

Waste Procedure – UCL Chemical Engineering

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Review Date: 09/21

1. Scope

This document details the waste streams available in the UCL Department of Chemical Engineering, what to use them for, and how to dispose of the waste. This information is summed up in a table at the end.

2. Waste Streams

2.1. General Advice

Sharps, including metal scalpels, needles, and broken glass, cannot be put into any waste receptacles with plastic liners. These sharps can pierce the linings causing harm to lab users and cleaners. Sharp items may only be placed in:

- Sharps Bins
- Broken Glass Bins

Waste receptacles for solvents must be labelled correctly. Bottles which have previously contained other chemicals must be re-labelled accordingly by striking through or removing the labels and rinsing them out three times with water before use.

Solvents must be separated into chlorinated and non-chlorinated receptacles. Flammable solvents require red tin cans and must also be separated into chlorinated and non-chlorinated waste.

Glass must be decontaminated before putting in the glass recycling bin. This consists of rinsing out the glass multiple times with water and removing all labels and non-recyclable parts e.g. plastic caps.

Replacements for all items can be obtained from the DSO.

2.2. Recycling Bin

The general recycling bins can be identified by their green tops and transparent bin linings. The cleaners dispose of these daily. Only non-contaminated waste that can be recycled may be put in these bins. Lab waste or any other contaminated items may not be put in these bins. Example items for this bin are:

- Cardboard
- Metal
- Certain plastics
- Food waste?

2.3. General Waste Bin

General bins have black tops and the clear blue linings. The cleaners dispose of these daily. Waste that cannot be recycled may be used in this bin. This bin must not be used for lab contaminated waste, including gloves. Examples of types of waste to put in this bin are:

- Polystyrene
- Some plastics
- Some metals

2.4. Hazardous Waste

The Hazardous Waste Bins are used for all lab-contaminated waste. It is disposed of by lab users in the yellow bins outside the Darwin building which can be accessed using a key held by the DSO. Sharps such as needles and scalpels may not be put in this bin. Examples of items to dispose in this bin are:

- Gloves
- Waste tissues
- Weighing boats

2.5. Sharps Bins

The sharps bin is a hard plastic yellow container and is used for all sharps. Other items such as tissues and gloves must not be put in this bin. When full the top must be fully closed, be careful not to overfill, and it may be disposed in the yellow bins outside the Darwin building. Examples of items to dispose of in these bins are:

- Scalpel heads
- Syringe needles
- Contaminated broken glass

2.6. Broken Glass Bins

Glass bins are white cardboard boxes and are used for non-contaminated glass broken only. Other sharps may not be put in this bin. When full the top must be fully closed, be careful not to overfill, and it may be disposed of next to the glass recycling bin outside the Darwin building. Examples of items to dispose of in this bin are:

- Clean broken vials
- Clean broken glass pipettes.

2.7. Glass Recycling Bin

The glass recycling bin is located outside the Darwin Building. It is for bottles and containers that are empty and clean that may be recycled. In order to recycle a bottle you must:

- Rinse out the bottle thoroughly to get rid of any residue in the bottle. Fume cupboards may be used to facilitate this.
- Strikethrough or remove labels.
- Remove the plastic cap or any metal parts and throw these in the general waste bin.

2.8. Low Risk Infected Waste Bins

These bins are used for contaminated hard waste that could pierce the linings of the hazardous waste bin. Some labs in the department use them as a replacement for the hazardous waste bin as they produce very little hazardous waste. These are disposed of in the yellow bins outside the Darwin building. A key for this can be collected from the office of the DSO.

- Pipette tips
- Gas Chromatography vials
- Centrifuge tubes
- Tissues
- Gloves

2.9. Solvent Waste

Solvent Waste receptacles can either be plastic containers or bottles from the lab with their labels removed and relabelled to indicate the waste they contain. The waste must be separated into **chlorinated and non-chlorinated waste**. Flammables must not be put in these receptacles, rather in the red metal tin cans. Once full the contents of the bottles will need to be disposed of into the bulk waste in the red cabinet outside the Darwin building. The lab user must arrange with the DSO when to visit the red cabinet to dispose of the contents of the solvent.

2.10. Flammable Solvent Waste

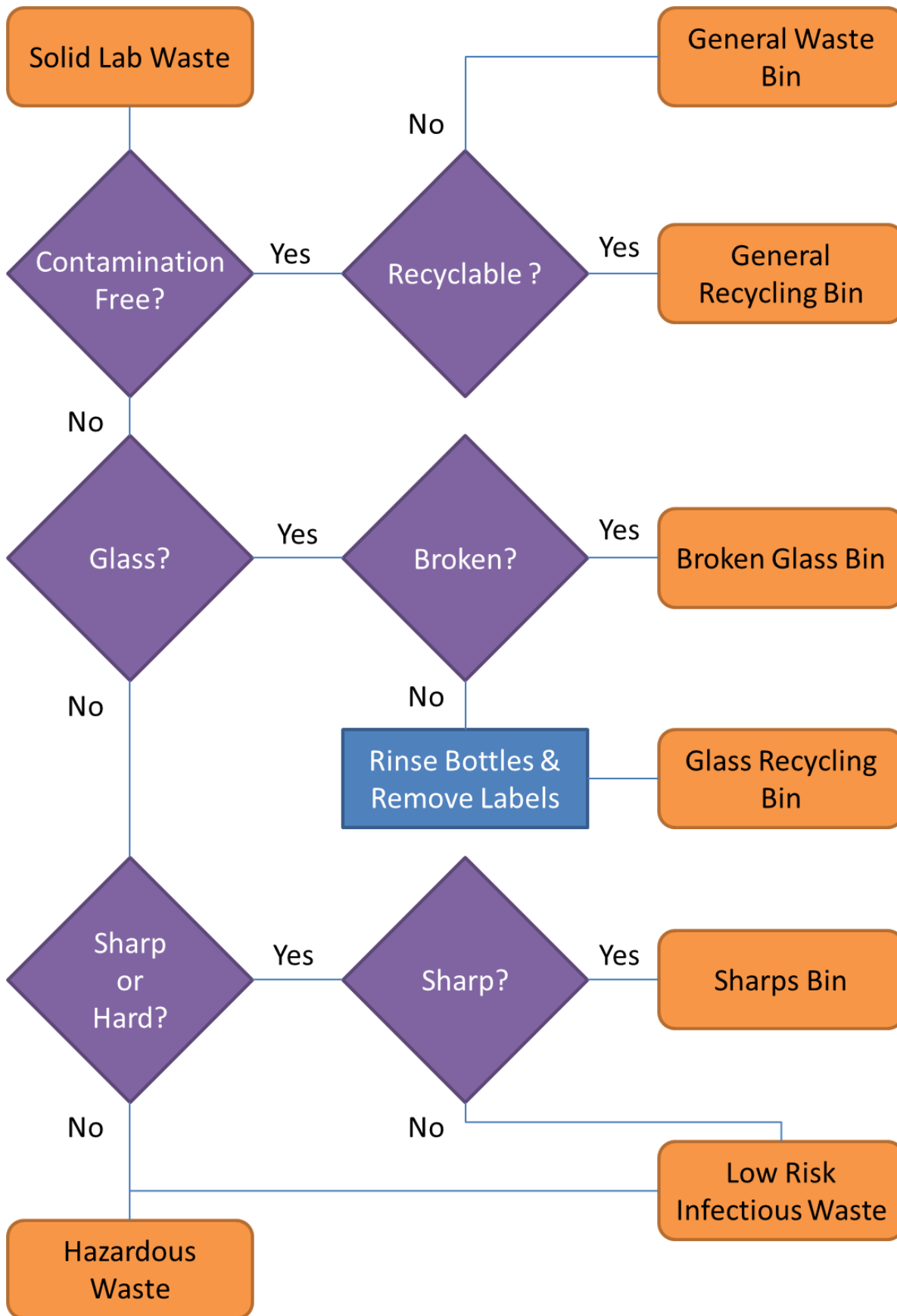
Flammable waste receptacles are red tin cans that are **separated into chlorinated and non-chlorinated waste**. All flammable solvents must be put into these cans. Once full they will need to be disposed of into the waste in the red cabinet outside the Darwin building. The lab user must arrange with the DSO when to visit the red cabinet to dispose of the contents of the solvent.

2.11. Lab Smalls and Bulk Waste

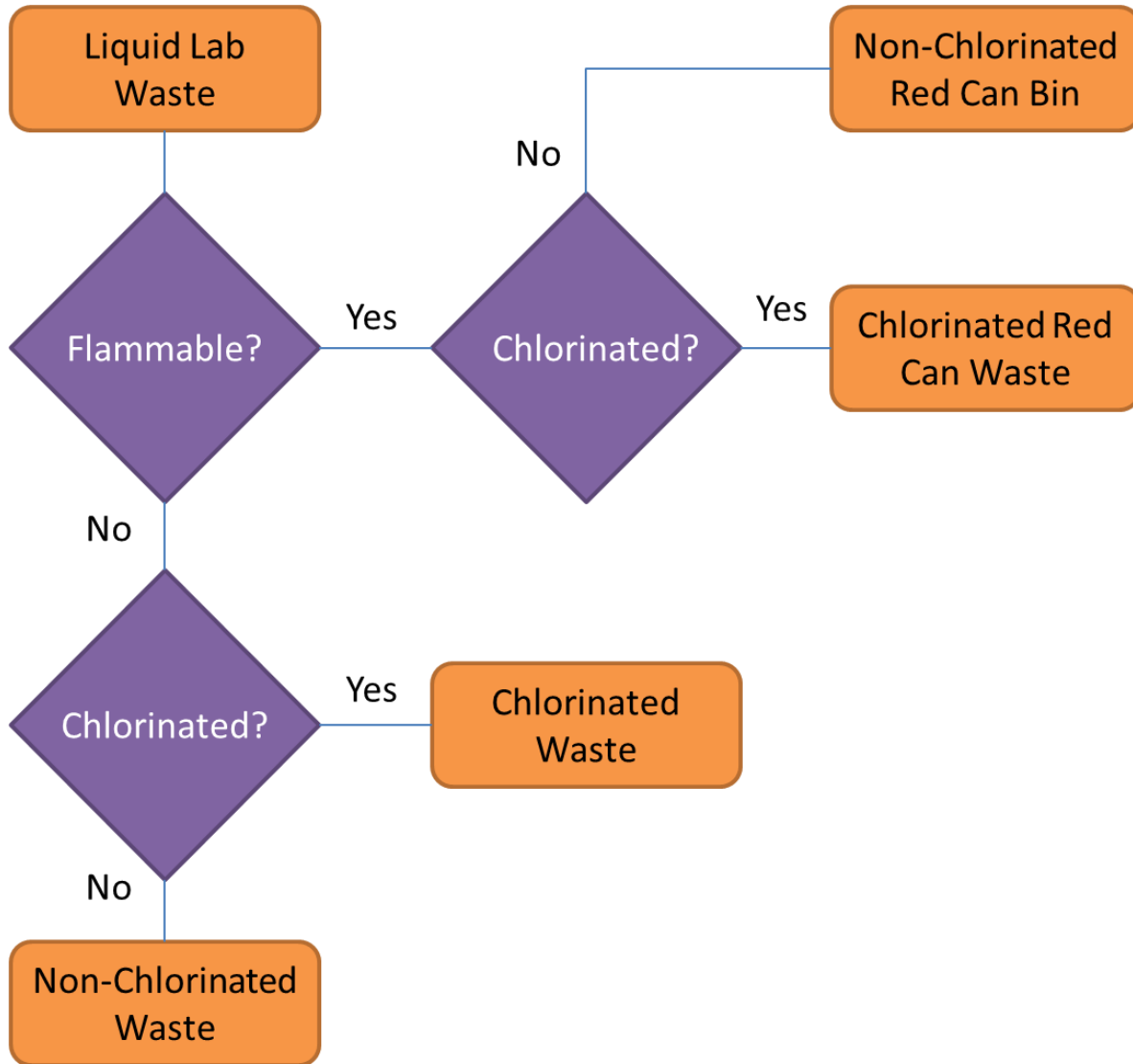
Lab Chemicals which are not empty but are no longer required may be removed from the lab by arranging with the DSO to put them into the Red Cabinet outside the Darwin building. The DSO will then use the waste forms found on the website to organise a collections of the waste and any replacement containers if required.

3. Flow Charts

3.1. Solid Waste






3.2. Liquid Waste







4. Tables of Waste


4.1. Recycling

Waste Bin / Disposal Method	Identified By	Used for	Example
Recycle Bins / Cleaners	Green Top Transparent Linings	Non-contaminated recyclable waste: e.g. waste paper, packaging	
General Bins / Cleaners	Black Top Blue Linings	Non-contaminated waste: e.g. polystyrene, non-recyclable plastic and metal	
Glass Recycling Bin / Lab Users in green bin outside Darwin building	Green Top	Empty bottles. Bottle must be rinsed three times with water and labels removed.	

4.2. Solid Lab Waste

Waste Bin / Disposal Method	Identified By	Used for	Example
Hazardous Waste / Lab users in yellow bin outside Darwin building Key from DSO	Yellow Linings	Contaminated Waste: e.g. gloves, tissues, weighing boats	
Sharps Bins / Lab users in yellow bin outside Darwin building Key from DSO	Hard Plastic Yellow Bin	All Sharps: e.g. syringe needles, scalpel heads	
Broken Glass Bin / Lab users in green bin outside Darwin building	White Cardboard Box	Non-contaminated Broken Glass.	
Low Risk Infected Waste Bin / Lab users in yellow bin outside Darwin building Key from DSO	Small Yellow Cardboard Box	Hard Contaminated Waste: e.g. GC vials, pipette tips, centrifuge tubes.	

4.3. Liquid Lab Waste

Waste Bin / Disposal Method	Identified By	Used for	Example
<p>Solvent Waste / Lab users with DSO in red cabinet outside Darwin building</p>	<p>Labelled bottle Separated by chlorinated and non-chlorinated waste.</p>	<p>Chloro-solvents, Hydrocarbons, etc.</p>	
<p>Flammable Solvent Waste / Lab users with DSO in red cabinet outside Darwin building</p>	<p>Red metal can Separated by chlorinated and non-chlorinated waste.</p>	<p>Flammable waste solvent: Methanol / Ethanol, Benzene, Pentane, Ethers, etc.</p>	