



## Guidance Note

May 2007

## Chemical Recycling

HWG-028

*This information is for your use and as a way of providing consistent information. There is no response required.*

### UCDHSC Chemical Recycling

Recycling/reuse of laboratory chemicals provides UCDHSC the opportunity to save money and minimize the impact on the environment. Any researcher who has chemicals that are no longer needed but are still useable can utilize the following procedure to recycle these materials:

- a. The owner of the chemicals should inform all of the researchers in their department about the availability of the unwanted chemicals.
- b. If the owner has chemicals remaining to recycle, the owner may contact the Environmental Health and Safety (EH&S) at 4-0345. EH&S will request that the owner of the chemicals act as the contact person for recycling purposes to other researchers on a campus wide announcement. EH&S will publish a short list of the chemical reagents (including the purity when possible) available for free on the Lab Safety announcement along with the contact person's email address and phone number. Guidance will be provided to the researchers in the announcement reminding them of proper storage requirements for chemicals and the correct procedure for transporting chemicals across the campus (secondary containment).
- c. EH&S will allow the owner of the chemicals 1-2 weeks to recycle the chemicals to other researchers on our campus.
- d. If the owner of the chemicals is not interested in recycling the chemicals to his department or by being the contact person for the entire campus, EH&S will attempt to recycle a reasonable number of the chemicals by delivering them to our storage cabinets.
- e. EH&S will prepare a list of the chemicals to be recycled from the storage cabinets. The list of chemicals to be recycled will be distributed on the UCDHSC Lab Safety announcement and assistance will be provided to deliver the recycled chemicals directly to the laboratories that replied to the email.
- f. Chemicals that were not recycled after being placed on the recycle list will be properly disposed as hazardous chemical waste prior to issuing a new list (approximately 3 – 4 months). RCRA waste labels will be placed on the appropriate chemical containers before being placed in the storage cabinets for disposal.
- g. The UCDHSC Hazardous Materials Manager will maintain records of the recycling lists and the researcher's requests for the chemicals. The records may be used to verify to the regulatory agency that our campus has a recycling program.

## Some Exceptions

Some chemicals do not lend themselves to reuse. The following are some examples of chemicals that are typically exempted from recycling:

1. Chemicals that are past the written expiration date on the container.
2. Peroxidizable solvents such as isopropyl ether or ethyl ether.
3. Unstable or potentially explosive chemicals.
4. Controlled Substances will usually not be recycled unless the researchers have the correct Drug Enforcement Administration (DEA) federal registration form 223.
5. Absolute ethanol will usually not be recycled unless the researchers have the correct TTB permit or unless we are able to properly document the disposition of this substance.
6. Select agents (toxins or ricin).
7. Extremely toxic chemicals will generally not be recycled unless we can verify that the researcher has a legitimate purpose for the substance. Our campus should minimize the total quantities of extremely toxic chemicals that are stored in our laboratories.
8. Chemical reagents that have a written statement on the container stating that they must be stored at 0 -8 degrees Centigrade will not be recycled unless they have been properly refrigerated in the past.
9. Common chemical solvents or reagent containers that are less than 75 percent full will generally not be recycled. This is especially true for older chemical reagent containers.
10. Chemical solvents used in making plastics or resins (methyl methacrylate) unless they are fairly new. It is not a good idea to store monomers for extended periods of time.
11. Old containers of formalin or formaldehyde.
12. Old containers of benzene, toluene, dioxane, and xylene.
13. Chemical reagents of limited value (sucrose, starch, common salts, etc.) will generally not be recycled by EH&S if we must transport them to our storage facility..
14. Chemical reagents will not be recycled off campus to non-UCDHSC researchers.
15. It will be a high priority to recycle unopened HPLC solvents because of their high cost. Cesium chloride is also very expensive and is widely used so this material is always recycled.
16. Unopened chemical reagents which are relatively new will be given a high priority for recycling.