

## Information on Material Safety Data Sheets (MSDS)

*This handout is designed to help you to use the MSDS database when working on your pre-labs.*

*(Note: Not all pre-labs require MSDS. Check the guidelines on Virtual Office Hours (VOH) to see if MSDS is required for each experiment.)* **NOTE: You may also access MSDS from any computer equipped with a Web browser.**

The MSDS database contains information on many chemicals that are routinely used in chemistry laboratories. The MSDS database is available on the Internet. You may use any computer to access the MSDS database. Login is required for using the computers in Young Hall 1054 or SLC in 4<sup>th</sup> floor YH. The login name is the same as your BOL login ID. The login password is your student ID. If you have trouble logging on to the computer, ask the staff in the computer lab for assistance.

Once you have successfully logged on to the computer (*wait until the computer finishes the login process, which may take a minute or two depending on the load of the server*), double click on the "Netscape" or "Internet Explorer" icon. Type in the web address <http://www.msdsearch.com/>. Click on "DB" (located on the menu bar. DB stands for database). A search engine will come up on your screen. The search engine is linked to many different MSDS sites in universities and chemical companies. You may use **ANY** one of the links in the search engine to do your search. The search engine will search by either the trade name of the chemical (for example, aspirin) or the common/chemical name (acetylsalicylic acid instead of aspirin).

To use the MSDS, type in the chemical name in the search engine and click "**SUBMIT**". You will see a list that contains many different sites that have information on the compound that you are searching for. You can click on **ANY** one of the sites (*check to make sure that the web site give you the chemical that you want before selecting*) and start writing the following information into your lab notebook.

In addition to the above web site, there is another excellent web site for searching chemicals on-line: <http://chemfinder.cambridgesoft.com/> Once the search engine found your chemical, it displays all the physical properties plus many different links that you may be interested in for that particular compound. One of the links is the MSDS. There is another excellent MSDS site that is maintained by University of California: <http://www.ucop.edu/oebsp/> (click on "Material Safety Data Sheets Resources". Select "UC MSDS Management System". Also available on-line is the Merck Index (<https://themerckindex.cambridgesoft.com/>). However, access to the Merck Index is restricted through campus computing facilities only (see above).

**As an exercise, look up the following information for each of the chemicals listed below by using the Web sites listed above. Note: You should choose the site that provides you with the chemical information that matches closely to the concentration/reagent grade listed for each chemical.**

- (i) Product Name
- (ii) Formula weight & Chemical Formula (*this should be listed under "physical properties"*)
- (iii) Physical state at room temperature (i.e. solid, liquid or gas)
- (iv) Melting point & boiling point
- (v) Specific Gravity (*also known as Density*)
- (vi) Solubility in water
- (vii) Fire and explosion data (summarize in your own words - no more than 1/4 page)
- (viii) Health hazard data (summarize in your own words - no more than 1/4 page)

**Chemicals:** Acetic acid (5%) Sodium chloride (*ACS, Reagent Grade*)  
Sulfuric acid (*Concentrated*) Sodium hydroxide (*ACS, Reagent Grade*)