

Gravimetric Analysis of Calcium

Procedure

See Harris's instructions!

Notes on Constant Weight:

Obtaining constant weight is more likely if you heat and weigh the crucibles the same way every time. Remember, you must also get constant weight after the preparation of the of unknown. So you need to prepare the unknown for this experiment at least one week before it is due. Timing is everything!

Notes on Precipitation procedure:

Make only enough of each solution for your individual use. Instructions are for a liter of solution. **YOU DON'T NEED THAT MUCH!!!**

Your unknown is impure calcium carbonate, so use the high end of the range given or slightly more for your experiment.

Warnings about dissolving calcium carbonate: Use concentrated HCl. Do not add water until the powder appears completely dissolved. It is possible that your solution may not be perfectly clear or colorless...it depends on the contaminants present. It is likely that your sample will continue to evolve carbon dioxide gas even after it appears dissolved. To avoid anyone getting sprayed with acid:

Do not point your volumetric flask at anyone.

Remember that adding water to acid is highly exothermic and can be dangerous. Be **VERY** careful.

Uncap the flask frequently as during the mixing/dilution process to allow CO₂ to escape.

Do not leave flask capped for an extended period of time. You can cover it with parafilm if you need to leave it overnight.