

WKS-Predicting Products: Single Replacement (Displacement) Reactions

Directions: For each of the reactions below, write balanced molecular and net ionic equations. Show phases of all substances. Then, based on the activity series or Standard Reduction Potential chart, determine whether each reaction would actually occur. Briefly justify your answer.

1. **A solid piece of copper is dropped into a container of water.**

Molecular eq:

Net Ionic eq:

Does the reaction occur? _____ Justify

2. **Liquid bromine is added to a container of sodium iodide crystals.**

Molecular eq:

Net Ionic eq:

Does the reaction occur? _____ Justify

3. **An aluminum strip is immersed in an aqueous solution of silver nitrate.**

Molecular eq:

Net Ionic eq:

Does the reaction occur? _____ Justify

4. **Zinc pellets are added to a sulfuric acid solution.**

Molecular eq:

Net Ionic eq:

Does the reaction occur? _____ Justify

5. **Fluorine gas is bubbled into a solution of aluminum chloride.**

Molecular eq:

Net Ionic eq:

Does the reaction occur? _____ Justify

6. **Magnesium turnings are added to an aqueous solution of lead(II) acetate.**

Molecular eq:

Net Ionic eq:

Does the reaction occur? _____ Justify

7. **Iodine crystals are added to an aqueous solution of sodium chloride.**

Molecular eq:

Net Ionic eq:

Does the reaction occur? _____ Justify

8. **Calcium metal is added to an aqueous solution of nitrous acid.**

Molecular eq:

Net Ionic eq:

Does the reaction occur? _____ Justify

9. **A pea-sized piece of lithium metal is added to water.**

Molecular eq:

Net Ionic eq:

Does the reaction occur? _____ Justify

10. **A solution of iron(III)chloride is poured over a piece of platinum wire.**

Molecular eq:

Net Ionic eq:

Does the reaction occur? _____ Justify.

(Needed info: Here are the needed reduction potentials that are not on your charts.)

