



Mineral Identification Diagnostic Physical Properties

Apatite	Green color, H=5, may show hexagonal crystal form
Augite	Dark or dull green color, 2 cleavages at ~90 degrees, similar properties to Hornblende
Biotite	Black color, one perfect direction of cleavage resulting in the mineral peeling into thin, flexible sheets, similar properties to Muscovite
Calcite	H=3, reacts with HCl, 3 directions of cleavage (rhombic cleavage)
Corundum	H=9, often shows hexagonal crystal form
Dolomite	Reacts to HCL in its powdered form, similar properties to calcite
Fluorite	H=4, 4 directions of cleavage, often purple in color (can be white, clear, yellow, green)
Galena	Gray, metallic mineral, 3 directions of cleavage (cubic)
Garnet	Typically reddish brown color, no cleavage, commonly found in twelve-sided crystals (dodecahedrons)
Graphite	"Pencil lead", soft metallic mineral, gray streak
Gypsum	H=2, can be scratched with a fingernail
Halite	"Salt", H=2.5, cannot be scratched with a fingernail, 3 directions of cleavage (cubic), salty taste
Hematite	Reddish brown streak, "rust"
Hornblende	Black to dk. green color, 2 directions of cleavage at 120 or 60 degrees, similar properties to Augite
Magnetite	Magnetic, metallic mineral
Muscovite	Clear or translucent color, one perfect direction of cleavage resulting in the mineral peeling into thin, flexible sheets, similar properties to Biotite
Olivine	Apple green or yellowish green color, H=7 (often difficult to determine), conchoidal fracture, no cleavage
Orthoclase	H=6, salmon pink color is typical, perthitic intergrowths are common, 2 directions of cleavage at 90 degrees, similar properties to plagioclase
Plagioclase	H=6, white or gray color, striations may be seen on cleavage surface, 2 directions of cleavage at 90 degrees, similar properties to orthoclase
Pyrite	"Fool's Gold", gold metallic color
Quartz	H=7, conchoidal fracture, no cleavage, color is typically white or clear but can be pink, red, purple, black
Sulfur	Yellow color, "rotten egg" smell if burned
Talc	H=1, very soft, easily scratched by fingernail