

Quiz for Video 5 – Net Ionic Reactions

- In a precipitation/double displacement reaction, what is forming?
 - A soluble cation
 - An insoluble ionic compound
 - A high amount of energy
 - Gaseous Molecules
- Which of the following compounds is the most soluble? (and follows our general solubility rules)
 - KCl
 - PbCl₂
 - MgSO₄
 - ZnO
- Which of the following compounds is most likely to be insoluble? (and does not follow our general solubility rules)
 - NaOH
 - NH₄F
 - Zn(C₂H₃O₂)₂
 - Fe(OH)₂
- The following chemical reaction should be classified as what type of reaction?
 $\text{HBr} + \text{H}_2\text{O} \rightarrow \text{H}_3\text{O}^+ + \text{Br}^-$
 - Acid/Base
 - Redox
 - Double Displacement
 - Single Displacement
- Redox (oxidation/reduction) reactions involve the transfer of what?
 - Electrons (e⁻)
 - protons (H⁺)
 - Positrons (e⁺)
 - Water (H₂O)
- For the following reaction showing the combustion of methane, how many moles of water (H₂O) are formed from the combustion of 2.4 moles of methane (CH₄)?
 $\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$
 - 1.2 moles
 - 2 moles
 - 2.4 moles
 - 4.8 moles
- Predict the product(s) of the following reaction: $\text{NaOH(aq)} + \text{FeCl}_2\text{(aq)} \rightarrow$
 - Fe(OH)₂(s) and NaCl(aq)
 - Fe(OH)₂(aq) and NaCl(s)
 - NaCl(aq) only
 - H₂O(l) only
- What is the role of Na⁺ in the net ionic reaction:
 $2\text{AgNO}_3 + \text{Na}_2\text{CrO}_4 \rightarrow \text{Ag}_2\text{CrO}_4 + 2\text{NaNO}_3$
 - Precipitate
 - Reactant
 - Product
 - Spectator Ion
- Why are spectator ions often left out of a reaction?
 - Because they are irrelevant
 - Because they are not changing chemically
 - Because they are massless
 - Because they are chargeless
- If we know that 3 moles of iron (Fe) are consumed in the following reaction, how many moles of hydroxide (OH⁻) should be consumed? $\text{Fe}^{2+} + 2\text{OH}^- \rightarrow \text{Fe(OH)}_2\text{(s)}$
 - 1.5 moles
 - 2 moles
 - 3 moles
 - 6 moles