Mineral Name

Actinolite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

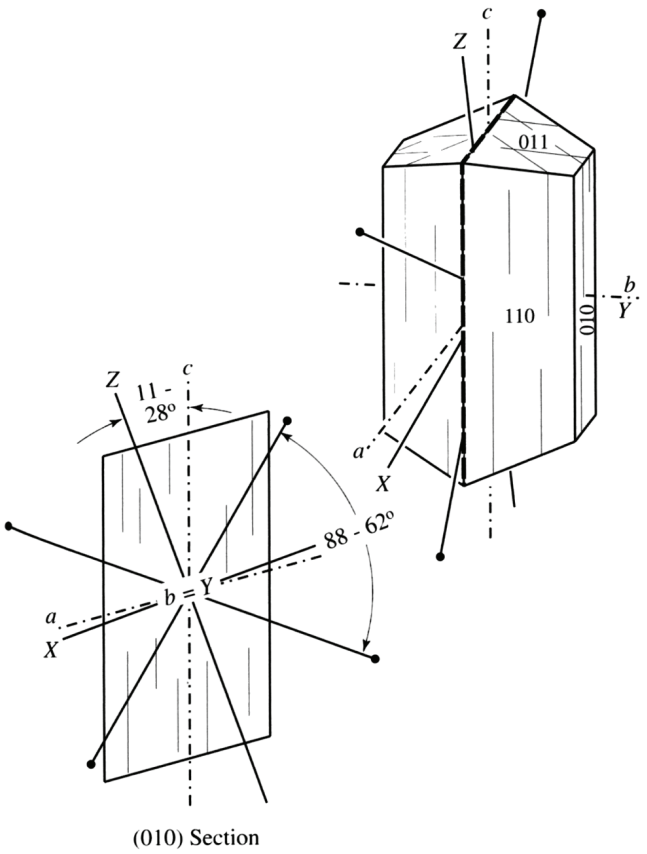
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



(010) Section

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Andalusite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

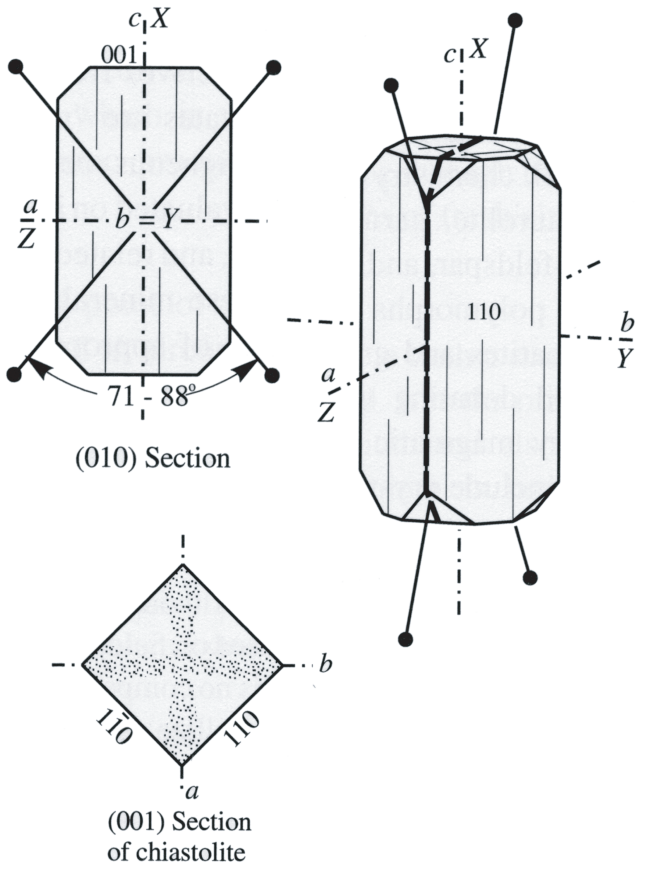
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



ORTHOSCOPIC

Relief

V.Low Low Medium High V.High **POS NEG**

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Apatite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

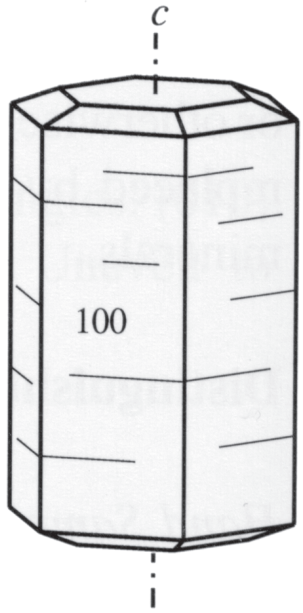
Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Aragonite

Mineral Name

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

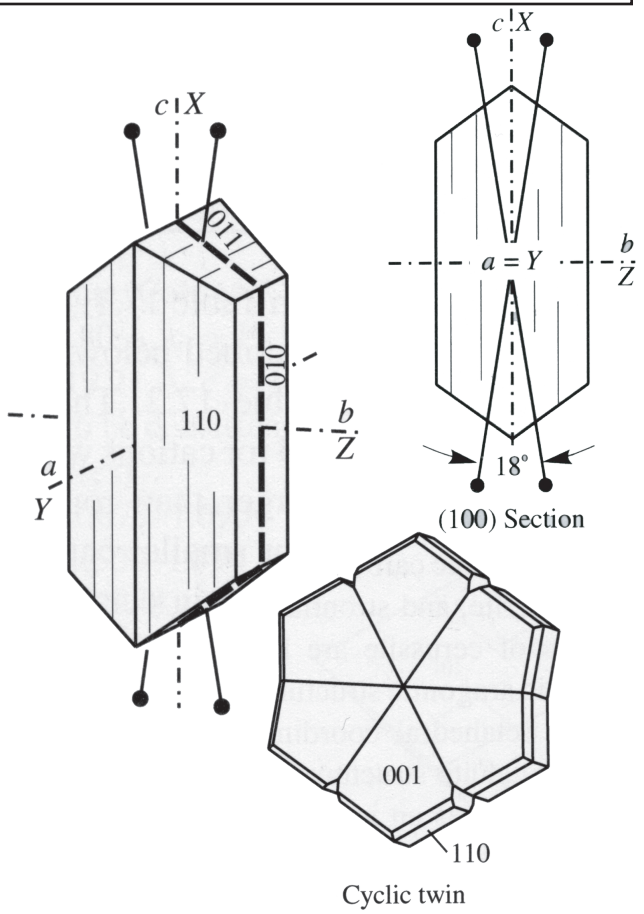
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Arsenopyrite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

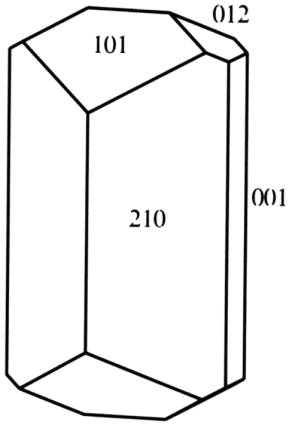
Occurrence

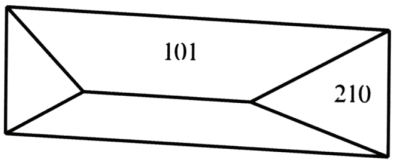
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

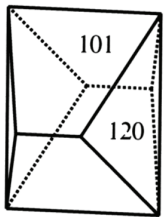
Alteration / Decomposition

Other useful features

Cleavage







Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Augite

Mineral Name

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H
fn cp sn gl qz sp
1 2 3 4 5 6 7 8 9 10

G

Density
LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

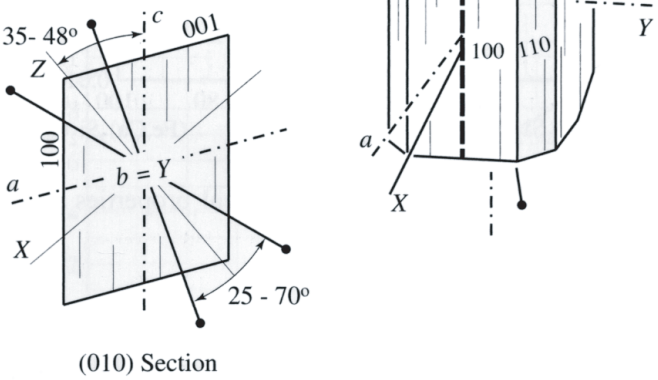
Habit(s)

Occurrence
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



(010) Section

ORTHOSCOPIC

Relief
V.Low Low Medium High V.High
POS NEG
n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Azurite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

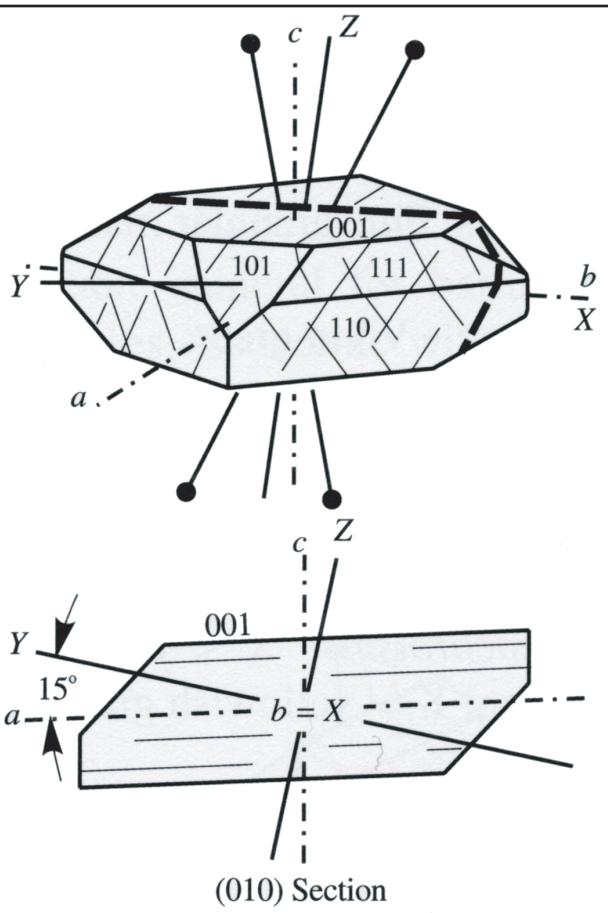
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



(010) Section

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Barite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

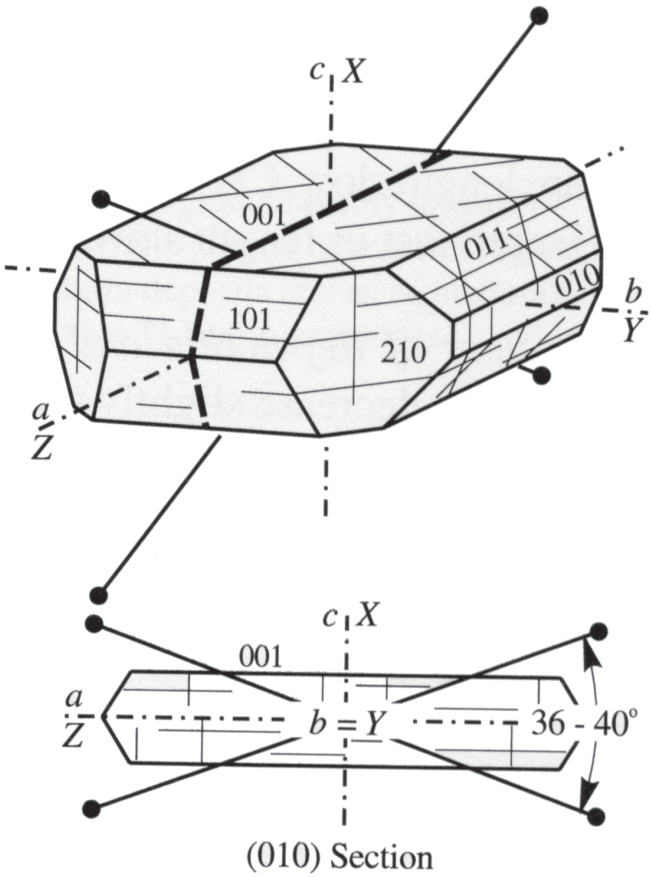
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



(010) Section

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Beryl

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

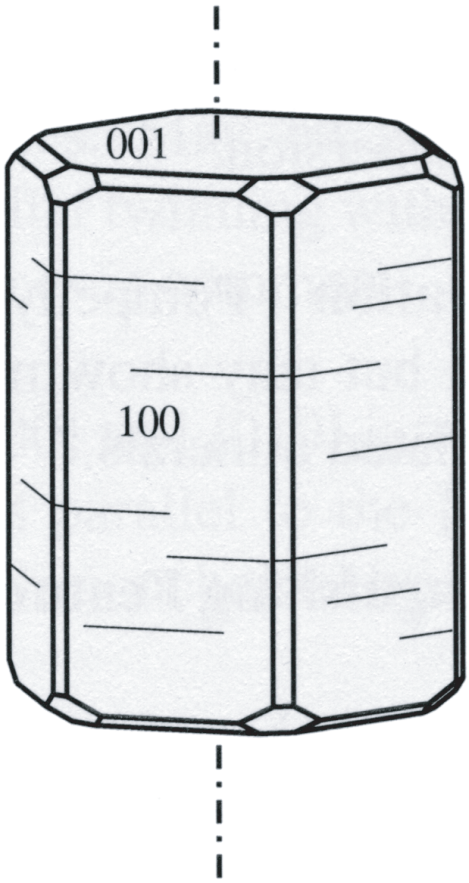
Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



Cleavage

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Biotite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

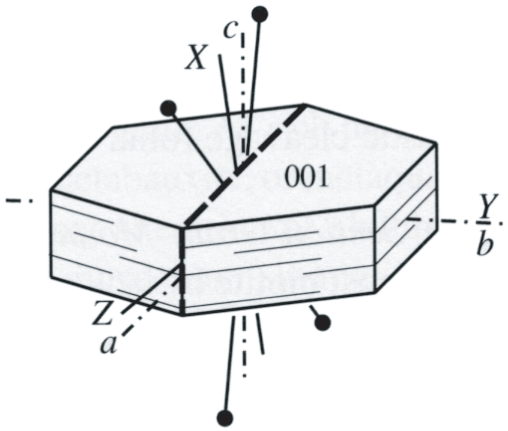
Occurrence

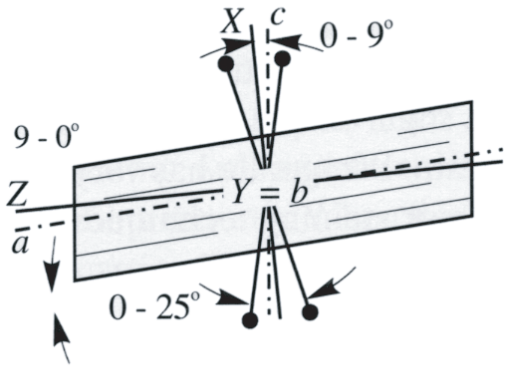
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage





(010) section

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High **POS NEG**

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

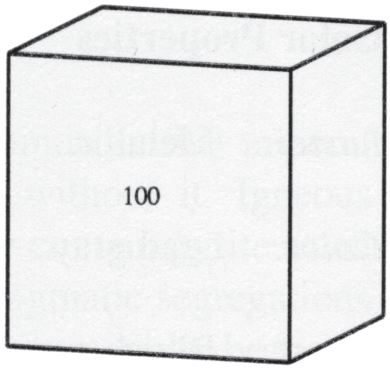
Mineral Name

Bornite

Formula / Key Elements

Crystal System

Classification



PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Calcite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

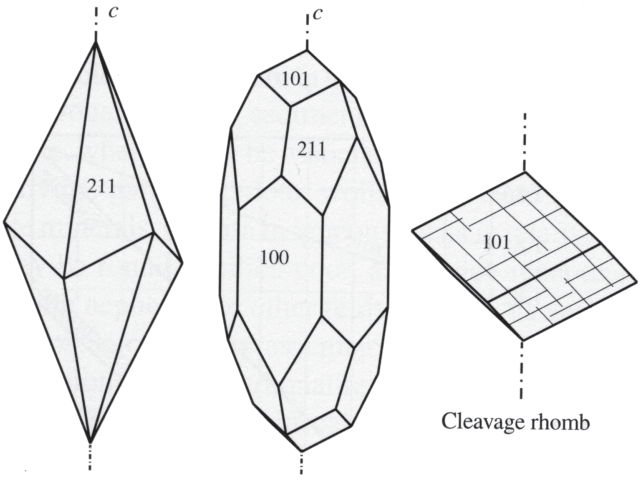
Habit(s)

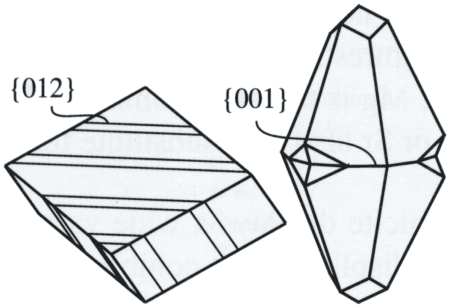
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features





Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Chalcopyrite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

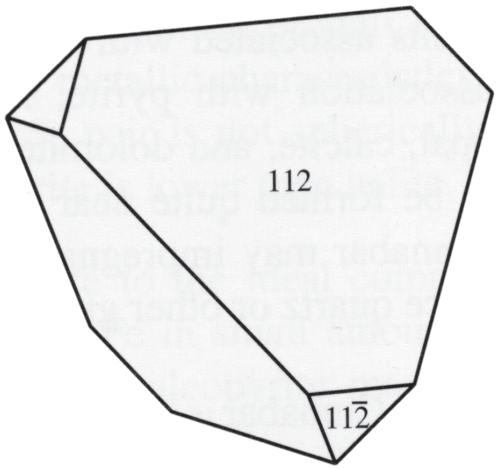
Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Chlorite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

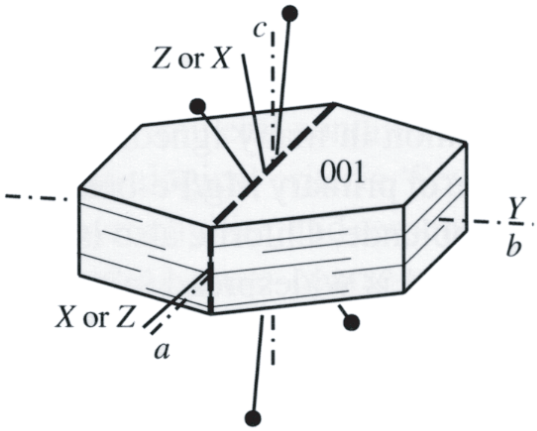
Occurrence

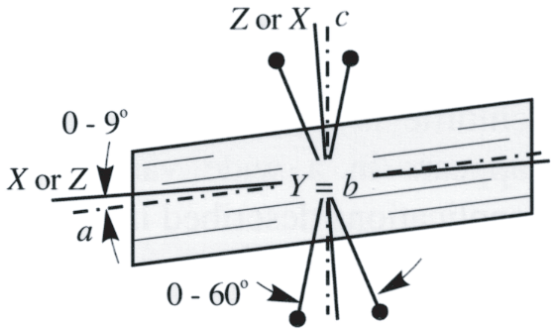
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage





(010) section

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High **POS NEG**

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

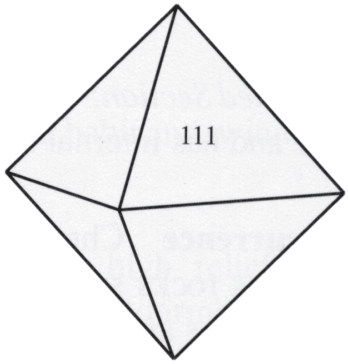
Mineral Name

Chromite

Formula / Key Elements

Crystal System

Classification



PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

CONOSCOPIC

Optic Sign

2V

Dispersion

Mineral Name

Cinnabar

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

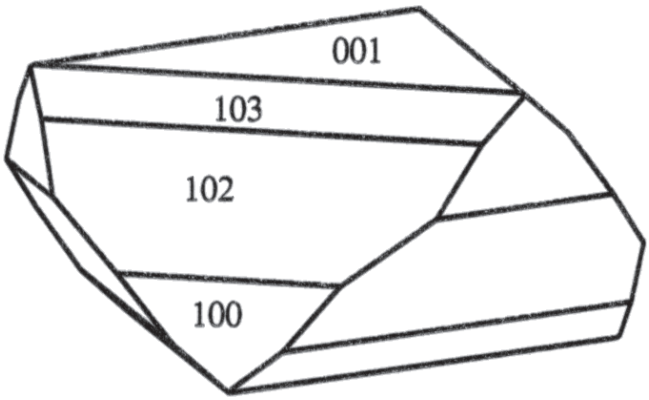
Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

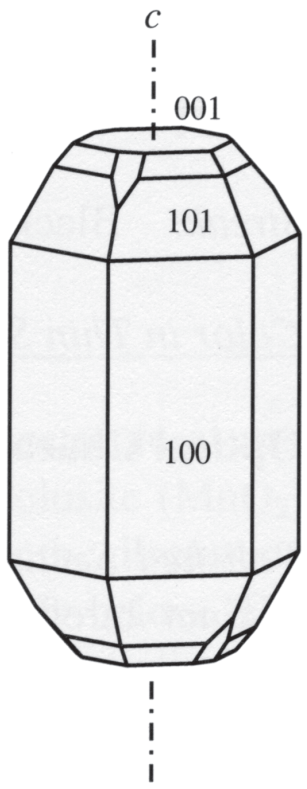
Mineral Name

Corundum

Formula / Key Elements

Crystal System

Classification



PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Cordierite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

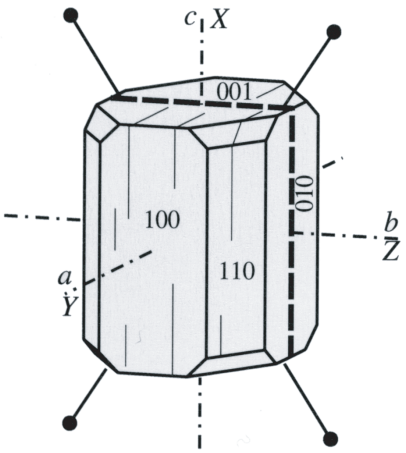
Occurrence

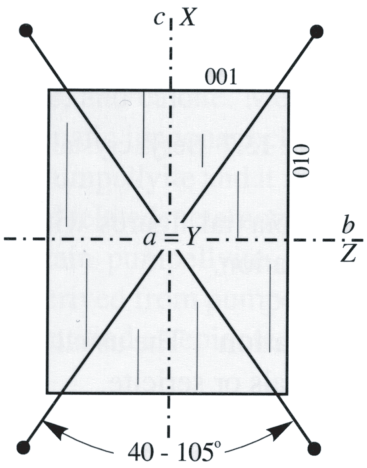
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage





ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Chloritoid

Mineral Name

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H
fn cp sn gl qz sp
1 2 3 4 5 6 7 8 9 10

G

Density
LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

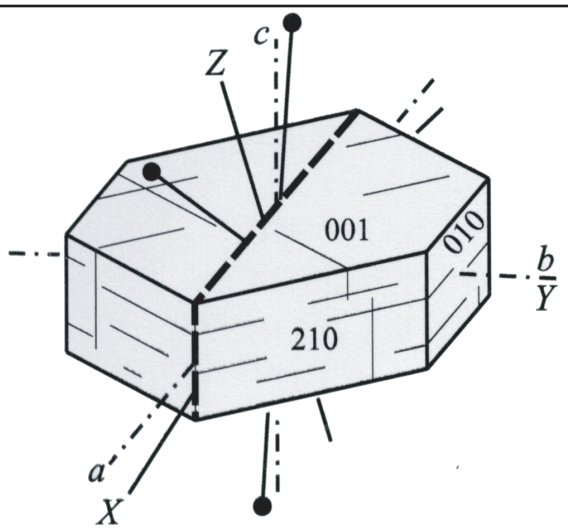
Habit(s)

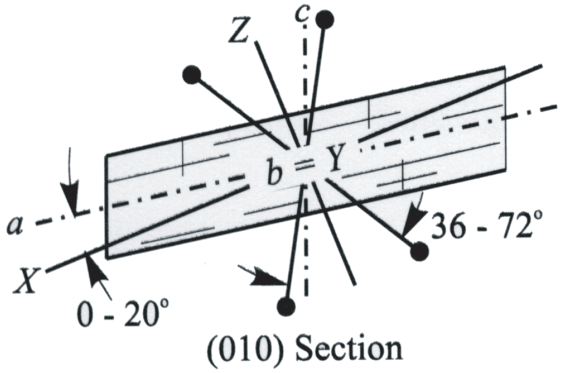
Occurrence
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage





(010) Section

ORTHOSCOPIC

Relief
V.Low Low Medium High V.High
POS NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Diopside

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

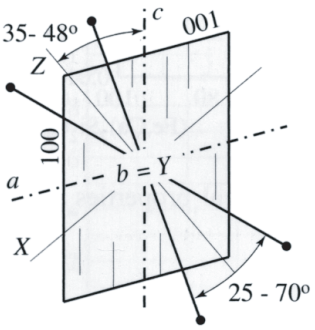
Habit(s)

Occurrence

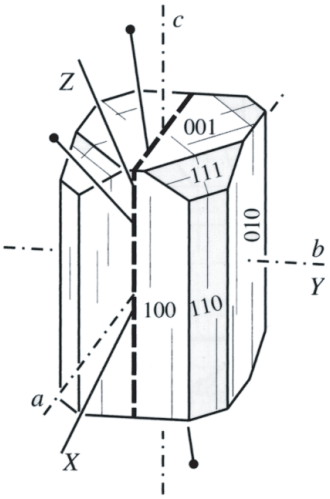
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



(010) Section



Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Dolomite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

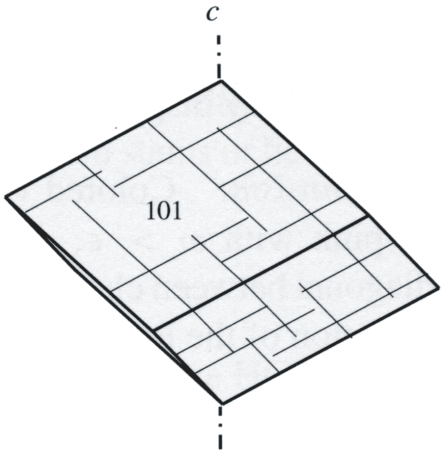
Habit(s)

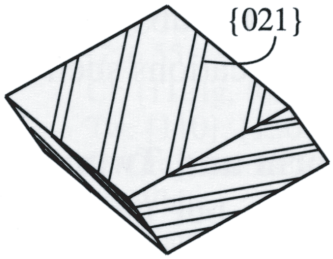
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features





Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Enstatite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

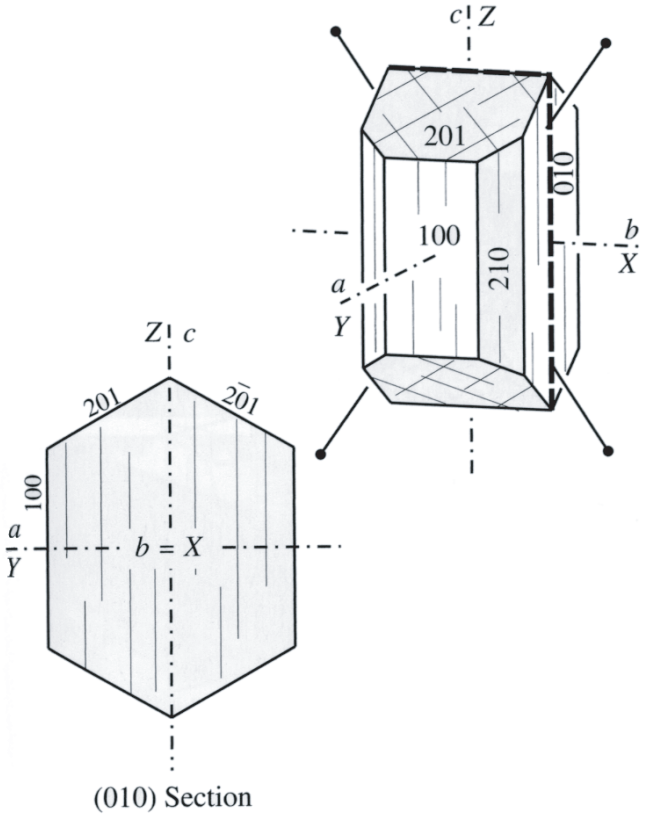
Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



(010) Section

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Epidote

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

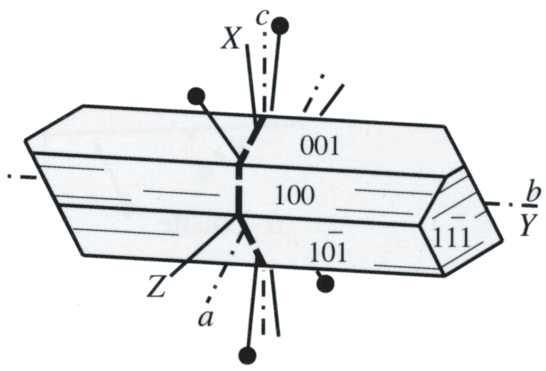
Occurrence

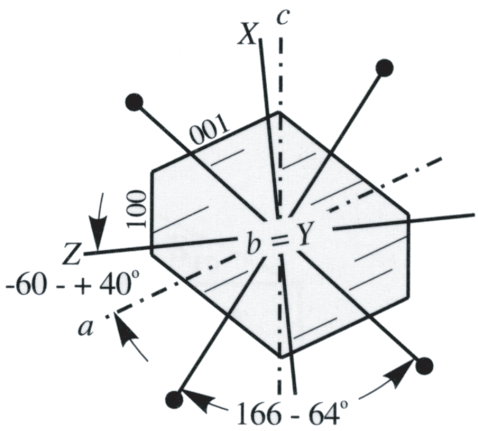
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage





(010) Section

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

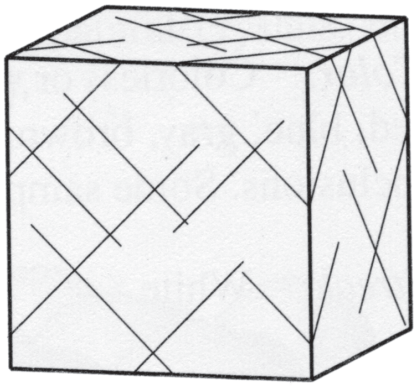
Mineral Name

Fluorite

Formula / Key Elements

Crystal System

Classification



PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Galena

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

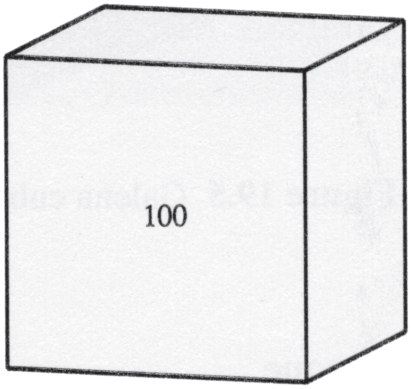
Habit(s)

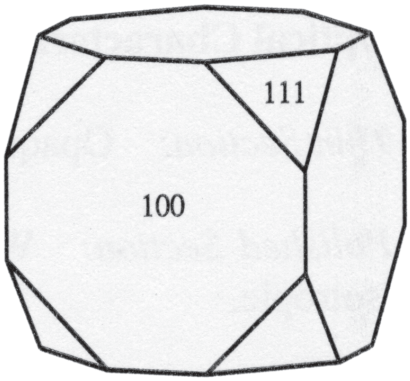
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features





Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High **POS NEG**

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Glaucophane

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

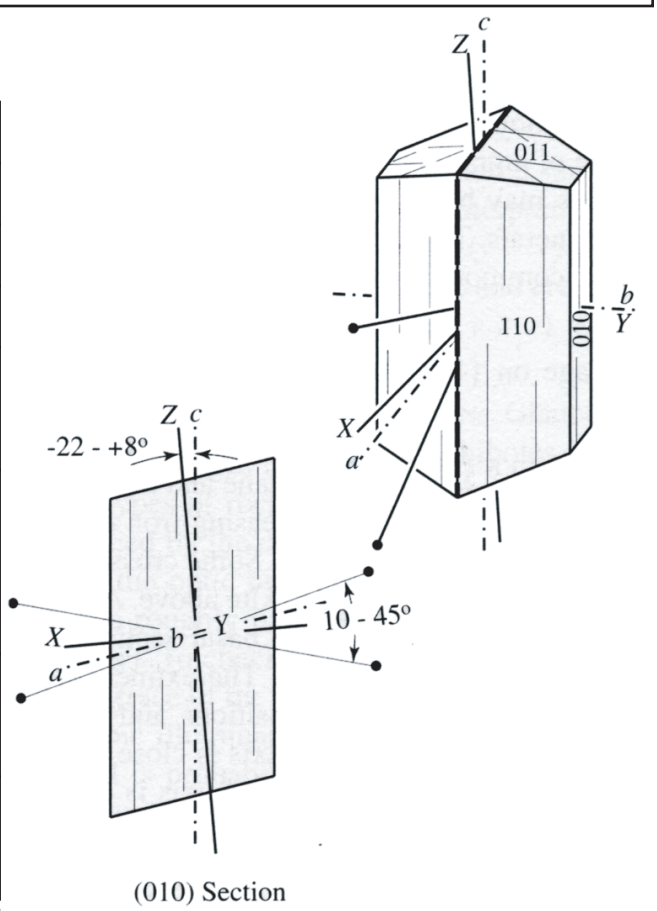
Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



(010) Section

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Graphite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

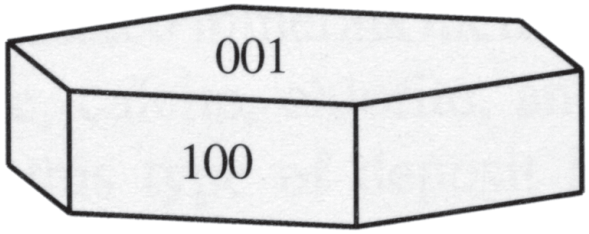
Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



Cleavage

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Grossular

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

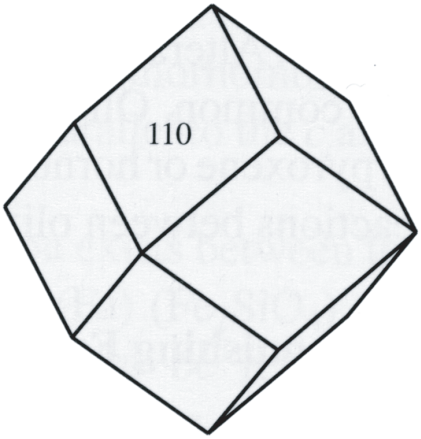
Habit(s)

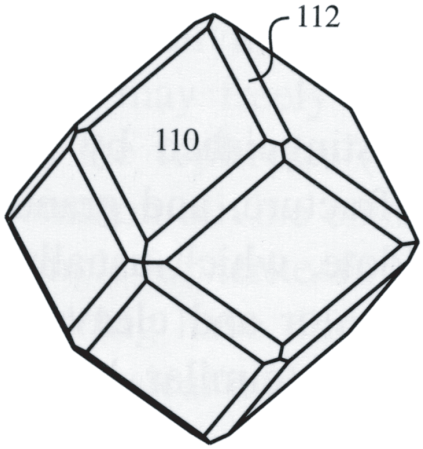
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features





Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Garnet

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

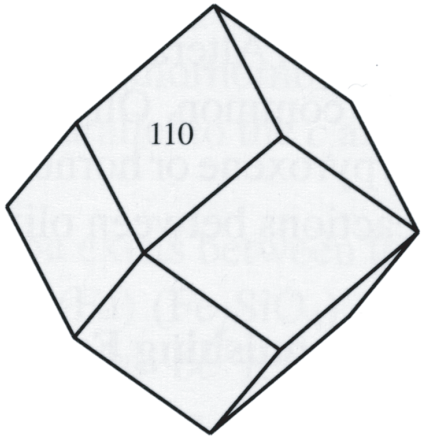
Occurrence

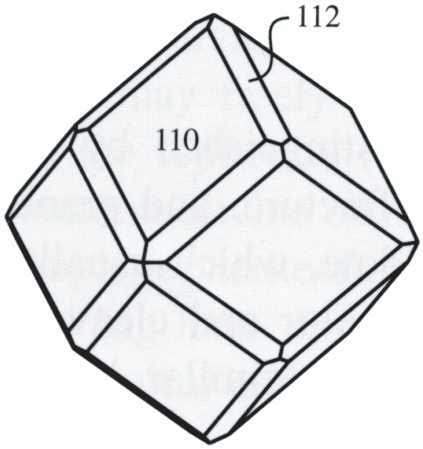
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage





ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Gypsum

Mineral Name

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

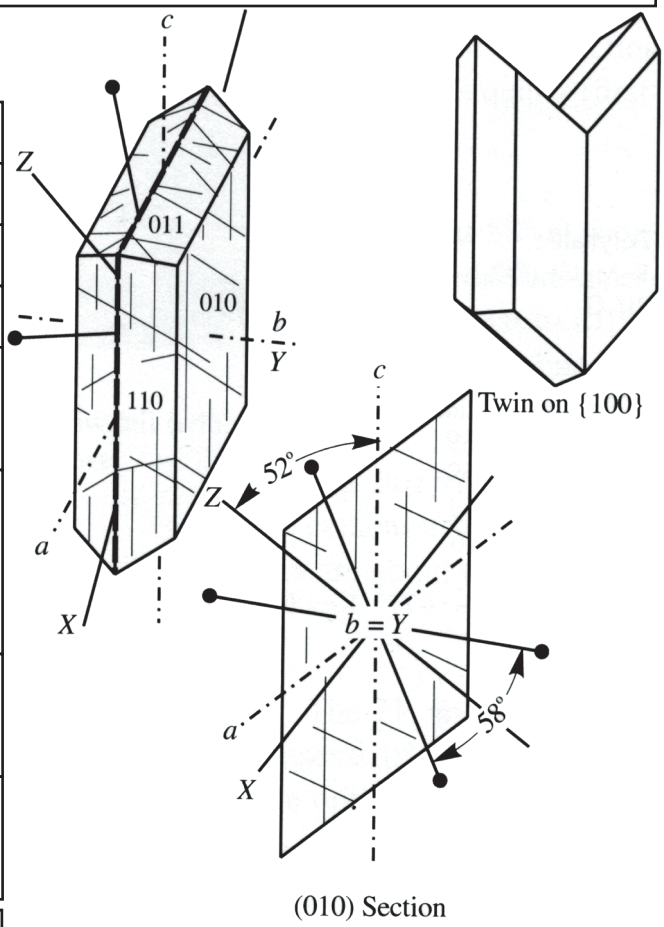
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

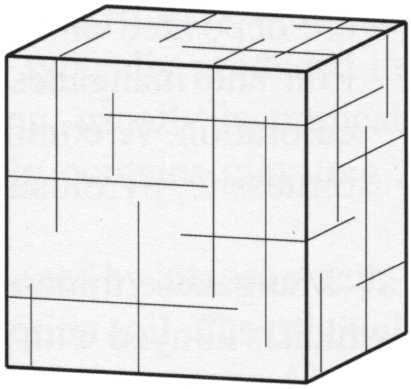
Mineral Name

Halite

Formula / Key Elements

Crystal System

Classification



PHYSICAL

H
fn cp sn gl qz sp
1 2 3 4 5 6 7 8 9 10

G

Density
LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

Occurrence
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

ORTHOSCOPIC

Relief
V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Hornblende

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

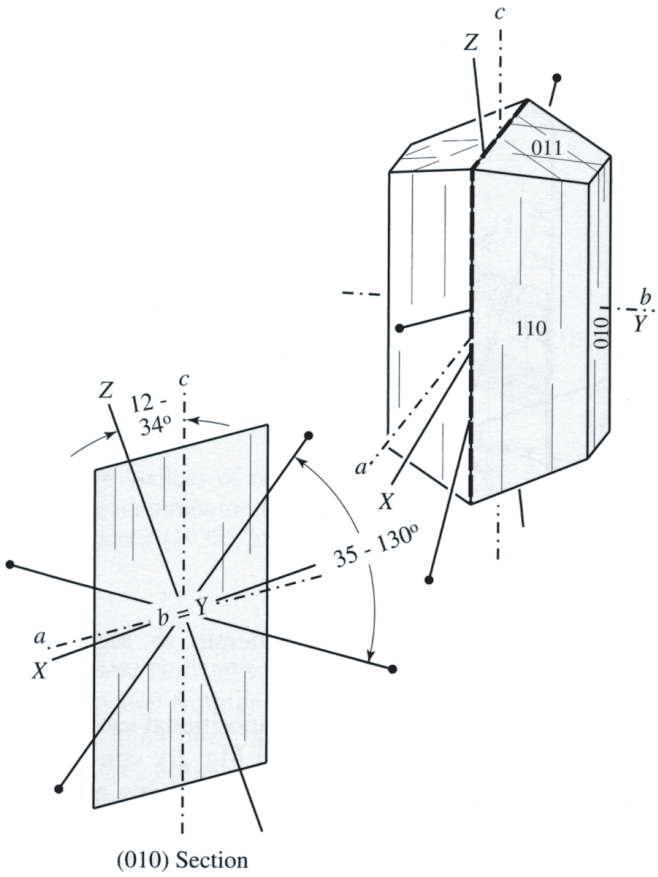
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



(010) Section

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

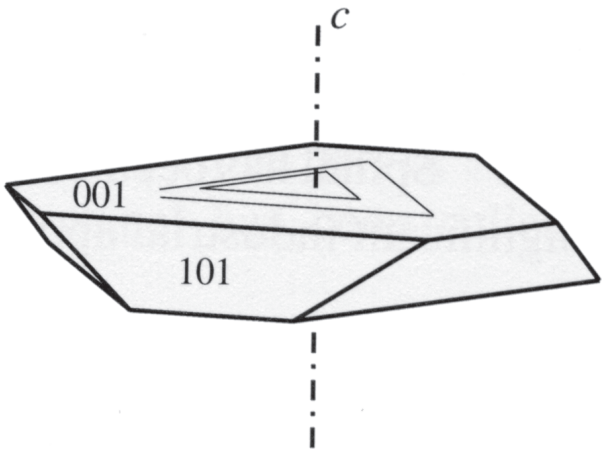
Mineral Name

Hematite

Formula / Key Elements

Crystal System

Classification



PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

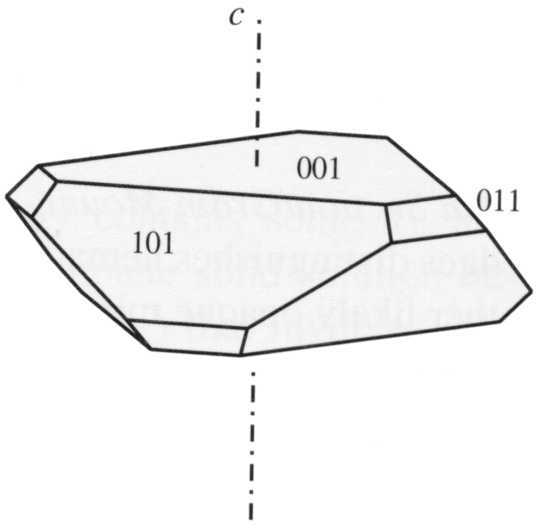
Mineral Name

Ilmenite

Formula / Key Elements

Crystal System

Classification



PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Kaolinite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

CONOSCOPIC

Optic Sign

2V

Dispersion

Mineral Name

Kyanite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

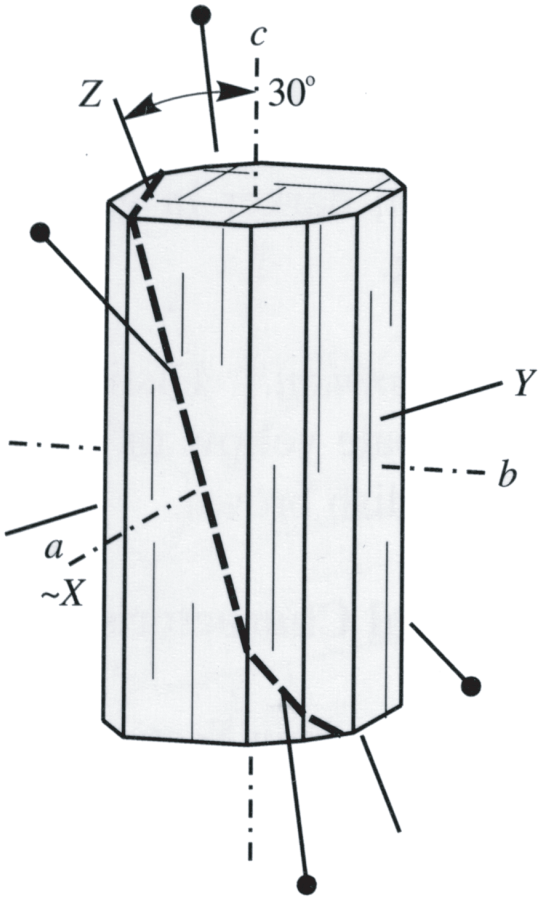
Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Malachite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

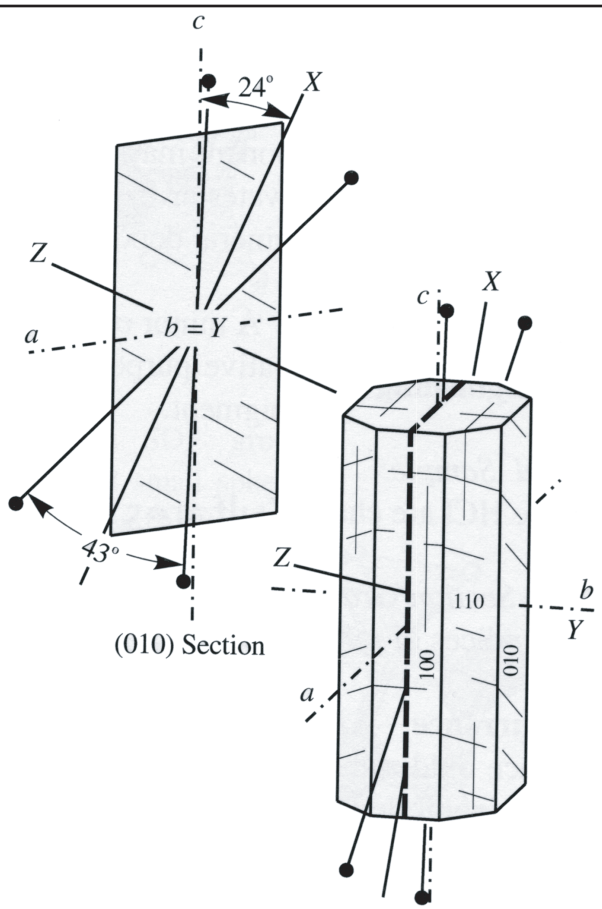
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



ORTHOSCOPIC

Relief

V.Low Low Medium High V.High **POS NEG**

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

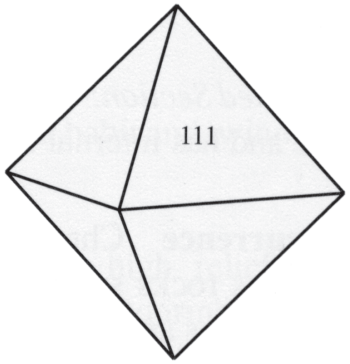
Mineral Name

Magnetite

Formula / Key Elements

Crystal System

Classification



PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Microcline (K-feldspar)

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H
fn cp sn gl qz sp
1 2 3 4 5 6 7 8 9 10

G

Density
LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

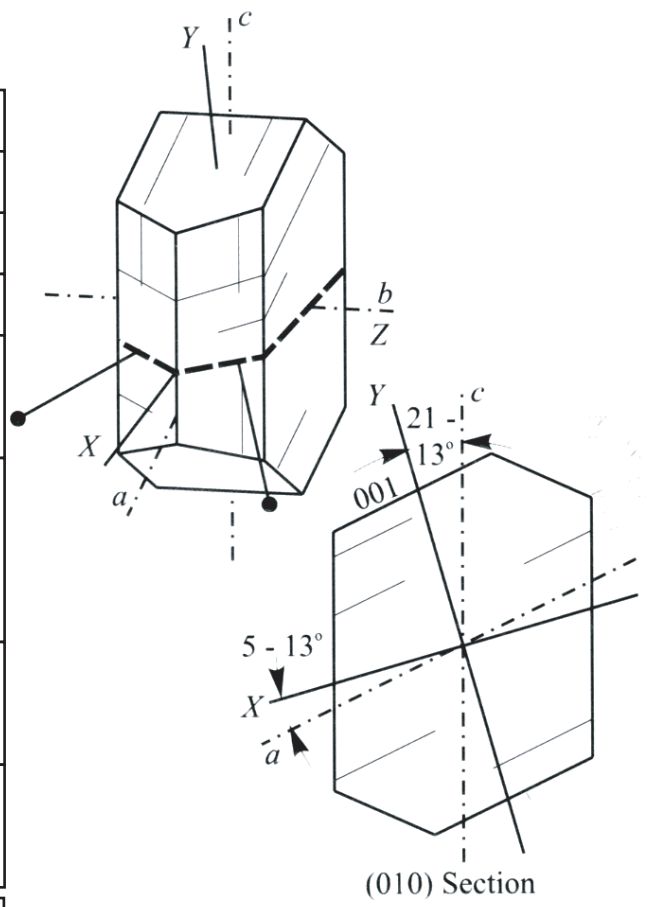
Habit(s)

Occurrence
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



ORTHOSCOPIC

Relief
V.Low Low Medium High V.High
POS NEG
n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Molybdenite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

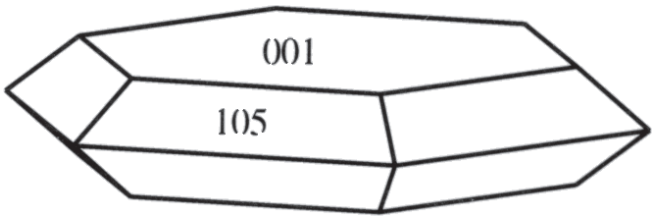
Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Muscovite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

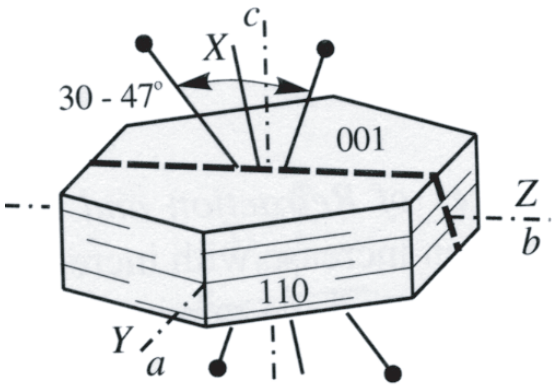
Habit(s)

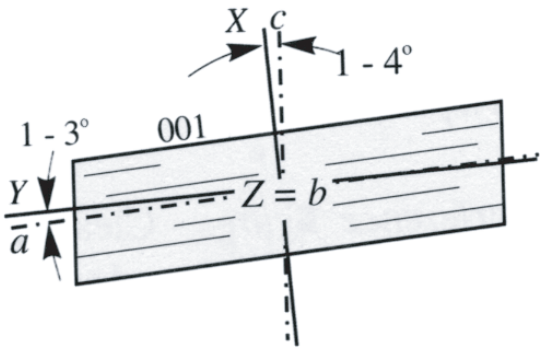
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features





(010) section

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High **POS NEG**

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Nepheline

Mineral Name

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

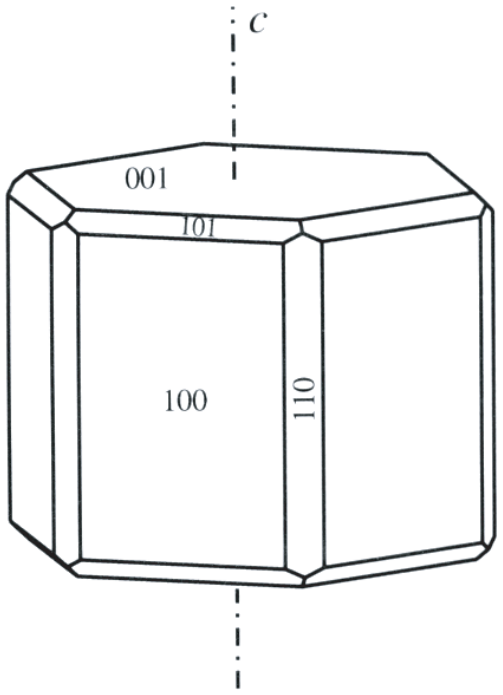
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Olivine

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

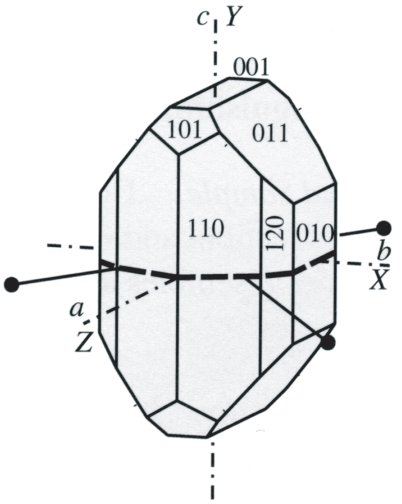
Occurrence

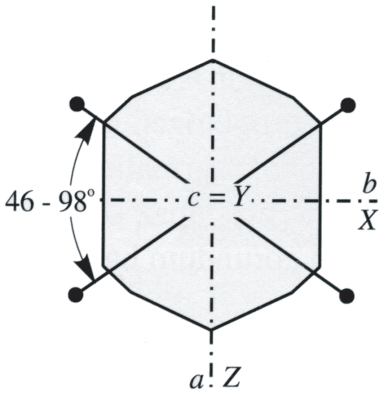
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage





(001) Section

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Opal

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Orthoclase (K-feldspar)

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

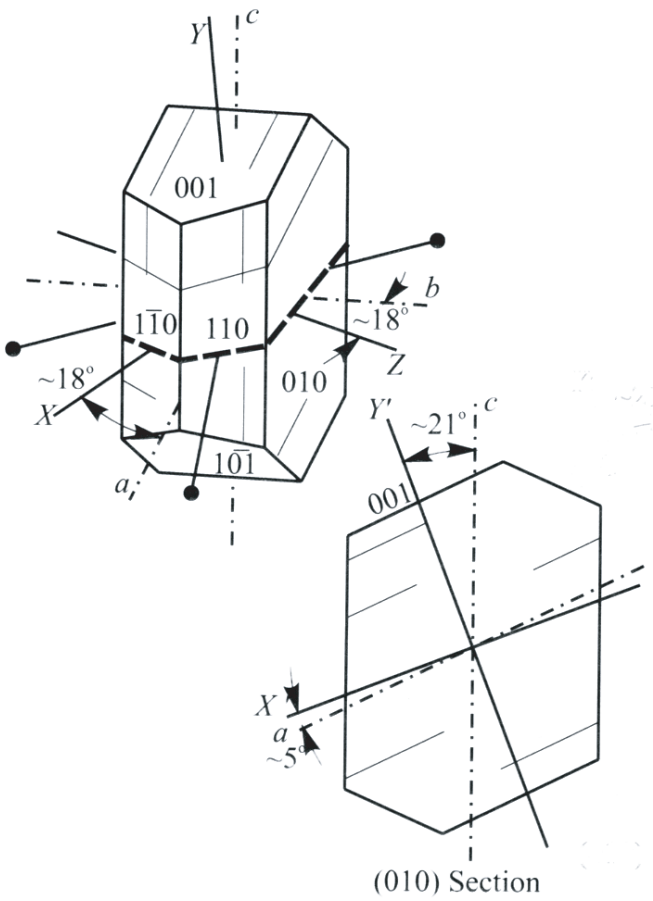
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



(010) Section

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Orpiment

Mineral Name

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

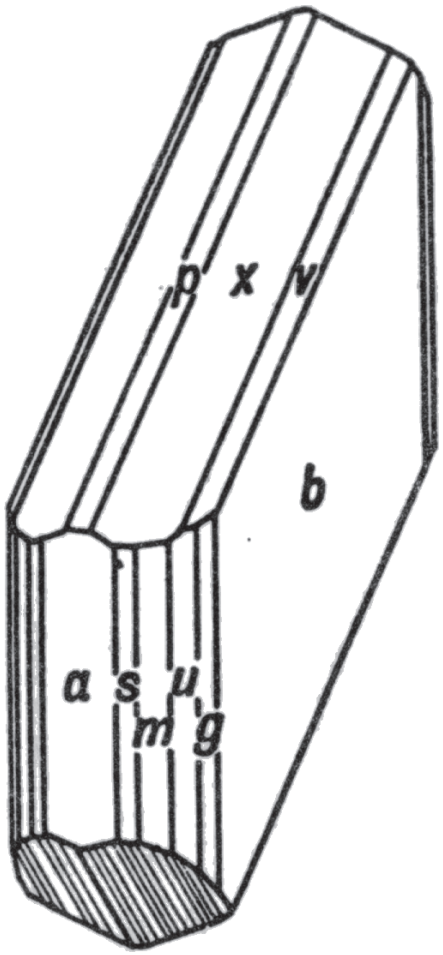
Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Plagioclase

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

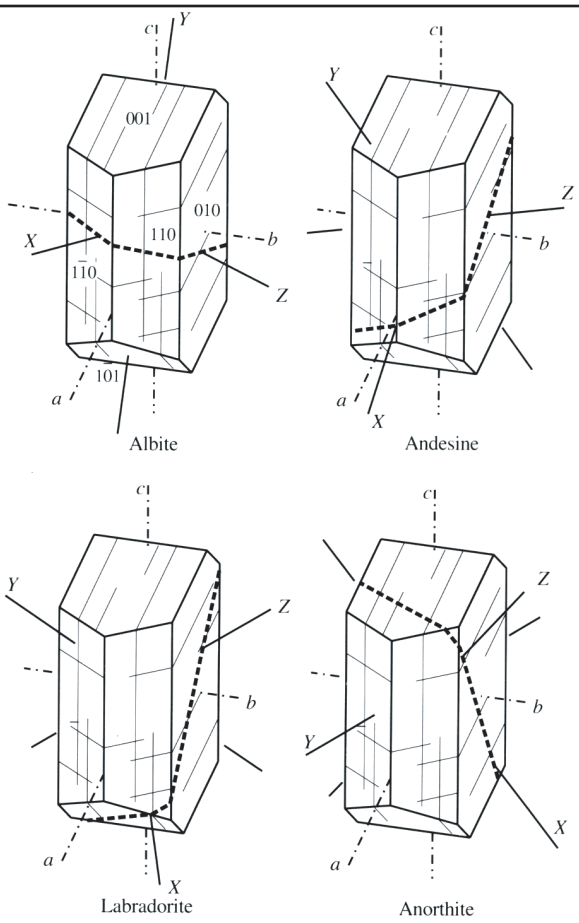
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Pyrrhotite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

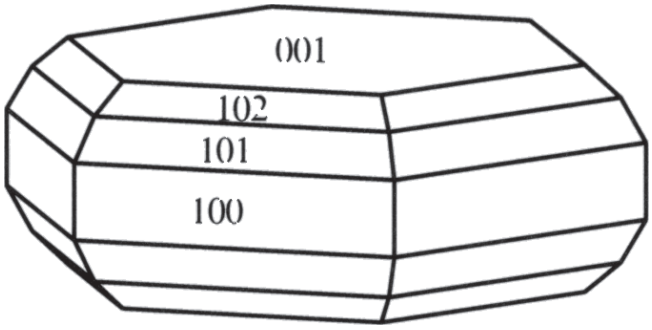
Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

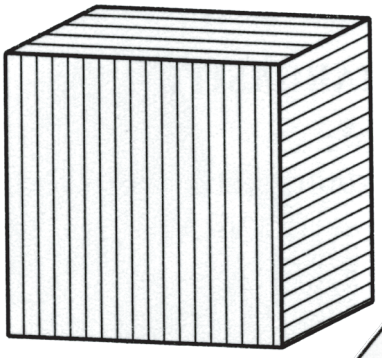
Mineral Name

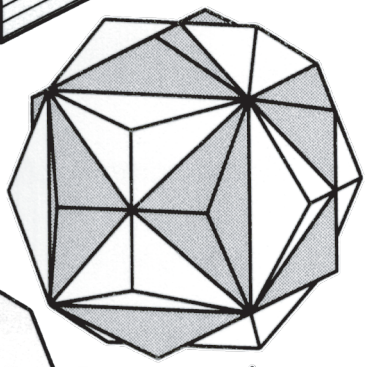
Pyrite

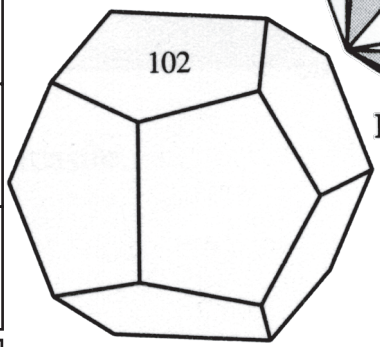
Formula / Key Elements

Crystal System

Classification







Iron cross twin

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Quartz

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

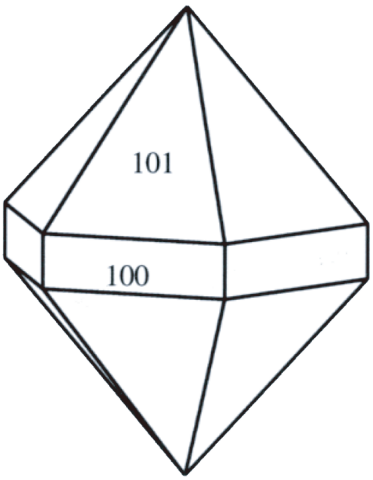
Habit(s)

Occurrence

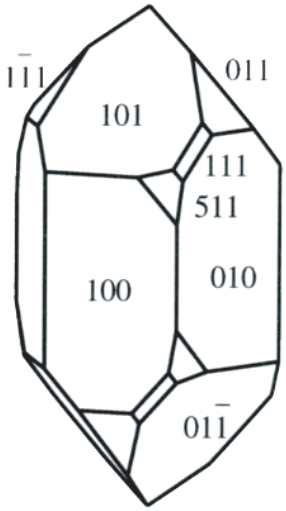
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



β-Quartz



α-Quartz

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Realgar

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

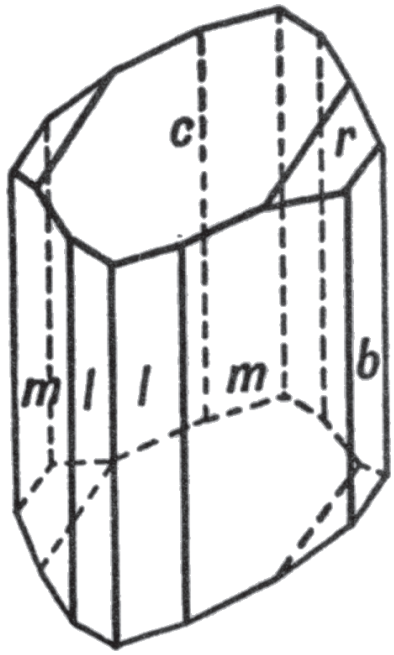
Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



Cleavage

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

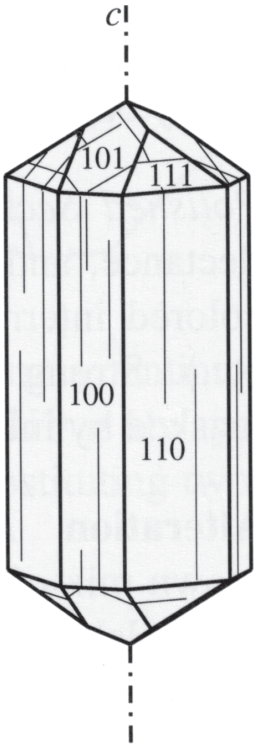
Mineral Name

Rutile

Formula / Key Elements

Crystal System

Classification



PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Sanidine (K-feldspar)

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

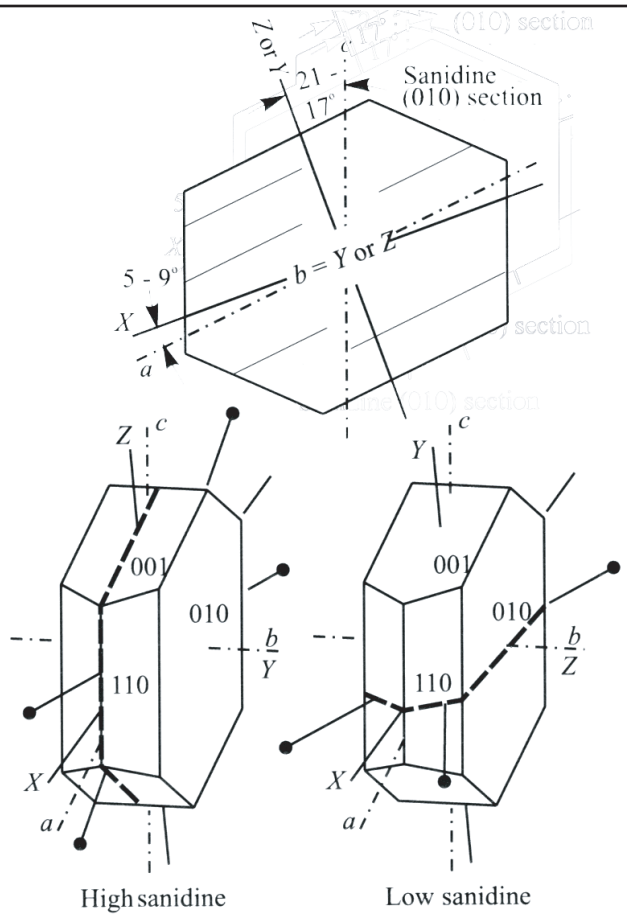
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Serpentine

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

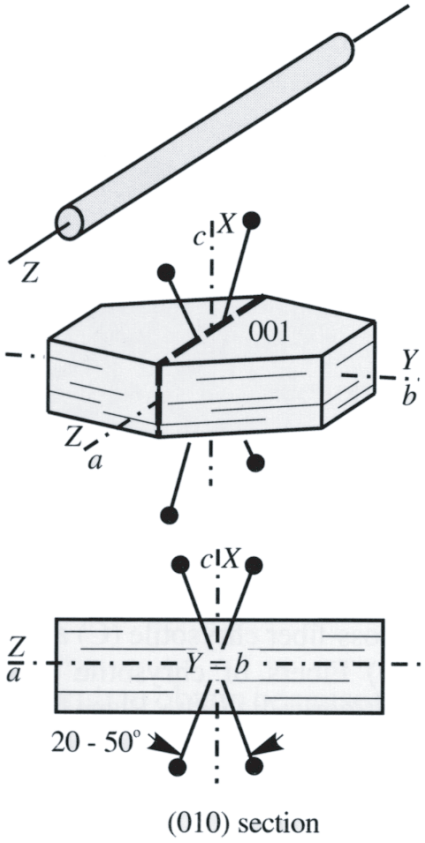
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



(010) section

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

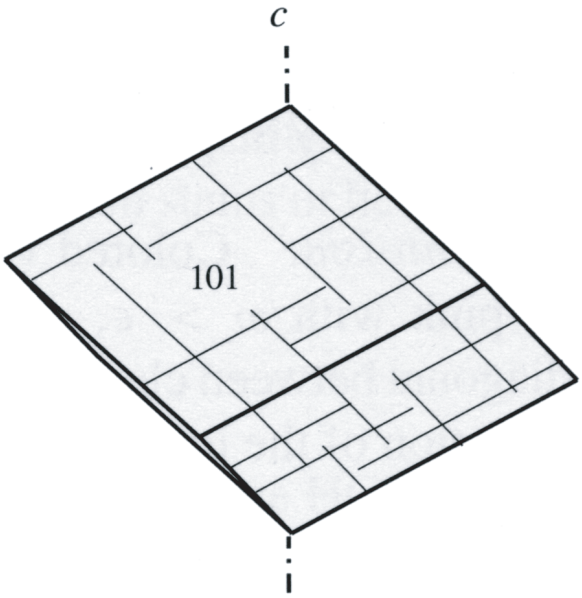
Mineral Name

Siderite

Formula / Key Elements

Crystal System

Classification



PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Sillimanite

Mineral Name

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H
fn cp sn gl qz sp
1 2 3 4 5 6 7 8 9 10

G

Density
LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

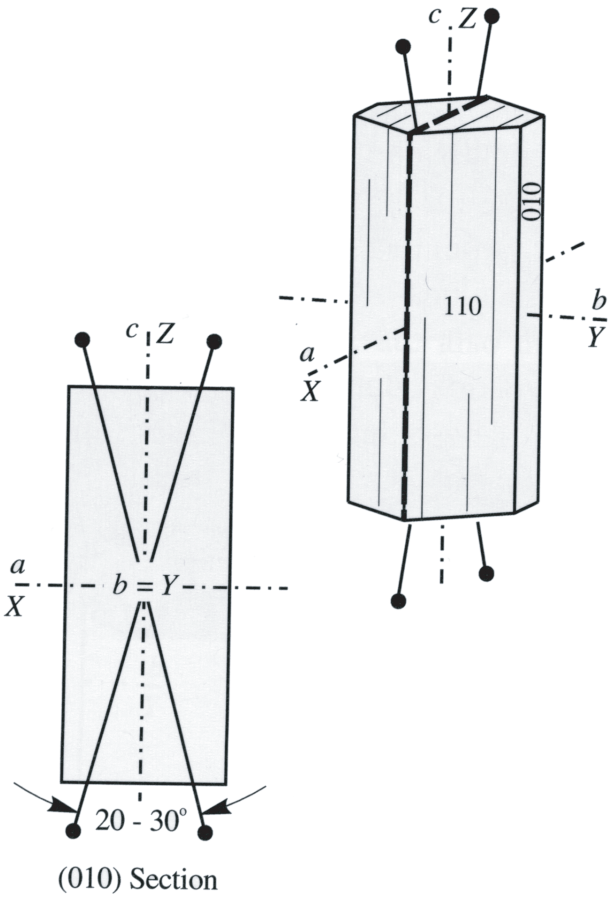
Habit(s)

Occurrence
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



(010) Section

ORTHOSCOPIC

Relief
V.Low Low Medium High V.High
POS
NEG
n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Stilbite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

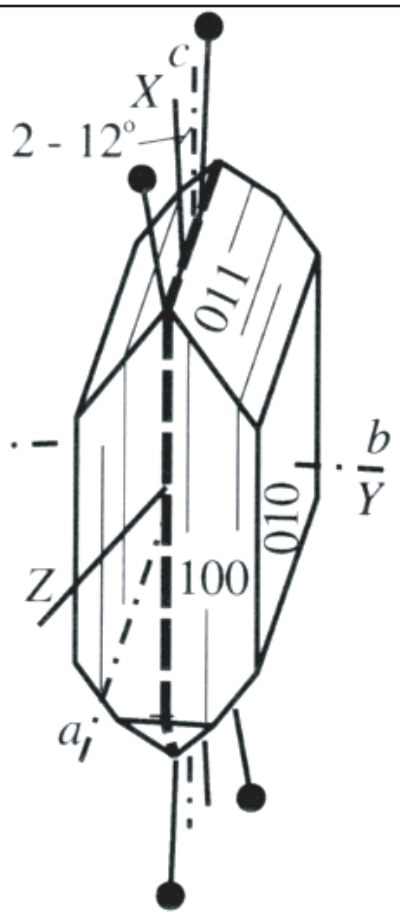
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Sulfur

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

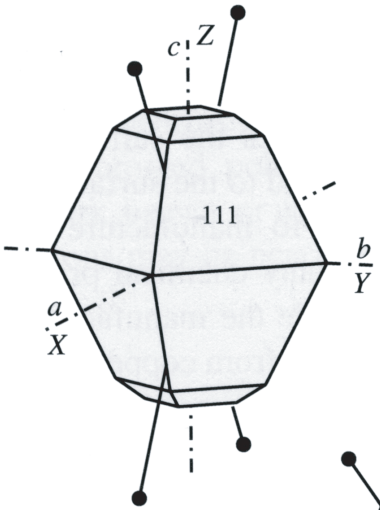
Habit(s)

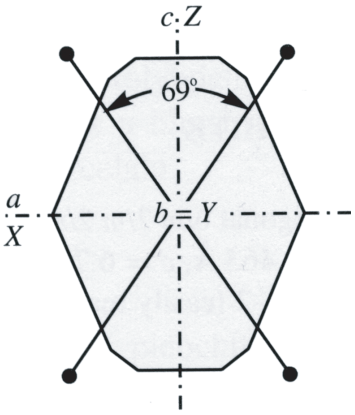
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features





(010) Section

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High **POS NEG**

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

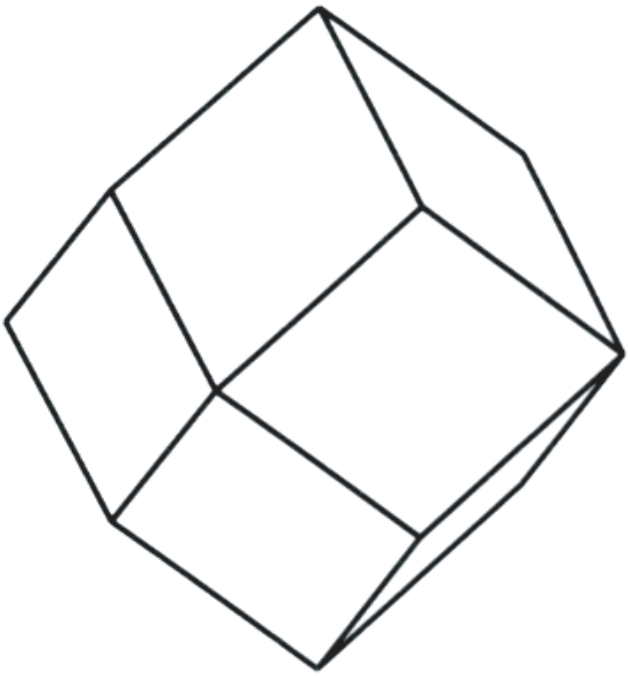
Mineral Name

Sodalite

Formula / Key Elements

Crystal System

Classification



PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

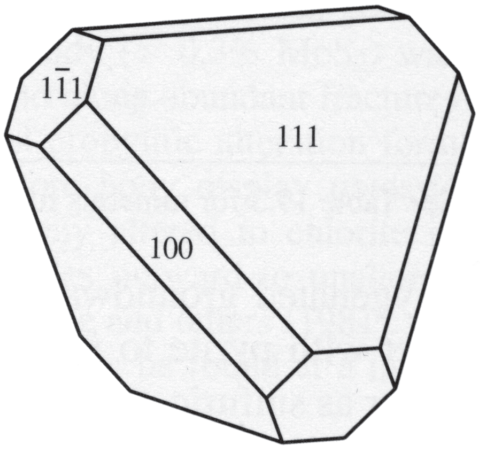
Mineral Name

Sphalerite

Formula / Key Elements

Crystal System

Classification



PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Staurolite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

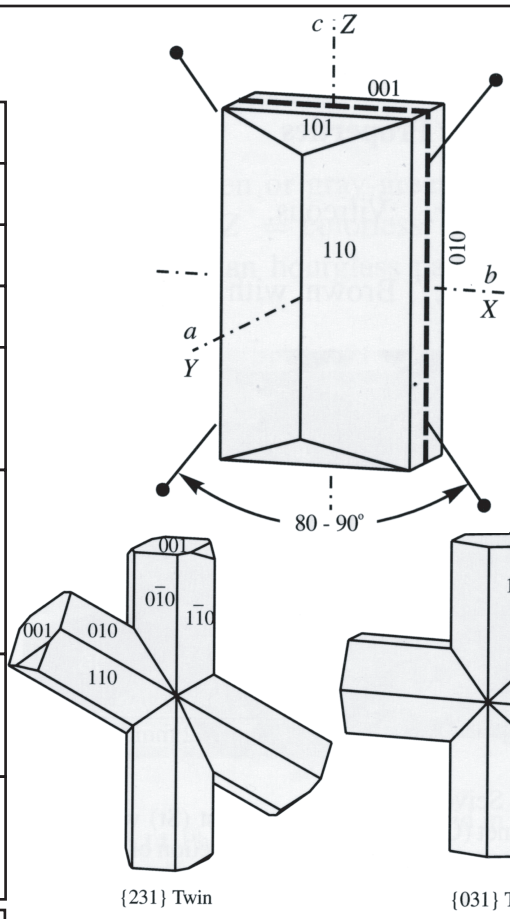
Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H
fn cp sn gl qz sp
1 2 3 4 5 6 7 8 9 10

G

Density
LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

Occurrence
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage

OPTICAL — PETROGRAPHIC

Relief
V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

ing Features (hand specimen)

uish from _____ by _____

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguish from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Titanite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

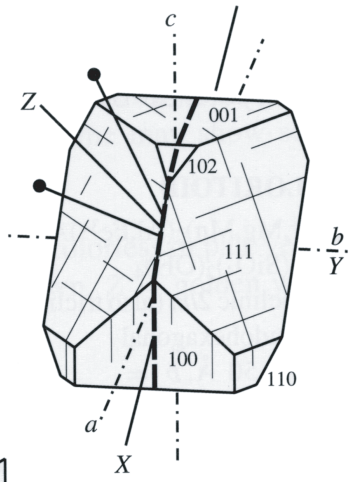
Habit(s)

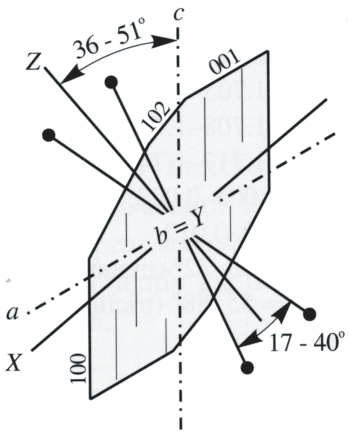
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features





(010) Section

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name **Talc**

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H
fn cp sn gl qz sp
1 2 3 4 5 6 7 8 9 10

G

Density
LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

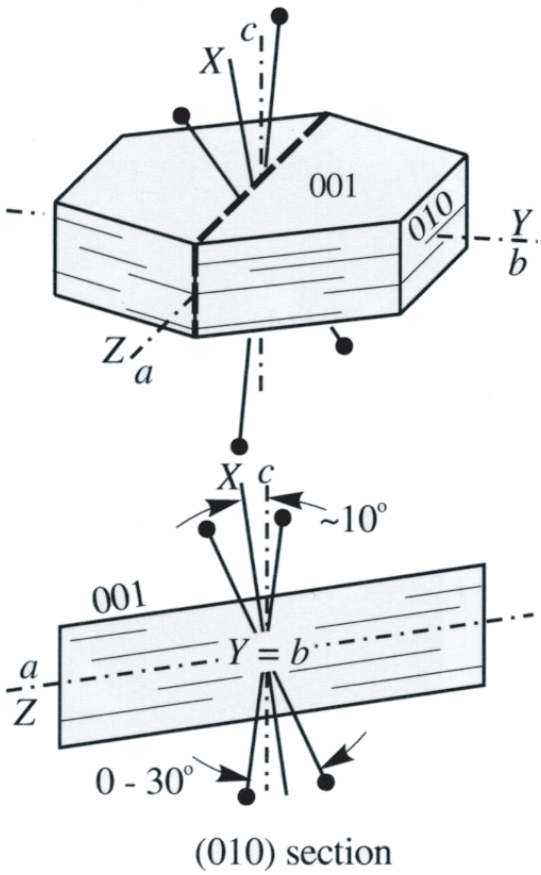
Habit(s)

Occurrence
Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



(010) section

ORTHOSCOPIC

Relief
V.Low **Low** **Medium** **High** **V.High**
POS
NEG
n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Tourmaline

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

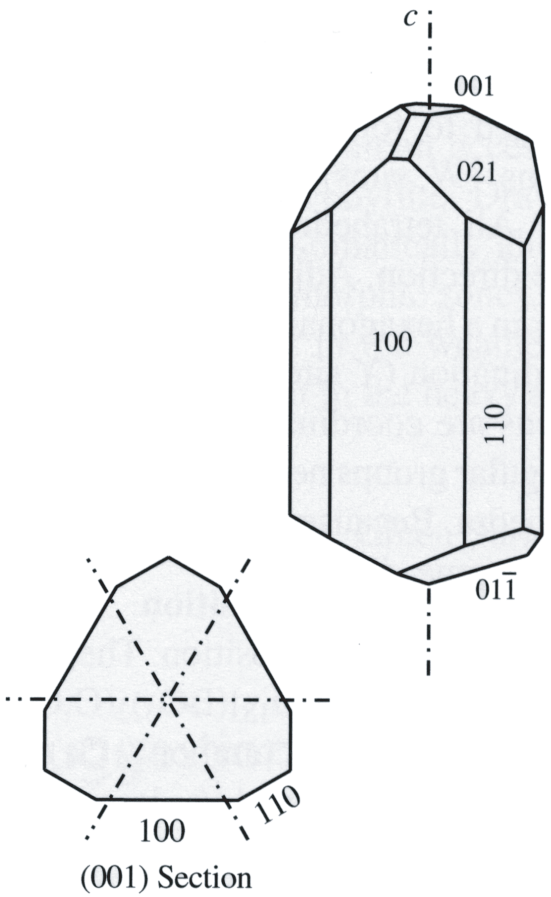
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



(001) Section

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High **POS NEG**

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Topaz

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

Habit(s)

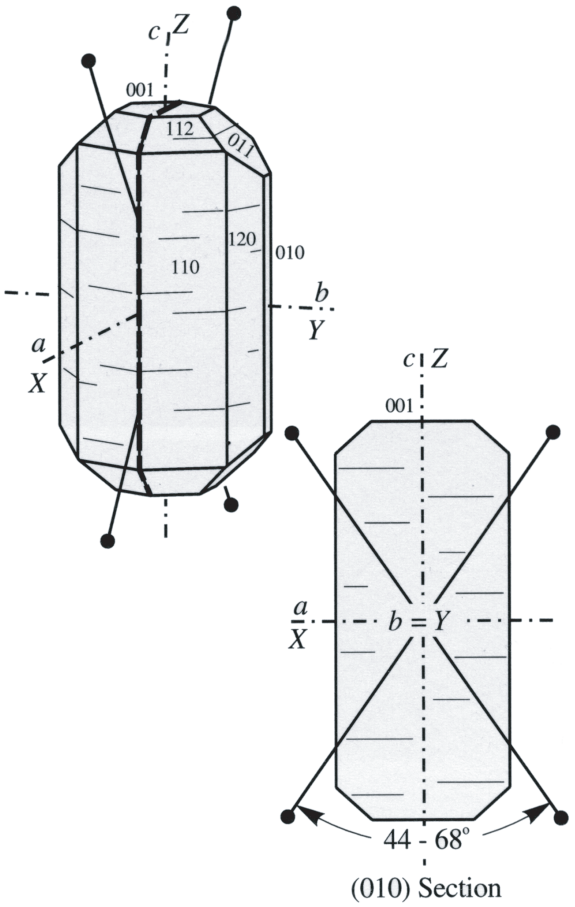
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



(010) Section

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Tremolite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

Habit(s)

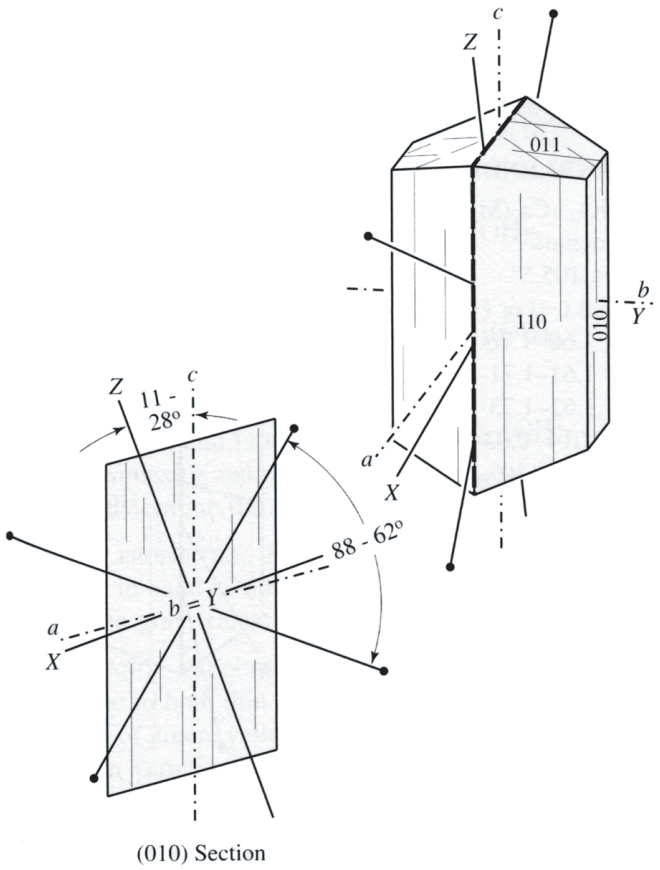
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features

Cleavage



(010) Section

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Wollastonite

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT **NORMAL** **DENSE** **VERY DENSE**

Luster

Typical Color

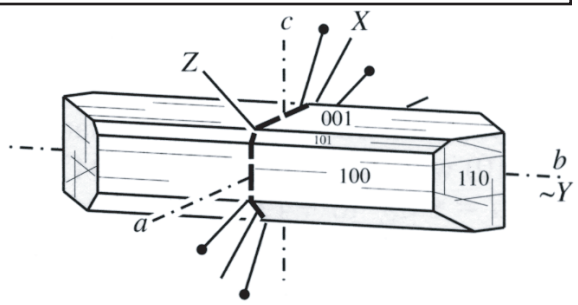
Habit(s)

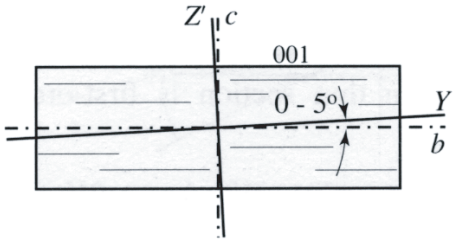
Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

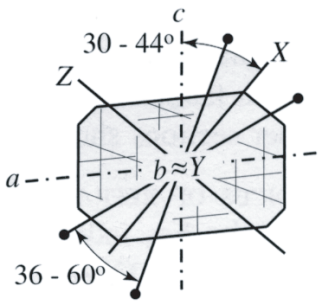
Alteration / Decomposition

Other useful features





(100) Section



~(010) Section

Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High **POS NEG**

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Mineral Name

Zircon

Formula / Key Elements

Crystal System

Classification

PHYSICAL

H

fn cp sn gl qz sp

1 2 3 4 5 6 7 8 9 10

G

Density

LIGHT NORMAL DENSE VERY DENSE

Luster

Typical Color

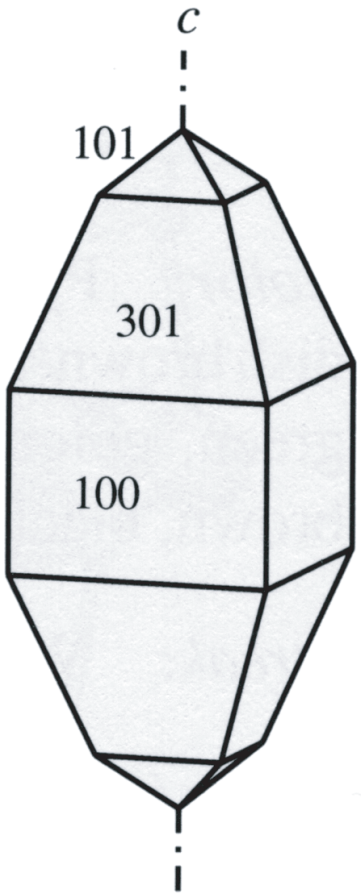
Habit(s)

Occurrence

Igneous
Metamorphic
Low-T hydrothermal
High-T hydrothermal
Sedimentary

Alteration / Decomposition

Other useful features



Cleavage

ORTHOSCOPIC

Relief

V.Low Low Medium High V.High

POS
NEG

n

Color / Pleochroism

Birefringence/Max. Interference Colors

Extinction / Ext. Angle

Twinning

Elongation

CONOSCOPIC

Optic Sign

2V

Dispersion

Distinguishing Features (hand specimen)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Distinguishing Features (thin section)

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____

Dist. from _____ by _____