O,OH,H₂O)₃Cl₂ Fe-analogue of kentbrooksite; 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**
KFe₃⁺AlSi₃O₁₀F₂F-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, 2*V*(meas) - 0, 2*V*(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**
AgSbS₂
Triclinic: *P1̄* Polymorph of miargyrite and cuboargyrite; structure
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**
NaMg₃V₆(Si₆O₁₈)(BO₃)₃(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**
NbBO₄ Nb-analogue of behierite; structure
Tetragonal: *I41/amd*
a 6.206(5), *c* 5.487 Å
Greyish pink; vitreous; transparent
Uniaxial (+), η 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**
Bi₂Fe³⁺(Fe³⁺,Co)₂(O,OH)₂(OH)₂(AsO₄)₂
Triclinic: *P1̄*
a 4.551, *b* 6.146, *c* 9.002 Å, α 95.41, β 99.28, γ 92.89°
Brown; adamantine; translucent to transparent
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**
Nd(CO₃)(OH) 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)