

# Chemical Handling, Storage and Disposal Checklist

## Personnel

- 1) How many lab staff have been trained in safe procedures when working with hazardous chemicals (documented)?
- 2) All employees aware of emergency procedures in case of an accident involving hazardous chemicals. Yes No N/A
- 3) All employees are aware of the Permissible Exposure Limits (PEL). Yes No N/A
- 4) Employees aware of the chemical SDS. Yes No N/A
- 5) Employees follow safe handling instruction of hazardous chemicals. Yes No N/A
- 6) Employees wear appropriate PPE when handling chemicals. Yes No N/A
- 7) Employees wash their hands before and after handling chemicals. Yes No N/A

## Handling and labelling chemical containers

1. All containers are clearly labelled as to contents. Yes No N/A
2. Chemical containers are labelled with the appropriate hazard warning (e.g. poison, corrosive, etc). Yes No N/A
3. Labels are readable and free of encrustation or contamination. Yes No N/A
4. Labels are firmly attached to containers. Yes No N/A
5. All container labels include both date of receipt and group name. Yes No N/A
6. All chemical container lids are tightly sealed. Yes No N/A
7. All chemical containers free from dents and in good working condition. Yes No N/A
8. Chemical substances held in their original container. Yes No N/A

## Storage areas

1. Storage rooms/areas are properly marked or identified. Yes No N/A
2. Storage rooms are secured whenever not in use and are available only to authorised personnel. Yes No N/A
3. Storage areas are well illuminated. Yes No N/A
4. Storage areas are well ventilated. Yes No N/A
5. Aisles in the storage area are free from obstruction. Yes No N/A
6. Ladders with handrails are available where needed. Yes No N/A
7. There are minimum quantities of chemicals stored in the work area. Yes No N/A

## Storage shelves

1. Large bottles and containers are stored on shelves near the floor. Yes No N/A
2. Containers of chemicals are stored below eye level. Yes No N/A

3. Where possible shelves have raised edges or rim guards to prevent the accidental dislodging of containers. Yes No N/A
4. Reagent bottles or containers do not protrude over the shelf edges. Yes No N/A
5. Enough space is available so that chemicals are not overcrowded. Yes No N/A
6. Empty bottles are removed from shelves. Yes No N/A
7. Shelves are level and stable. Shelving units are securely fastened to wall or floor. Yes No N/A
8. Shelves are clean-free of dust and chemical contamination. Yes No N/A

### **Storage containers**

1. Storage containers are inspected periodically for rust, corrosion, or leakage. Yes No N/A
2. Damaged containers are removed or repaired immediately. Yes No N/A
3. Chemicals are kept in airtight bottles, not in beakers or open vessels. Yes No N/A
4. Stoppers form an airtight seal with containers. Yes No N/A
5. Stoppers are easily removed from bottles or containers. Yes No N/A

### **Chemical storage**

1. There is an accurate inventory for the chemicals. Yes No N/A
2. Chemicals are not exposed to direct sunlight or localised heat. Yes No N/A
3. Containers of corrosive chemicals are stored in trays large enough to contain spillage or leakage. Yes No N/A
4. Chemicals are stored by, reactive class (e.g. flammables with flammables, oxidizers with oxidizers). Yes No N/A
5. Incompatible chemicals are physically segregated from each other during storage. Yes No N/A

#### 1. Acids

1. Large bottles of acids are stored in acid cabinets. Yes No N/A
2. Oxidizing acids are segregated from organic acids and flammable and combustible materials. Yes No N/A
3. Acids are separated from caustics and from active metals such as sodium, magnesium, and potassium. Yes No N/A
4. Acids are segregated from chemicals that can generate toxic gases on contact, such as sodium cyanide and iron sulfide. Yes No N/A
5. Bottle carriers are used for transporting acid bottles. Yes No N/A
6. Absorbents or acid neutralizers are available for acid spills. Yes No N/A

#### 2. Caustics

1. Caustics are stored away from acids. Yes No N/A
2. Solutions of inorganic hydroxides are stored in polyethylene containers. Yes No N/A
3. Absorbents or caustic neutralizers are available for spills. Yes No N/A

### 3. Flammables

1. Flammables are kept away from any source of ignition: flames, heat or sparks. Yes No N/A
2. Where refrigerators are used for flammable liquid storage they are internally '**spark-free**'. Yes No N/A
3. Bonding and grounding wires are used where flammables are stored and dispensed. Yes No N/A
4. Absorbents are available for leaks or spills. Yes No N/A

### 4. Peroxide-Forming Chemicals

1. Peroxide-forming chemicals are stored in airtight containers in a dark, cool, and dry place. Yes No N/A
2. Peroxide-forming chemicals are properly disposed of before the date of expected peroxide formation. Yes No N/A
3. Suspicion of peroxide contamination is immediately evaluated by use of safe procedures. Yes No N/A
4. Chemicals are labelled with date received, date opened, and disposal date. Yes No N/A

### 5. Water-Reactive Chemicals

1. Chemicals are kept in a cool and dry place. Yes No N/A
2. In case of fire, a Class D fire extinguisher is used. Yes No N/A

### 6. Oxidizers

Oxidizers are stored away from flammable, combustible, and reducing agents (e.g. zinc, alkaline metals).  
Yes No N/A

### 7. Toxic Compounds

Toxic compounds are stored according to the nature of the chemical, with appropriate security employed where necessary. Yes No N/A

### **Disposal**

- 1) Waste chemicals are labeled as waste and stored in a suitable location until final disposal. Yes No N/A
- 2) Bins are clearly marked with their waste stream. Yes No N/A
- 3) Containers are tightly closed. Yes No N/A

- 4) Standard operating procedures are established and are they being followed when cleaning up chemical spills. Yes No N/A
- 5) There is a dedicated sink for acceptable liquid waste. Yes No N/A
- 6) The sink is clearly marked up. Yes No N/A
- 7) Are "Hazardous Waste" signs in place and clearly visible. Yes No N/A
- 8) Waste chemicals are disposed of appropriately. Yes No N/A
- 9) How are they disposed of?
- 10) All waste containers stored in waste storage area. Yes No N/A
- 11) Records are kept of the chemicals disposed of. Yes No N/A

### **Working area and housekeeping**

1. Cleanliness and order are maintained in the storage areas at all times. Yes No N/A
2. Unlabeled, contaminated, or undesirable chemicals are discarded properly. Yes No N/A
3. Chemicals in storage cabinets and on shelves are inspected for decomposition on a regular basis. Yes No N/A
4. Unused chemicals are never returned to stock bottles. Yes No N/A
5. Packing materials and empty cartons are removed at once from the area. Yes No N/A
6. Waste receptacles are properly marked and easily located. Yes No N/A
7. Separate disposal containers are available for broken glass. Yes No N/A
8. There is a fumehood, an exhaust fan or open window for adequate ventilation, when using hazardous chemicals. Yes No N/A
9. Exit doors are unobstructed. Yes No N/A

### **Emergency preparedness**

1. Equipment and supplies for cleaning up spills are readily available. Yes No N/A
2. Fire extinguishers are immediately accessible. Yes No N/A
3. Fire extinguishers are periodically inspected and maintained. Yes No N/A
4. Eye-wash fountains and safety showers are provided in areas where corrosive chemicals are handled. Yes No N/A
5. Chemical spill kits are available with instructions on how to use them. Yes No N/A
6. Respirators are stored in a convenient, clean and sanitary location, and are they adequate for emergencies. Yes No N/A