ELECTROLYTES:

What are they?

Three types of electrolytes:

Non-electrolytes

Molecular compounds

Do NOT form ions in water

Weak electrolytes

Weak acids

Insoluble salts (based on solubility rules)

Form very VERY few ions in water

Strong electrolytes:

Strong acids

Soluble salts (based on solubility rules)

Completely break apart into ions when put in water

Called ***ionization*** when talking about acids

Called ***disassociation*** when talking about salts

SOLUBILITY RULE PRACTICE/ELECTROLYTE PRACTICE

$Na_2C_2O_4$ + $CaCl_2$ → 2 NaCl + CaC_2O_4

3 H_2SO_4 + 2 $Fe(OH)_3$ → $Fe_2(SO_4)_3$ + 6 H_2O

2 LiCl + $Hg_2(C_2H_3O_2)_2$ → 2 $LiC_2H_3O_2$ + Hg_2Cl_2

2 HF + $Ba(OH)_2$ → BaF_2 + 2 H_2O

K_2CO_3 + 2 $HClO_4$ → 2 $KClO_4$ + H_2O + CO_2

2 $NaNO_3$ + $Mg(ClO_3)_2$ → 2 $NaClO_3$ + $Mg(NO_3)_2$

NET IONIC EQUATIONS:

1) Start with a balanced chemical equation (including all states of matter)

$Cr_2(SO_4)_3$ + Cs_3PO_4 → $CrPO_4$ + Cs_2SO_4

Break ALL strong electrolytes into ions. Leave non-electrolytes and weak electrolytes alone!

Cross out everything that is EXACTLY the same on both sides of the equation.

2) Start with a balanced chemical equation (including all states of matter)

$HClO_4$ + $Zn(C_2H_3O_2)_2$ → $HC_2H_3O_2$ + $Zn(ClO_4)_2$

Break ALL strong electrolytes into ions. Leave non-electrolytes and weak electrolytes alone!

Cross out everything that is EXACTLY the same on both sides of the equation.

3) M.E. $Na_2C_2O_4$ + $CaCl_2$ → NaCl + CaC_2O_4

I.E.

N.I.E.

4) M.E. HF + $Ba(OH)_2$ → BaF_2 + H_2O

I.E.

N.I.E.

3) M.E. $Fe_2(SO_4)_3$ + $PbCl_2$ → $FeCl_3$ + $PbSO_4$

I.E.

N.I.E.

4) M.E. $NaNO_3$ + LiCl → NaCl + $LiNO_3$

I.E.

N.I.E.

5) M.E. $HC_2H_3O_2$ + $Ba(OH)_2$ → $Ba(C_2H_3O_2)_2$ + H_2O

I.E.

N.I.E.

6) M.E. H_2SO_4 + NaOH → Na_2SO_4 + H_2O

I.E.

N.I.E.