

Titration: Neutralize an acid lake contamination

Informal Lab Report Instructions

General Lab Info: This lab delves into topics (specifically calculations) we have not covered yet, but that's okay! When you get to the part about doing the calculations, let the computer guide you rather than trying it all yourself. (It gives you that choice.) Be sure to write down all the calculations as they will need to be shown (in full detail) in your lab report.

Background Information: Please include definitions of:

- acid
- accurate titration
- alkali
- concordant titre
- dilution
- end-point
- indicator
- titration
- titre
- rough titration
- standard solution

Also, please briefly explain the purpose for doing this lab (cleaning up a lake contaminated by sulfuric acid due to a train accident), but do not go into extensive detail.

Equipment: There is a lot in this lab! Be thorough. Draw a sketch of the titration apparatus and label it. Explain what a burette is and what it's for. Explain what a volumetric flask is and what it is for.

Variables: For this lab, please skip the variables section.

Method: Remember, only the **numbered** steps go here! No data or analysis! You are permitted to write **ONLY** the steps concerning how to perform a titration. No need to include trips to the crash site or educational simulations, etc.

Data: Please include:

- The balanced equation for the reaction
- The table showing the start point, end point and titer for the rough titration and all accurate titrations (I think they are numbered 1-4)

- The graph showing the color change of the indicator you use (what is the range for the color change?)

Analysis: Please include:

- The calculations you perform to find the 'question marks'. All calculations MUST include units!
- What was the final concentration you determined for the contaminated lake water?

Conclusion:

- What are two sources of potential error in this lab? (Please don't tell me it's virtual and therefore there's no error. I already know that. We are *pretending* it's real, guys... use your imagination!)
- Given the situation, what are potential solutions for cleaning up the lake?
- Please skip the section on topics for further investigation.