

## Chemical Dropouts!

A **precipitation** reaction is a reaction in which two solutions are mixed to produce an insoluble solid called a precipitate.

### Materials

White spotting plates and dropper bottles containing 0.1 M solutions of sodium hydroxide, silver nitrate, copper sulfate, potassium iodide, mercury nitrate, sodium chloride.

Filter paper, 1 x filter funnel, 1 x retort ring and 2 x small beakers

**Teacher:** Give directions in the handling & disposal of chemicals according to your risk assessment. Inform or check with students what the precipitate is for each reaction.

**Students:**

1. Complete the precipitation reactions
2. Mix the chemicals and record the (color/colour) of the precipitate.
3. Filter **one** of the precipitates and draw a diagram of the equipment used. Dilute the mixture with water first. Label the residue(solid) and the filtrate(liquid).

**Precipitation Reactions** (s) = solid precipitate

**Hint:** Change of partners, metals are named first in each compound.

1. Sodium hydroxide + silver nitrate → sodium nitrate + \_\_\_\_\_

2. Sodium hydroxide + copper sulfate → \_\_\_\_\_ + \_\_\_\_\_

3. Potassium iodide + lead nitrate → \_\_\_\_\_ + \_\_\_\_\_

4. Potassium iodide + mercury nitrate → \_\_\_\_\_ + \_\_\_\_\_

5. Potassium iodide + silver nitrate → \_\_\_\_\_ + \_\_\_\_\_

6. Sodium chloride + silver nitrate → \_\_\_\_\_ + \_\_\_\_\_

## Chemical Dropouts! - ANSWERS

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**Precipitation Reactions** (s) = solid precipitate

**Hint:** Change of partners, metals are named first in each compound.

1. Sodium hydroxide + silver nitrate → sodium nitrate + silver hydroxide(s)  
*brown*
2. Sodium hydroxide + copper sulfate → sodium sulfate + copper hydroxide(s)  
*blue*
3. Potassium iodide + lead nitrate → lead iodide(s) + potassium nitrate  
*yellow*
4. Potassium iodide + mercury nitrate → potassium nitrate + mercury iodide  
*orange*
5. Potassium iodide + silver nitrate → silver iodide + potassium nitrate  
*yellow white*
6. Sodium chloride + silver nitrate → sodium nitrate + silver chloride  
*white*