

## Worksheet 3.5

### Qualitative Analysis

**Separation Positive Ions:** *Work from top to bottom of solubility chart!!*

1.  $\text{Ag}^+$   $\text{Mg}^{2+}$   $\text{Ba}^{2+}$

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

iii) Add: Filter Out: Net Ionic equation:

2.  $\text{Pb}^{2+}$   $\text{Ba}^{2+}$   $\text{Sr}^{2+}$

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

iii) Add: Filter Out: Net Ionic equation:

3.  $\text{Cu}^+$   $\text{Ca}^{2+}$   $\text{Sr}^{2+}$

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

iii) Add: Filter Out: Net Ionic equation:

4.  $\text{Be}^{2+}$   $\text{Sr}^{2+}$   $\text{Ag}^+$

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

iii) Add: Filter Out: Net Ionic equation:

5.  $\text{Be}^{2+}$   $\text{Ca}^{2+}$   $\text{Pb}^{2+}$

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

iii) Add: Filter Out: Net Ionic equation:

6. Calculate the  $K_{sp}$  for  $\text{CaCl}_2$ , if 50.0 g is required to saturate 25.0 mL of water.

**Separation Negative Ions: *Work from top to bottom of solubility chart!!***

1.  $\text{SO}_3^{2-}$   $\text{OH}^-$   $\text{I}^-$

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

iii) Add: Filter Out: Net Ionic equation:

2.  $\text{CO}_3^{2-}$   $\text{OH}^-$

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

3.  $\text{Br}^-$   $\text{S}^{2-}$   $\text{PO}_4^{3-}$

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

iii) Add: Filter Out: Net Ionic equation:

4.  $\text{PO}_4^{3-}$   $\text{OH}^-$   $\text{S}^{2-}$

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

iii) Add: Filter Out: Net Ionic equation:

5.  $\text{OH}^-$   $\text{S}^{2-}$   $\text{SO}_4^{2-}$

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

iii) Add: Filter Out: Net Ionic equation:

6.  $\text{S}^{2-}$   $\text{SO}_4^{2-}$   $\text{Cl}^-$

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

iii) Add: Filter Out: Net Ionic equation: