Speeding Things Up at the Campground

Lab Prep Instructions

***GENERAL INFORMATION***

Experiment Day/Date:

Instructions: Write any calculations in the space provided, and check with the lab instructor if you have any questions. Check off each item as you prepare it.

Quantity: Amounts indicated are for 1 lab section of 16 students working in pairs (amounts have been over-estimated to guarantee extra is available). Prepare enough for **2** section of CH-106.

***SOLUTIONS***

□ 500 mL of 0.10 M KI (potassium iodide)

 -include two 10 mL pipettes, 30 mL beakers & green pumps for student dispensing when setting up

-divide evenly between two **dark**, sealed, bottles with labels

**- please round volume of 0.10 M KI needed to match the nearest volumetric flask volume** available (i.e. to the nearest 500mL or 1L). Amount of 0.10 M KI to prepare:\_\_\_\_\_\_\_\_L KI

-This calculation must be repeated for each flask size used to prepare the total volume of 0.10 M KI (i.e. if you must prepare 3L total, repeat this calculation for a 2L volumetric and a 1L volumetric=total 3L.)

□ 250 mL of 3 % H2O2

-use household peroxide, keep in original containers, during set-up include two 30 mL beakers with 3% H2O2 labels

 **Notify instructor if additional bottles are needed**

□ 250 mL of 0.1 M AgNO3 (silver nitrate)

 -caution: avoid direct contact, as it will stain skin brown

 -divide evenly between two **dark**, sealed, bottles with labels



 -**please round volume of 0.1M AgNO3 needed to match the nearest volumetric flask volume** available (i.e. to the nearest 500mL or 1L). Amount of 0.1M AgNO3 to prepare:\_\_\_\_\_\_\_\_L AgNO3



-This calculation must be repeated for each flask size used to prepare the total volume of 0.1 M AgNO3 (i.e. if you must prepare 3L total, repeat this calculation for a 2L volumetric and a 1L volumetric=total 3L.)

□ 25-100 mL of 1 M K2CrO4 (indicator-potassium chromate)

 -25 mL should be enough regardless of the number of sections

 -if less than 25 ml is on hand: prepare 100 ml

 -weigh out 19.4 g K2CrO4, transfer the solid to a 100 mL volumetric flask and dilute to the line

 -divide evenly between 4 eyedropper bottles

***CHEMICALS***

N/A

***EQUIPMENT & GLASSWARE***

**In Lab Bins: (need 8)**

□ stopwatch (1)

□ clamp & clamp holder (1)

□ thermometer (1)

□ 125 mL Erlenmeyer flask (1)

□ glass funnel, narrow stem (1)

□ 50 mL beaker (1)

□ 10 mL graduated cylinder (1)

□ one hole stopper (# 4 or 4.5) fitted with glass tube to fit the Erlenmeyer flask attached with tubing to a one hole stopper fitted with glass tube to fit top of buret (#00) (1) see Fig. 2, check drawer in 202

□ 60 mL plastic syringe fitted with hose wired on (1)

 -check drawer in 202

 -plunger should be removed from syringe

□ Square plastic container

□ Stir bar (1)

**In Dana 201**:

□ burets (8)

□ burette clamps (8)

□ Ring stands (8)

□ fill dH2O carboys (all)

□ buret brushes (8)

□ Parafilm

□ magnetic stir plates (8) (at stations)

***WASTE DISPOSAL CONTAINERS***

Large 4 L plastic waste bottles (x 1) &/or add to previous week's

€ Building: Dana

€ Room #: 201

€ Waste Accumulation Start Date: Oct 3, 2013

€ Date Container Filled: leave blank

€ Date moved to MAA: leave blank

€ Physical State(s): liquid

€ Chemical Waste Composition: potassium iodide (<1%), hydrogen peroxide (<1%), silver nitrate (<1%), potassium chromate (<1%), water (~99%)

€ Hazards: toxic, oxidizer, corrosive

**TESTING**

* Run a test reaction following the instructions for solution 1 at room temperature to verify H2O2 produces 14 ml of oxygen with a rate of at least 1 mL/minute. Use a magnetic stirrer rather than swirling by hand. *This will need to be done for each bottle that is currently on hand and open.* Discard any bottles that do not meet the criteria.