

Name
Date

Period

Grade:

EXPERIMENT 30

MASS-MASS RELATIONSHIPS IN REACTIONS

PRELAB QUESTIONS:

1. Give a brief description of a double replacement reaction. What must one of the products be?
2. What is another name for a double replacement reaction?
3. Define filtrate, precipitate.

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Lab Partners

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DATA TABLE:

(a) Mass of empty 250 mL beaker	g
(b) Mass of 250 mL beaker + $\text{Zn}(\text{C}_2\text{H}_3\text{O}_2)_2 \cdot 2\text{H}_2\text{O}$	g
(c) Mass of $\text{Zn}(\text{C}_2\text{H}_3\text{O}_2)_2 \cdot 2\text{H}_2\text{O}$	g
(d) Mass of filter paper	g
(e) Mass of filter paper + precipitate	g
(f) Mass of precipitate	g

(g) Observations:

CALCULATIONS:

- Write a balanced equation for the double replacement reaction. (The precipitate formed is Zinc Phosphate Hydrate. Its formula is $\text{Zn}(\text{PO}_4)_2 \cdot 4\text{H}_2\text{O}$).
- Using mass-mass calculations, find the theoretical mass of the $\text{Zn}(\text{PO}_4)_2 \cdot 4\text{H}_2\text{O}$ precipitate that should be produced when 2.19 g of $\text{Zn}(\text{C}_2\text{H}_3\text{O}_2)_2 \cdot 2\text{H}_2\text{O}$ are completely reacted.

g
- Find the experimental mass of Zinc Phosphate hydrate formed (c) - (b) g
- Calculate your percent error.
- What are some sources of error in this experiment?

Discussion

Conclusion