

CHEM SAFE CONSULTING, INC.

Laboratory Safety/Hazardous Materials Management

Waste Profile for AP Biology Laboratory Manual

Lab #1:

Solid wastes: conventional waste disposal Liquid wastes: flush down the drain

Lab #2:

Exercise 2A,B, C: Adjust the pH of the sulfuric acid solution to 6-8 and flush down the drain. Recycle the potassium permanganate solution not used in the titration.

Lab #3:

Destroy biological wastes by autoclaving or using a bleach solution. In general use autoclaving for solid samples and bleach for the liquids.

Lab #4:

Exercise 4A: Use a fume hood and recycle the petroleum ether/acetone solvent.

Exercise 4B: The DPIP solution has a short shelf life. Make the solution fresh. The solution can be flushed down the drain.

Lab #5:

Place the potassium hydroxide soaked cotton balls in a large beaker, add water and adjust the pH to 6-8. Flush the resulting solution down the drain.

Lab #6:

Destroy the biological wastes by autoclaving or using a bleach solution.

Lab #7:

Store the spent alcohol in container #3 and write, "spent ethyl alcohol" on the label.

Lab #8:

No hazardous waste is generated in this lab.

Lab #9:

Place the ethyl alcohol in container #3.

The used toluidine blue O stain is aqueous and can be placed down the drain in small amounts (less than 10 ml).

Lab #10:

This lab generates no hazardous waste.

Lab #11:

Mix the dilute acid and base and test the pH of the resulting solution. If it is 6-8 flush the solution down the drain. If not, adjust the pH to 6-8 and flush.

Lab #12:

Follow the procedure for making the Winkler's solution as outlined in the "supplemental materials for teachers". Do not purchase DO kits as many contain sodium azide as a preservative and the kits expire in one year. Use soluble starch for the starch solution. These solutions need to be made up fresh to assure accurate results. If possible avoid the standardizing procedure for the thiosulfate. Test the pH of the samples and adjust to 6-8 if needed. Dispose of the unused Winkler's solution by adjusting the pH to 6-8 and flushing down the drain.