Actual Yield Lab

Problems:

1. How can you accurately measure out the mass of a scoop of an ionic compound?
2. How can you dissolve that scoop into 50 ml of water?
3. How can you use the mass and volume of water used to calculate the molarity of your solution?
4. How can you repeat problems 1 – 3 using 3 other ionic compounds?
5. Using the solutions you made, which of the reactions below will produce the most precipitate:

K2CO3 + CaCl2🡪 CaCO3 + KCl

OR

K2CO3 + Ba(OH)2🡪 KOH + BaCO3

Material: compounds from the ion exchanges, filter paper, scale, funnel beakers, graduated cylinder.

Data:

|  |  |  |  |
| --- | --- | --- | --- |
|  | Mass of 1 scoop | Volume | Molarity |
| K2CO3 |  | 50 |  |
| CaCl2 |  | 50 |  |
| K2CO3 |  | 50 |  |
| Ba(OH)2 |  | 50 |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | TY of precipitate | Mass of filter paper | Mass of filter paper + precip | AY of precipitate |
| K2CO3 + CaCl2 |  |  |  |  |
| K2CO3 + Ba (OH)2 |  |  |  |  |

Conclusion: from notes.