Research Project Reports. Due in electronic format.

The entire document should be submitted to me as a Microsoft Word file. If your report is too large to be submitted through the university system to my UMass address, then send to aramis01002@gmail.com, but send a message to tyson@chem.umass.edu to let me know.

The report is required in the form of an article for an analytical chemistry journal. To help with this, download the template from the Royal Society of Chemistry for a full paper and create your report so that it looks like an article (not a communication) in *The Journal of Environmental Monitoring* or *The Analyst* or any of the RSC journals (except *Faraday Discussions*). The only deviation from this format that I require is that you give the full title of the journal articles you cite in your list of references. You'll find the files (both MAC and PC) at:

http://www.rsc.org/Publishing/ReSourCe/AuthorGuidelines/ElectronicFiles/Templates/word.asp

The report should contain the following sections:

Title
Names and addresses of authors.
Date report was submitted.
Abstract
Introduction
Experimental
Results and Discussion
Conclusions
Acknowledgments (may not be needed)
References

The results and discussion section should include any tables and figures (including pictures) that are relevant. Each table should have a title (above it) and each figure should have a caption below it. You may want to include a figure in the experimental section if you include something that is best described by a picture.

Note that to put figures into the body of the text, you need to copy them into the last page of the template first. When the document is complete, remove as much extraneous material as you can before e-mailing to me. Save a copy for your records.

Some further help on what each of these sections contains is available elsewhere on the website. There are also some examples of previous reports available on the site.

Some points to note

Make sure you list all of the equipment and chemicals you used and put the description of all your experimental work into the appropriate subsections of the "experimental" section. Note that many published papers are badly organized and are not good models. The "results and discussion" section should not contain the first descriptions of experiments.

Note also the following:

The technique cannot be used as the instrument.
The overall procedure is the method. The instrument is the technique.
Analytes are determined, samples are analyzed.
There are two spaces after a period.
Place reference numbers at the earliest opportunity in the sentence.
One or two authors: give both names (just last names). More than two: first named plus "et al." Note there is a period after "al." as it is in abbreviation.
Don't start sentences with numbers or abbreviations or acronyms.
Don't use etc. Write out the list in full.
Don't use "used" or "using" very often. Find the action and make the sentence active. Use researchers names (and don't refer to them as authors).
Techniques have lower case letters (as do chemicals, unless they are trade names).
Refer to figures and tables by numbers in the text, and try to make a direct reference to them rather than just inserting a parenthetical reference.
There is a space between a number and its units (and between each unit)—except percent (%).

Citing internet sources—see next section.

Internet Sources.

Try to identify who the author is (indicate if this a "home page") or what organization is responsible, give the title of the article and the uniform resource locator (URL), together with the month, day and year accessed. For example:

Julian Tyson's arsenic project at UMass. http://courses.umass.edu/chemh01/ (accessed Aug 30, 2006).

Internet sources can be somewhat ephemeral and so it is important that you tell your readers what was the date that you obtained the information. Despite the temptation to do so, as the relevant material can be easily copied and pasted, do not give references to journal articles in the following way:

Katz, S. A.; Salem, H. Chemistry and toxicology of building timbers pressure-treated with chromated copper arsenate: a review. http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=15669035&query_hl=1&itool=pubmed_docsum (accessed Aug 30, 2006).

This does not tell the reader where to find the article. All the reader can do is retrace your search, which may not be that easy if he or she has to type that long url into the appropriate box on the computer screen

Do not use this format:

Katz, S. A.; Salem, H. Chemistry and toxicology of building timbers pressure-treated with chromated copper arsenate: a review. http://www3.interscience.wiley.com/cgi-bin/abstract/109875414/ABSTRACT (accessed Aug 30, 2006).

This does not tell the reader where to find the article either. Although the url is shorter, you are still asking the reader to follow your search path,

The format that is acceptable is the one that allows the reader to find the article from a knowledge of the details of the journal in which the article is published.

Katz, S. A.; Salem, H. Chemistry and toxicology of building timbers pressure-treated with chromated copper arsenate: a review. *J. Appl. Toxicol.* 2005, **25**, 1-7.

Notice that giving the journal title conveys much more information than the bare bones format.

Katz, S. A.; Salem, H. J. *Appl. Toxicol.* 2005, **25**, 1-7.

Instructions are also posted on the Arsenic Project Website. Go to http://courses.umass.edu/chemh01/ and scroll down to the links to "guidelines for grading" and "more guide-lines". These links will take you to the material copied above. You may have to look for this material at the page for a previous semester.