

These are just a few names of compounds, what color they are, their special characteristics (if any), etc.

You'll find this information useful in **Acids, Bases, and Salts; Analytical Chemistry; and in the differentiate between two salt/acids/compounds questions.**

-->  $\text{PbCl}_2$  - white chalky ppt; insoluble in cold water, soluble in hot water.

-->  $\text{AgCl}$  - white curdy ppt; insoluble in hot and cold water

-->  $\text{ZnO/PbO}$  - yellow when hot, white when cold

-->  $\text{BaSO}_4$  - white ppt; insoluble in all dilute mineral acids

-->  $\text{PbSO}_4$  - white ppt; insoluble on heating (or when hot)

-->  $\text{Zn(NO}_3)_2$  - white

-->  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$  - blue

-->  $\text{CuSO}_4$  (after losing water of crystallization) - white amorphous

-->  $\text{CuCO}_3$  - green

-->  $\text{Cu}$  - reddish/pink deposit

-->  $\text{CuO}$  - black

-->  $\text{MnO}_2$  - black

-->  $\text{FeCl}_3$  - reddish brown; **NOTE: Name a reddish brown deliquescent salt (always  $\text{FeCl}_3$ )**

-->  $\text{FeSO}_4$  - dirty green

-->  $\text{KMnO}_4$  - purple/violet

-->  $\text{K}_2\text{Cr}_2\text{O}_7$  - orange

#### List of Gases:

-->  $\text{I}_2$  - violet

-->  $\text{Br}_2$  - reddish/brownish gas

-->  $\text{NO}_2$  - reddish brown gas

-->  $\text{Cl}_2$  - greenish yellow gas; **NOTE: NOT yellowish green**

-->  $\text{SO}_2$  - burning sulphur smell

-->  $\text{NH}_3$  - green flame when burnt in oxygen

-->  $\text{NH}_3$ ,  $\text{HCl}$ ,  $\text{CO}_2$ ,  $\text{SO}_2$  - colorless gas with pungent odor

-->  $\text{HNO}_3$  (pure) - colorless

-->  $\text{HNO}_3$  (in sunlight) - yellow

#### List of Colored Ions:

--> Cupric  $\text{Cu}^{2+}$  - Blue

--> Chromium  $\text{Cr}^{3+}$  - Dark green

--> Nickel  $\text{Ni}^{2+}$  - Green

--> Ferrous  $\text{Fe}^{2+}$  - Light green

--> Ferric  $\text{Fe}^{3+}$  - Brown

--> Manganese  $\text{Mn}^{2+}$  - Light pink

--> Cobalt  $\text{Co}^{2+}$  - Pinkish violet

--> Permanganate  $\text{MnO}_4^-$  - Pink

--> Chromate  $\text{CrO}_4^{2-}$  - Yellow

--> Dichromate  $\text{Cr}_2\text{O}_7^{2-}$  - Orangish yellow

**NOTE: All salts of Na, K,  $\text{NH}_4$  are white**