Standard Operating Procedure: Laboratory Inventory

Location: iMac
Login: Arsenic
Location: Desktop > Inventory
File Name: Inventory.xlsx

Procedure for Entering a New Chemical:

1. Using the Arsenic login on the iMac, log into the computer.

2. First, open the folder on the Desktop labeled “Inventory.” Open the Inventory.xlsx spreadsheet by double clicking the Microsoft Excel icon labeled “Inventory.”

   If you get an error stating: “The workbook you opened contains automatic links to information in another workbook” click the Ignore Links button.

3. Properly format the chemical name to determine where the chemical is going to go in the inventory.

   a. All prefixes are moved after the “main” chemical name and a comma.
   b. The first letter of the “main” chemical name is capitalized.

   Examples:
   
   p-Toluenesulfonic Acid = Toluene sulfonic Acid, p-
   DL-Mandelic Acid = Mandelic Acid, DL
   3, 5-Pyridinecarboxylic Acid = Pyridine carboxylic Acid, 3, 5-
   4, 4′-Di-tert-butylibiphenyl = Butyl biphenyl, 4, 4′-Di-tert-

4. Locate the row below where your chemical should go in the inventory. Using the mouse click the appropriate row number on the far left of the screen. The entire row should now be highlighted. On the menu bar at the top of the screen, click the word Insert and then click Rows with the mouse. A new row should appear above the row you previously highlighted.

   Even if your chemical is listed you MUST enter a new row. Every container of a chemical must have its own row.

5. Into Column A, type the properly formatted chemical name. Double check it for spelling errors.
6. Into Column B, type the CAS number (including hyphens) for your chemical. If this information is not on the bottle you will need to locate it on the MSDS (see step).

7. Open the Microsoft Excel spreadsheet entitled “EHS List.xls” on the Desktop of the MacMini by double clicking the icon. Once open, hold the Apple Key and the F Key simultaneously. The “Find” window should appear. Type the CAS number (including hyphens) of your chemical into the window and click the Find Next button.

   a. If the CAS number cannot be found then the chemical is NOT on the EHS list.

   If the CAS number is found, check the first column of the row where your CAS number appears to check for any restrictions on the type of that chemical. (For example, hydrochloric acid is only on the EHS list in gaseous form.)

   b. If the CAS number is found and the form/purity of the chemical DOES NOT match the requirements for the EHS List, then the chemical IS NOT on the EHS List.

   c. If the CAS number is found and the form/purity of the chemical DOES match the requirements for the EHS List, then the chemical IS on the EHS List.

Close the EHS List Spreadsheet.

8. Into Column C of the Inventory Spreadsheet, type the appropriate letters (separated by a space) to describe the type of chemical being inputted.

   If the chemical met step 7c then place the letter E at the END of the list of letters describing the type of chemical being inputted. DO NOT use the letter E for any chemical that did not meet step 7c.

   Pure (P), Mixture (M), Solid (S), Liquid (L), Gas (G), EHS (E)

9. In Column D, convert the size of the container the chemical is in into pounds.

   For liquids, the density of the liquid chemical being inputted must be used. This information is located either on the chemical bottle, MSDS or the chemical manufacturer’s website.

   1 pound = 453.59 grams
10. In Column E, convert the *quantity of chemical* currently in the container into pounds.

For liquids, the density of the liquid chemical being inputted must be used. This information is located either on the chemical bottle, MSDS or the chemical manufacturer’s website.

1 pound = 453.59 grams

11. In Column F, describe the type of container the chemical is in. Include the container color, type and material.

12. Go online to the chemical manufacturer’s website and locate the MSDS for the chemical being inputted. Save the MSDS by the CAS number in the folder titled MSDS on the Desktop of the MacMini. Print a copy of the MSDS with the print settings set to 4 pages per printed page.

   a. Look at the MSDS for the chemical. Locate the “Hazards Identification” Section (normally the third section of the MSDS). In this section find the “NFPA Rating.”

      If Fire = 3 or 4 then the chemical = F
      If Reactive = 2, 3 or 4 then chemical = R
      Underline (on the MSDS) any special hazards.

   b. If the chemical is in a gas cylinder or aerosol can then the chemical = S

   c. Look at the MSDS for the chemical. Locate the “Toxicological Information” Section (normally the eleventh section of the MSDS).

      Look at the Acute and Chronic information presented. Determine if an A and/or C is appropriate for this chemical. If you have questions ask the group member in charge of this group duty or look at what types of hazards have warranted A or C in other cases.

   d. On the first page of the MSDS, write any letter corresponding to a physical, health or safety hazard in RED pen in the bottom right of the page. Please write them in the order F S R A C. If none write *none*.

   e. Hole punch the copy of the MSDS. Locate the appropriate MSDS binder on the shelf and put the MSDS into the binder in the appropriate alphabetical location (based on Step 3).

13. In Column G, write every letter (separated by a space) that was written on the first page of the MSDS of the chemical in Step 12d. If there are none leave the cell blank. Please write them in the order F S R A C.
14. In Column H, write the location where the chemical will be stored. Pay attention to the storage requirements of the chemical.

Unless storing a chemical in a new place, make sure to refer to the same location in a consistent fashion. All storage areas must be labeled.

Procedure for Removing a Chemical:

1. When you have consumed a chemical, please find the chemical in the electronic inventory and DELETE the row belonging to that chemical.

2. DO NOT remove the MSDS from the binder.

3. Do not forget to re-order the chemical.

Frequency:

Officially the inventory must be updated annually and submitted to Greg Peebles via e-mail (peebles@fit.edu). Assume the updated inventory is due at the end of each January and that around Winter Break the entire laboratory should begin the process of inventorying the laboratory. The current inventory should be used because if an item has already been inputted then only the quantity, locations and average amounts need to be updated. Not starting from scratch makes the process much easier and less time consuming.

Miscellaneous:

It is the responsibility of the person whom the chemical belongs to, to complete ALL of the steps in “Procedure for Entering A New Chemical.”

In the case of communal chemicals group members may be assigned chemicals to add to the inventory to reduce the burden on one or two individuals. The task of adding communal item will be shared equally to the best of our abilities.

Remember that if you permanently move a chemical its location needs MUST BE updated in the inventory.