

Carbonate Class

These chemically diverse minerals are treated together because they contain an anion complex, which can be recognized as strongly bonded units in their structures. The bond strengths within such anionic complexes are always stronger than those between the anionic complex and other ions of structure.

Carbonate: The carbonates include some very common and widespread minerals. The fundamental anionic unit is $(\text{CO}_3)^{-2}$, which is a planar group with C at the center of an equilateral triangle of three O atoms.

Carbonate, Nitrate, and Borates Class	
Name	Chemical Composition
Calcite	CaCO_3
Magnesite	MgCO_3
Siderite	FeCO_3
Rhodochrosite	MnCO_3
Dolomite	$\text{CaMg}(\text{CO}_3)_2$
Aragonite	CaCO_3
Witherite	BaCO_3
Malachite	$\text{Cu}_2 (\text{CO}_3)(\text{OH})_2$
Azurite	$\text{Cu}_3 (\text{CO}_3)_2(\text{OH})_2$
Soda-Niter	NaNO_3
Borax	$\text{Na}_2\text{B}_4\text{O}_7(\text{OH})_4 \cdot 8\text{H}_2\text{O}$

Sulphate Class

The halide mineral class include those minerals with a dominant halide anion (F^- , Cl^- , Br^- and I^-). Complex halide minerals may also have polyatomic anions in addition to or that include halides

Halides Class	
Name	Chemical Composition
Halite	NaCl
Sylvite	KCl
Flourite	CaF ₂