Minerals

Hematite

Fe_2O

Crystallography:

Hexagonal -R; $\bar{3}2/m$. Crystals thick to thin tabular on {0001}; more rarely rhombohedral. Also micaceous to platy, botryoidal to reniform, and commonly earthy.

Physical Properties:

Cleavage: None. Parting on {1011} with nearly cubic angles and also on {0011}. Uneven fracture.

Hardness: 5.5-6.5.

Specific Gravity: 5.26 for crystals.

Luster: Metallic in crystals; submetallic to dull in earthy varieties.

Color: Steel-gray to black, reddish-brown when earthy. Opaque.

Streak: Red or red-brown.

Composition/Features:

A common iron-oxide mineral distinguished chiefly by its characteristic red streak. Infusible. Slowly soluble in HCl.

Occurrence/Use:

Hematite is the most important and widely used source minerals for iron. Among varieties are: *red ochre*, a red earthy form; *specularite*, a platy, metallic variety; and *kidney ore*, a variety displaying botryoidal to reniform shapes with radiating structure. The huge commercial deposits of hematite are mainly of sedimentary origin. Principle ore of iron for steel manufacture; also used in pigments.