Essay on hematite

Law, Evidence

The chemical formula for hematite is Fe2O3 and its molecular weight is 159. 69 grams. The Iron percentage in hematite is 69. 94% and oxygen content accounts for 30. 06%. The empirical formula for hematite is Fe3+2O3. Its availability is restricted to sedimentary, metamorphic, hydrothermal and magmatic rock species.

Image from www. webmineral. com

It exhibits trigonal, hexagonal scalenohedral crystal system. Hematite exhibits no cleavage and it exists in black, reddish gray and blackish red colors. The density of this mineral is 5. 3 and it exhibit opaque to subtranslucent diaphaneity. The fractures are formed in these minerals which are designated by smoothing curves and hence it is termed as conchoidal fracture. It has blocky and earthy habit because it shows equant crystal shape and dull with invisible affinities. The hardness of hematite is 6. 5 and its exhibit non fluorescent luminescence with a metallic luster. It offers reddish brown luster. The dichroism observed are in brownish red and yellowish red. It exhibits magnetism after heating. It has limited economic value since its usability is restricted to as a component of manufacturing steel and its color as the essential pigment. It can be utilized as polishing powder for other minerals and metal counter parts. Gems can be obtained when these black crystals are finely cut. The close associated minerals of hematite are Maghemite and Goethite. The polymorph of the hematite is considered as Goethite and the if hematite occurs in dimorphic state, and then it is considered as Maghemite. The varities of hematite includes martite and kidney ore along with specularite and iron rose. This mineral is antiferromagnetic material and the Morin transition is observed at 250 K.

References

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