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3. Water was added to remove any underacted copper(II) sulfate, iron, and iron(II) sulfate. The solution was washed to isolate the copper.

4. The water added didn't matter if the measurement w for water was exact because it wasn't included in the reaction. Water was only used to wash the copper and help facilitate the reaction.

5. $Fe+CuCO_4->Cu+FeSO_4$ The formula for the iron-containing compound was $FeSO_4$. The observations support this as the color of the copper(II) sulfate solution got darker, so it is iron(II) that was used. So, it would be $Fe^{2+}+SO_4^{2-}->FeSO_4$, making the formula $FeSO_4$.

6. 95.2% Yield 119.42g-117.25g=2.17g (2.17/2.28)*100=95.2%

Conclusion:

The purpose of this lab was to practice identifying and calculating limiting reactants. We did this by combining copper(II) sulfate with iron filings and weighing the mass of the empty beaker, beaker with copper, and both reactants to use the mass to calculate the theoretical yield, actual yield, and percent yield. Through achieving this purpose, we were able to determine the limiting reactant and percent yield using the mass, and used observations to determine the charge of the iron used, when the reaction was complete, and what

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