

CHEM 490 Special Topics in Environmental Chemistry

Guidelines for Individual Paper

Spring 2010

Individual paper: Your paper must be approximately 5 pages in length, and is due (electronic submission is preferred) at midnight on May 11, 2010 (your exam date).

Please follow the following format when writing your paper

Title page: Your title should be clear, concise, and descriptive; avoid wasted words (100 characters max)! The title should be in the following format: <Title>, <your name>, Bridgewater State College, Bridgewater, MA 02325

Background or Introduction. This is probably the longest part of your paper. Give a detailed background information about the (1) analyte(s) and (2) the instrumental method used to test for it.

Analyte: (~ ½ page)

- ✚ Describe its properties and any safety hazard that the analyst should be familiar with when testing for it. Cite your source within the text.
- ✚ Discuss why it is important to test for this analyte(s).

Instrumental Method (~ 1 page; This is usually associated with an EPA Method #)

- Cite your source within the text

- ✚ Scope and application - This info is usually provided within the EPA Method
- ✚ Summary of method - This info is usually provided within the EPA Method
- ✚ Major components of the instrument and their function - you need to research on this
 - You may use a picture, but use arrows and label each major component, then describe the function of each component - CHEM450 alumni, you know how to do this; all the rest, come see me if you need help
 - Alternatively, you may use block diagrams, label each major component, then describe the function of each component

Sample collection and preservation: (~ ½ page) If applicable, briefly discuss in no more than 150 words the procedure for collecting samples and any sample preservation prior to instrumental analysis.

Procedure: Summarize the procedure followed to test for your analyte(s). This must be in paragraph form, just like every section of your paper. This should not go over one page. Indicate the detection limit (LOD) of the method. Again, cite your source within the text.

Sample data: Copy and paste sample data, such as a chromatogram or spectrum of your analyte, as well as tabulated numeric data from real samples. An example would be sample ID and absorbance data. Again, you must cite your source of data and information.

Discussion of results: (~ ½ page) Discuss the data presented in the previous section. Keep in mind the goal of the analysis when discussing results (from sample data).

References: Please follow the Journal of Chemical Education style of citing references. We have old copies of this journal in the department office inside the big glass cabinet.