Calcium carbonate essay

Taki Simadiris pl Brierly Post-lab a. If you did not wash all of the Calcium Carbonate out of the beaker and Into the filter during step 5, would your percent yield be larger or smaller? If you do not wash all of the Calcium Carbonate out, then the percent yield would be smaller because there is enough calcium carbonate left in the beaker that would have attributed to the final yield.

b. If you used tap water instead of Dl water what do you think would happen? Why?

If you used tap water, the coffee filter would have weighed more after he calcium carbonate went through because tap water has other chemicals and minerals inside it that could have been filtered out through the coffee filter along with calcium carbonate. c. If you did not allow the Calcium Carbonate and filter to dry out completely over night would you expect the percent yield to be larger or smaller? Explain.

If you dldnt let the filter to dry out completely, you would expect a higher percent yield because now you are measuring the weight of the water, not Just the calcium carbonate In the filter, which would lead to Inaccurate lab results. Write a paragraph explaining your results. All three of your trials used the same total amount of reactants. Which combination of reactants produced the most product? Was this as you predicted.

Explain why this ratio produced more. If your Percent Yield was lower or higher than expected (i. e. 100%) explain where yield was lost or miscounted. In trial one, the mass of the empty coffee filter was 1.

77g. After the calcium carbonate was filtered through, the mass was 2. 13g, so the calcium carbonate weighed . 36g.

The toichiometry that we performed said that the predicted mass of calcium carbonate was . 51 g, so the percent yield is 71%.

For trial two, the mass of the empty filter was 1. 84g. Along with the calcium carbonate, the filter weighed 2. 00g, which tells us that there Is . 16g of calcium carbonate, and our predictions state that we should have ended up .

34g, having a percent yield of 47%. Trial three, the filter weighed at 1. 82g and after the filtration It weighed 2. 1 5g.

We scaled out . 33g of calcium carbonate as compared to our predicted stoichiometry, . 40g, which the yield resulted at 83%.

The combinations of reactants that produced the most product were . 75g of calcium chloride and sodium carbonate, according to the stoichiometry, that was what i predicted.

None of these trials show that our experimental mass was the same as our predicted mass. Each trial that was performed had a percent yield not even above 100%, which leads for me to believe we definitely made a mistake during our procedure, such as writing down wrong information or not calibrating out the balance/scale. Those seem to be the only explanation for why the ratios were miscounted.