CHEM 370 Writing Tips

### Writing guidelines (based on common mistakes):

* Revise, revise, revise! No writing is ever perfect the first time through; write, read, and revise!
* Make your report thorough yet concise.
* Be specific.
  + *Bad:* Samples were ~~heated~~ in an oven overnight.
  + *Good:* Samples were placed in an **80°C oven for 8 hours**.
* Avoid unnecessary words and phrases.
  + *Bad:* ~~It has been reported that~~ air pollution 7 million deaths per year.
  + *Good:* Air pollution causes 7 million deaths per year [Ref 1].
* Avoid too many/uncommon abbreviations, and define abbreviations the first time used (with a few exceptions, below); abbreviations should be appropriate for your audience.
  + *Abbreviations that do not need to be defined:* Element names (Cu) and well-known units (m, ml, °C, K, etc.)
  + *Good abbreviations, when defined:* Instrumental techniques, certain chemicals that are more commonly/easily known by their abbreviation (e.g. 4-MP).
  + *Bad abbreviations:* Tylenol (T-ol), acetaminophen (AM)
* Use first-person active voice.
  + *Bad:* ~~A GC-MS was used to perform a scent analysis on garlic. Samples were prepared for analysis thusly: To a sample vial, 1 g of garlic was chopped and added.~~
  + *Good:* We analyzed the scent of garlic using GC-MS. We chopped 1 g of garlic and placed it in a sample vial for analysis.
* Use past tense for observations and methods.
  + *Bad:* Tylenol-brand tablets ~~contain~~ 5% less acetaminophen than advertised.
  + *Good:* Tylenol-brand tablets **contained** 5% less acetaminophen than advertised.
* Use present tense for accepted facts.
  + *Bad:* Tylenol ~~helped~~ relieve headaches.
  + *Good:* Tylenol **helps** relieve headaches.
* Avoid faulty or incomplete comparisons.
  + *Bad:* These ~~results~~ are similar to ~~previous studies~~.
  + *Good:* These **results** are similar to the **results of** previous studies
  + *Bad:* ~~Fractional distillation worked better.~~
  + *Good:* **Fractional distillation** worked better **than simple distillation**.
* Use the correct suffix: The suffixes *-graphy* or *-metry* typically indicate *techniques*; *-er* and *-ist* indicate *people*; *-ometer* and *-graph* typically *instruments*; and *-um* and *-am* indicate *data*.
  + *Bad:* ~~The~~ gas chromatography was used to analyze the samples.
  + *Good:* Gas chromatography was used to analyze the samples.
  + *Bad:* The ~~chromatograph~~ has two peaks.
  + *Good:* The **chromatogram** has two peaks.
* Use correct spelling, grammar, and punctuation. See *Elements of Styles* ([Strunk and White](http://www.gutenberg.org/ebooks/37134?msg=welcome_stranger)) for more detail.
* Species names and Latin words are written in italic (e.g. *Allium sativum*, *in-vivo*).

Examples adapted from: *Writing Papers in the Biological Sciences* by Angelika H. Hofmann. Oxford University Press 2016 (2nd ed.)