1. **Read** pages 15-20 in your lab manual. You do not need to answer any pre-lab questions.
2. Prepare all entries in your notebook through data tables (1-5a) as directed in the syllabus and your lab manual. Follow all guidelines given in the writing handout and syllabus. **Remember to customize your procedure for your assigned solutions and temperature from the tables below and write your group number in the header.**
3. Include any hazards for H2O2, AgNO3 and K2CrO4 at the beginning of your experiment outline.
4. **COMPLETE the following calculations, put the results in the appropriate table and include one example of each in the calculation section of your notebook:**
   1. initial concentration of I− **for** **both assigned solutions**
   2. initial moles of H2O2 assuming 3.00% wt/vol stock solution **for** **both assigned solutions**
   3. initial concentration of H2O2 **for** **both assigned solutions**
   4. *In class you will be creating a spreadsheet to do the calculations for Table 2. We will assume that the vapor pressure of water has no effect and that the temperature of the O2 collected is the same as room temperature.* Prior to lab for solution 1, assuming that the temperature in the lab is 23 °C, the barometric pressure is 754 mm Hg and that exactly 2.00 mL of O2 are collected for the second row calculate:
      1. moles of O2 collected
      2. moles of H2O2 remaining
      3. new concentration of H2O2

*You may want to set-up a spreadsheet in advance for in lab calculations.*

5. We will be using computers to graph results during lab. You may use a computer from the cart or you may bring your own laptop computer to use if you wish.

**Table 1.** Reagent amounts for solutions 1-3.

|  |  |  |  |
| --- | --- | --- | --- |
| solution **#** | 1 | 2 | 3 |
| 0.1 M KI (mL) | 10.0 | 10.0 | 20.0 |
| di H2O (mL) | 15.0 | 10.0 | 5.0 |
| 3% H2O2 (mL) | 5.0 | 10.0 | 5.0 |

**Table 2.** Assignments section 002 Th am.

|  |  |  |  |
| --- | --- | --- | --- |
| group/bin # | who? | solutions | second temperature (°C) |
| 1 |  | 1 & 2 | 35-40 |
| 2 |  | 1 & 3 | 10-16 |
| 3 |  | 1 & 2 | 45-50 |
| 4 |  | 1 & 3 | 55-60 |
| 5 |  | 1 & 2 | 10-16 |
| 6 |  | 1 & 3 | 45-50 |
| 7 |  | 1 & 2 | 55-60 |

**Table 3.** Assignments section 003 Th pm.

|  |  |  |  |
| --- | --- | --- | --- |
| group/bin # | who? | solutions | second temperature (°C) |
| 1 |  | 1 & 2 | 35-40 |
| 2 |  | 1 & 3 | 10-16 |
| 3 |  | 1 & 3 | 45-50 |
| 4 |  | 1 & 2 | 55-60 |
| 5 |  | 1 & 3 | 35-40 |
| 6 |  | 1 & 2 | 10-16 |
| 7 |  | 1 & 2 | 45-50 |
| 8 |  | 1 & 3 | 55-60 |