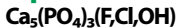




# Minerals

## Apatite



### Crystallography:

Hexagonal;  $6/m$ . Commonly occurs in crystals of long prismatic habit; also in massive to compact masses.

### Physical Properties:

**Cleavage:** {0001} poor. Fracture conchoidal to uneven; brittle.

**Hardness:** 5.0.

**Specific Gravity:** 3.15-3.20.

**Luster:** Vitreous to subresinous.

**Color:** Green, blue, violet, brown, colorless. Translucent to transparent.

**Streak:** White.

### Composition/Features:

Fluorapatite is the most common form, with chlorapatite and hydroxylapatite additional variants. F, Cl, and OH can substitute for each other, forming a complete series. A massive, cryptocrystalline form of apatite called collophane often constitutes the bulk of phosphate rock and fossil bone material. Collophane is often impure, containing small amounts of calcium carbonate. Apatite is usually recognized by its crystals, color, and hardness.

### Occurrence/Use:

Widely distributed as an accessory mineral in all classes of rocks. Common source of phosphates for fertilizers; transparent varieties occasionally used for gemstones.