**Solubility of Salts**

Salts are generally ionic compounds containing a metal joined to a non-metal ion. Some salts are soluble in water, others are insoluble.

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| **Soluble salts** | **Insoluble salts** |
| All Sodium , Potassium, Ammonium salts  All Nitrates **(SPAN)** | Most Carbonates  *(except SPA)* |
| Most Chlorides  *(except silver and lead)* | Most hydroxides  *(except SPA, calcium is slightly soluble)* |
| Most Sulfates  *(except barium, calcium and lead)* |  |

1. *Classify the following as soluble or insoluble*

K2CO3 BaSO4



LiCl AgOH



PbSO4 Mg(NO3)2



Na2SO4 NH4Cl



1. *Add state symbols to the following equations in the presence of water*



NaOH + HCl 🡪 NaCl + H2O



K2SO4 + Ba(NO3)2 🡪 BaSO4 + 2KCl



2AgNO3 + CaCl2 🡪 2AgCl + Ca(NO3)2

