

1. What does it mean when a compound is to have low solubility?

2. Determine whether $\text{FeCO}_{3(s)}$ is soluble or has low solubility

3. Will a precipitate form when 0.2M solutions of CaS and Na_2SO_4 are mixed?

Write out the reactions:

4. Determine the solubility of the following ionic compounds (soluble or low solubility)

1) AgCl		2) FeS		3) $\text{Al}_2(\text{CO}_3)_3$		4) Na_3PO_4		5) CuCl_2	
6) NaOH		7) FeSO_4		8) $\text{Fe}(\text{NO}_3)_3$		9) CuI		10) PbBr_2	

5. Determine whether the following mixtures will form a precipitate when mixed and give the formula of any precipitate formed.

Reacting Species	Precipitate?	Formula of the precipitate
a) AgNO_3 and NH_4Br		
b) SrBr_2 and NaNO_3		
c) KOH and AlCl_3		
d) NaI and $\text{Pb}(\text{NO}_3)_2$		
e) BaS and Na_2SO_4		
f) CaS and NH_4Cl		

6. You wish to make the following PbCl_2 as your precipitate. Give the complete chemical formulae of the reacting species (soluble salts) you need to form the precipitate.