Mineral List

Biotite Mica - Luster: NM Streak: gray-brown to white Distinctive properties: black, green-black, or brown-black; cleavage excellent; short prisms that split easily into sheets

Calcite - Luster: NM Streak: white Distinctive properties: usually colorless, white, or yellow; excellent cleavage in 3 directions not at 90

Chalcedony - Luster: NM Streak: too hard Distinctive properties: colorless, white, yellow, light brown, or other pastel colors; conchoidal fracture

Dolomite - Luster: NM Streak: white Distinctive properties: white, gray, or pink; cleavage excellent in 3 directions; breaks into rhombohedrons

Hornblende - Luster: NM Streak: white to pale gray Distinctive properties: dark gray or black; forms prisms with good cleavage at 56 and 124; brittle; splintery or asbestos forms

K-Feldspar - Luster: NM Streak: white Distinctive properties: orange, white, brown, green, or pink; cleavage excellent in 2 directions at nearly 90

Muscovite Mica - Luster: NM Streak: white Distinctive properties: colorless, yellow, brown, or red-brown; cleavage excellent in 1 direction

Pyroxene - Luster: NM Streak: white to pale gray Distinctive properties: dark green to brown or black; forms short 8 sided prisms; two good cleavage that intersect at nearly right angles

Quartz - Luster: NM greasy Streak: too hard Distinctive properties: usually colorless, white, or gray, but can occur in all colors; no cleavage

NM - nonmetallic

Minerals - Physical Properties

Crystal habit, cleavage and fracture, density, color, streak, lustre, hardness, other properties (magnetism, acid reaction, taste)

Cleavage: how a mineral brealks along planes.

Fracture: breakage without a definite shape.

Terms: conchoidal, uneven, hackly, splintery, crumbly, smooth.)

Streak: color of powdered mineral streak on unglazed porcelain.

Lustre: how a mineral reflects and penetrates light. Hardness: measure of a mineral's resistance to abrasion (strength of bonds)

Mineral Groups

Silicates

98% of crust volume by weight; 75% of earth's mass.

Examples: Quartz, feldspar, mica, amphibole, pyroxene, olivine, clay minerals

Rock-forming minerals

Felsic minerals (**fel** = feldspar + **sic** = silica) eg, Quartz, feldspar, mica

Mafic minerals (**ma** = magnesium + **fic** = iron) eg, Pyroxene

Felsic - describing light colored minerals like feldspar, quartz, and muscovite.

Mafic - describing dark colored, ferromagnesian minerals like olivine and pyroxene

What are Minerals?

Natural, inorganic, crystalline solid

Specific internal structure, chemical composition

Composed of a geometric pattern of atoms chemically bonded into a ***crystalline structure***

Crystalline structure - description of the ordered arrangement of atoms, ions or molecules in a crystalline material.