

## Guideline on Disposal of Laboratory Waste

Proper waste management prevents unnecessary accidents/incidents in the collection and disposal process.

The 2 most common types of wastes generated by CBC research labs are:

### Organic Solvent Waste:

#### **Chlorinated**

- C1: Dichloromethane, chloroform, carbon tetrachloride
- C2: Trichloroethylene, tetrachloroethylene, 1,2-dichloroethylene, 1,1,1-trichloroethane
- C3: 1-chlorobutane plus small amounts of non-chlorinated materials but no water

#### **Non-Chlorinated**

- Hydrocarbons: Alkenes C5-C12, cyclohexanes, toluene, xylene
- C1-C3 alcohols, ethylene glycol
- Diethyl ether and tetrahydrofuran
- Acetone, ethyl and n-butyl acetate

**DO NOT** dispose any solids, reaction mixtures, acids, bases and toxic materials together with the waste solvents.

20L polythene drums (carboys) are provided by the chemical store.

### Common Wastes collected by the CBC Chemical Store:

- Liquid Chemical Waste - Halogenated Waste
- Liquid Chemical Waste - Non-Halogenated Waste
- Liquid Chemical Waste – Aqueous Waste with Heavy Metals
- Liquid Chemical Waste – Oil Waste
- Solid Chemical Waste – Contaminated with chemicals (gloves, tissue, wipes)
- Solid Chemical Waste – Broken Glassware
- Solid Chemical Waste – Sharp Waste (Syringes, Needles etc.)
- Solid Chemical Waste – Silica Gel Waste

Please note that all waste carboys in the labs must be affixed with the sticker label provided by the chemical store **as soon as they are used to contain wastes in the labs.**

Necessary items to indicate on label include:

PI name: Indicate your Supervisor's name

Location: Indicate which lab the waste was generated from.

Fill the carboys with waste solvents up to 80% full and screw the cap tightly

During transportation, PPE (lab coats, safety goggles and gloves) have to be worn. Waste carboys have to be placed in secondary containments and secured to trolleys with straps.

### **Empty containers**

Empty bottles of sizes 2.5L or more can be disposed at the mobile garbage bin (MGB) provided at the CBC Chemical Store. Smaller bottles should be disposed in the broken glassware bins in the lab.

- **DO NOT** leave any remaining solvents/solids inside the containers (rinse the bottles before disposing)
- Close the empty containers tightly
- Always throw empty containers into the Bin provided

### **Sharp bins**

Always ensure that the lids of sharp bins are sealed before transportation.

### **Non-common wastes**

For non-common wastes, collect them separately in waste carboys, label the container appropriately and then contact the CBC Chemical store for disposal.

### **Note:**

Disposal of chemical wastes will only be available between 09.30 to 11.30 am and 02.00 to 04.30 pm daily. This is to consolidate daily chemical wastes to prevent any improper disposals. Do take note that any groups who are late and do not follow the proper procedures to dispose chemical wastes will be rejected.

Prepared by,



Approved by,

