

**Possible unknowns:** Carbonic acid, Citric acid, Formic acid, Hydrochloric acid, Oxalic acid, Phosphoric acid, Succinic acid **AND** any sodium salt of the above!

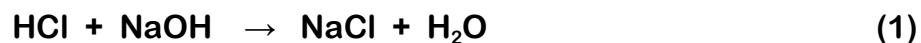
Your report should be a *maximum* of two pages of **text** and a **titration curve** (separate page). It must have a title containing your unknown number (although a separate title page is not necessary.)

Your **text** must meet the following standards: typed (word-processed), double-spaced (no extra space between paragraphs!), paragraph format, correct American standard grammar and spelling, consistently use past tense (since you finished the lab), refer to your titration curve as appropriate without imbedding it in your text. Equations must be on their own line and numbered. Fractions must show the zero before the decimal. Space between numbers and units. Formulas must use super- and subscripts as appropriate. Names of chemicals are not capitalized. You can find "±" under "insert -> symbol." Do not show sample calculations. Lab report format (of introduction, experimental, results) does not have to be used, in fact it generally works better if you do not. For an example of how to use Figures and equations, see [THIS](#).

Your **titration curve** must meet the following standards: computer-drawn, correctly labeled axes with appropriate units, meaningful title (does not repeat axes labels), tick labels with correct significant figures, visible data points, appropriate trend "line." Proportion size of graph and labels appropriately.

You will lose 1 point for each of these criteria which are not met.

An example of numbering you equation looks like this



when using this strong acid/strong base reaction as an example.

**In addition, your report must answer the following questions (although they do not have to be answered in this order) in such a way that the report reads smoothly. (3 pts per question.)**

**What is the identity of your unknown?**

**How did you determine the identity of the unknown? Use specific observations (color, numbers, etc.) to support your logic.**

**What is the titration reaction? If more than one, specify (in text) which reaction corresponds to the endpoint you used a color-changing indicator with.**

**What is the concentration of your unknown (appropriate significant figures and error)?**

**What standard titrant did you use to determine the concentration of analyte? What is its concentration (with appropriate significant figures and error)? How did you determine the concentration (i.e., what is the primary standard?)**

**How did you determine the endpoint of your titration? If an indicator was used, what was the indicator, how was it chosen and what was the color change that signaled the endpoint? Specify the color observed at the endpoint. If more than one endpoint, specify which was used. (If it was not an indicator, answer parallel question for whatever you used to determine your endpoint.)**