

School of Chemistry
Hazardous Waste Management Manual

SOPs for the disposal of hazardous waste generated in the
School of Chemistry

School of Chemistry Hazardous Waste Management Manual

Contents:

| | |
|--|---------|
| Overview..... | Page 3 |
| SOPs: | |
| Non-Halogenated Organic Solvent Waste..... | Page 4 |
| Halogenated Organic Solvent Waste..... | Page 5 |
| Aqueous Extractions..... | Page 6 |
| Chemically Contaminated Laboratory Waste..... | Page 7 |
| Chemically Contaminated Glass and Sharps..... | Page 8 |
| Waste Alumina..... | Page 9 |
| Waste Silica..... | Page 10 |
| Potentially Infectious Waste (Soft)..... | Page 11 |
| Potentially Infectious Waste (Rigid)..... | Page 12 |
| Potentially Infectious Waste Contaminated by Chemicals..... | Page 13 |
| Potentially Infectious Sharps Contaminated by Chemicals..... | Page 14 |
| Recognizable Animal Tissue..... | Page 15 |
| General Waste..... | Page 16 |
| Empty Brown Glass Winchester Bottles..... | Page 17 |
| Empty Plastic/Aluminium/Clear Glass Winchester Bottles..... | Page 18 |
| Paper and Cardboard..... | Page 19 |
| Irregular Laboratory Smalls..... | Page 20 |
| GMMs..... | Page 21 |
| Appendices: | |
| Irregular Lab Smalls Waste Form..... | Page 22 |
| Stores Compound Layout..... | Page 23 |

School of Chemistry Hazardous Waste Management Manual

| SCCB waste management plan | | |
|--|--|--------------------------------|
| Waste | packaging | collected in/on/by |
| organic solvents (non-halogenated) | 10L waste solvent containers | pallet in fire rated container |
| organic solvents (halogenated) | 10L waste solvent containers | pallet in fire rated container |
| aqueous extractions from organic synthesis | 10L waste solvent containers | pallet in fire rated container |
| chemically contaminated lab waste | red bags | green drums |
| chemically contaminated glass and sharps | blue 60L containers | pallet beside gas cylinders |
| alumina | old alumina containers | green drums |
| silica | old silica containers | green drums |
| potentially infectious (soft) laboratory waste | yellow bags | grey wheelie bins |
| potentially infectious (rigid) laboratory waste | yellow 30/60L bin with yellow lid | in fire rated container |
| potentially infectious laboratory waste contaminated with chemicals | yellow 60L bin with purple lid | in fire rated container |
| potentially infectious laboratory sharps contaminated with chemicals | yellow 12L bin with purple lid | in fire rated container |
| recognizable animal tissue | green freezer bag | Contact Patrick Waldron |
| <i>general waste</i> | <i>green bags</i> | <i>cleaners</i> |
| empty glass bottles | none | glass wheelie bins |
| empty plastic/aluminium bottles | none | 720L greyhound wheelie bins |
| <i>paper</i> | <i>square boxes or green bags</i> | <i>cleaners</i> |
| Irregular lab smalls | Contact School Hazardous Waste Coordinator, Patrick Waldron. Ext. 2301, S0.96. | |
| GMMs | | |

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SOP for the disposal of non-halogenated solvent waste generated in the School of Chemistry:

- Collect a 10L non-halogenated solvent waste container from Chemistry Stores.
- This container will have a large red diamond with flame (see photograph below).
- The container will be barcoded and scanned in by a Stores officer for tracking purposes.
- Use the waste container to collect non-halogenated solvent waste.
- Fill the waste container to 90% capacity.
- Bring the waste container to Stores and place it on the appropriate pallet in the fire rated container, lining it up as instructed on the pallet.
- **All waste containers returned to Chemistry Stores must have the correct labels (shipping and barcode), containers without appropriate labels will not be accepted.**



Non-halogenated solvent waste container



Containers stacked on pallet in fire rated container

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SOP for the disposal of halogenated solvent waste generated in the School of Chemistry:

- Collect a 10L halogenated solvent waste container from Chemistry Stores.
- This container will have a large white diamond with skull and crossbones (see photograph below).
- The container will be barcoded and scanned in by a Stores officer for tracking purposes.
- Use the waste container to collect halogenated solvent waste.
- Fill the waste container to 90% capacity.
- Bring the waste container to Stores and place it on the appropriate pallet in the fire rated container, lining it up as instructed on the pallet.
- **All waste containers returned to Chemistry Stores must have the correct labels (shipping and barcode), containers without appropriate labels will not be accepted.**



Halogenated solvent waste container



Containers stacked on pallet in fire rated container

School of Chemistry Hazardous Waste Management Manual

SOP for the disposal of aqueous extractions from organic synthesis generated in the School of Chemistry:

- Contact the School Safety advisor to ensure the components of the aqueous extractions are compatible with the waste stream.
- Collect a 10L non-regulated aqueous waste container from Chemistry Stores.
- This container will be labelled “NON REGULATED MATERIAL – AQUEOUS WASTE” (see photograph below).
- The container will be barcoded and scanned in by a Stores officer for tracking purposes.
- Use the waste container to collect aqueous extractions.
- Fill the waste container to 90% capacity.
- Ensure the contents are pH neutral.
- Bring the waste container to Stores and place it on the appropriate pallet in the fire rated container, lining it up as instructed on the pallet.
- **All waste containers returned to Chemistry Stores must have the correct labels (shipping and barcode), containers without appropriate labels will not be accepted.**



Non-regulated aqueous waste container



Containers stacked on pallet in fire rated container

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SOP for the disposal of chemically contaminated laboratory waste generated in the School of Chemistry (ie. anything which has come into contact with chemical agents; nitrile gloves, filter paper, etc):

- Collect a red chemical waste bag from Chemistry stores.
- The bag will be barcoded and scanned in by a Stores officer for tracking purposes.
- Place the waste into the chemically contaminated laboratory waste bin (see photograph below).
 - *Note: It is advisable to use a small rigid container for plastic pipette tips to prevent them from puncturing the bag.*
- When the bin is 2/3 full; close and seal the bin.
- Bring the bin to Chemistry Stores and carefully place inside the green chemical waste drums.
- *Note: sharp objects, glass, hard plastics or free liquids **must not** be placed into this bin.*



Chemically contaminated laboratory waste bin.



Green chemical waste drums

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SOP for the disposal of chemically contaminated glass and sharps generated in the School of Chemistry:

- Collect a chemically contaminated glass and sharps bin from Chemistry Stores.
- This container will be barcoded and scanned in by a Stores officer for tracking purposes.
- Carefully place all chemically contaminated glass and sharps for disposal into this bin.
- When the bin is $\frac{3}{4}$ full; close and seal the bin.
- Return the bin to Chemistry Stores and place it on the designated pallet.
- *Note: no free liquids.*



Chemically contaminated glass and sharps bin



Pallet for glass and sharps bins

SOP for the disposal of waste alumina generated in the School of Chemistry:

- Re-use an old alumina container as a waste alumina container.
- Label the container as alumina waste.
- Place the waste alumina into the container and seal the container.
- Bring the waste alumina container to Chemistry Stores and place inside the chemical waste drums.



Green chemical waste drums

SOP for the disposal of waste silica generated in the School of Chemistry:

- Re-use an old silica container as a waste silica container.
- Label the container as silica waste.
- Place the waste silica into the container and seal the container.
- Bring the waste silica container to Chemistry Stores and place inside the chemical waste drums.



Green chemical waste drums

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SOP for the disposal of potentially infectious (soft) laboratory waste generated in the School of Chemistry (i.e. anything which has come into contact with biological agents; nitrile gloves, plastic pipette tips, etc):

- Collect a yellow potentially infectious waste bag from Chemistry stores.
- The bag will be barcoded and scanned in by a Stores officer for tracking purposes.
- Place the waste into the potentially infectious laboratory waste bin (see photograph below).
 - *Note: It is advisable to use a small rigid container for plastic pipette tips to prevent them from puncturing the bag.*
- When the bin is 2/3 full; close and seal the bin.
- Bring the bin to Chemistry Stores and contact a Stores Officer.
- Carefully place the yellow bag into the UN approved yellow bag (see photograph below).
- Carefully place the double bagged waste into the grey wheelie bin.
- *Note: Bags which are torn or contain free liquids cannot be accepted by Stores.*



Potentially infectious waste bin



UN approved bag



Grey wheelie bin

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SOP for the disposal of potentially infectious (rigid) laboratory waste generated in the School of Chemistry (*i.e. anything which has come into contact with biological agents; plastic pipette tips, etc*):

- Collect a 30L or 60L yellow container with yellow lid from Chemistry stores.
- The container will be barcoded and scanned in by a Stores officer for tracking purposes.
- Place the waste in the potentially infectious (rigid) laboratory waste bin (see photograph below).
- When the bin is full; close and seal the bin.
- Bring the bin to Chemistry Stores and place in the fire rated container.
- *Note: no free liquids.*



Potentially infectious (rigid)
laboratory waste bin

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SOP for the disposal of potentially infectious laboratory waste contaminated with chemicals generated in the School of Chemistry:

- Collect a 60L yellow container with purple lid from Chemistry stores.
- The container will be barcoded and scanned in by a Stores officer for tracking purposes.
- Place the waste in the potentially infectious laboratory waste contaminated with chemicals bin (see photograph below).
- When the bin is full; close and seal the bin.
- Bring the bin to Chemistry Stores and place in the fire rated container.
- *Note: no free liquids.*



Potentially infectious laboratory waste contaminated with chemicals bin

School of Chemistry Hazardous Waste Management Manual

SOP for the disposal of potentially infectious laboratory sharps contaminated with chemicals generated in the School of Chemistry:

- Collect a 12L yellow container with purple lid from Chemistry stores.
- The container will be barcoded and scanned in by a Stores officer for tracking purposes.
- Place the waste in the potentially infectious laboratory sharps contaminated with chemicals bin (see photograph below).
- When the bin is full; close and seal the bin.
- Bring the bin to Chemistry Stores and place in the fire rated container.
- *Note: no free liquids.*



Potentially infectious laboratory sharps contaminated with chemicals bin

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SOP for the disposal of recognizable animal tissue generated in the School of Chemistry:

- Place the recognizable animal tissue into a green recognizable animal tissue waste bag (available on request from Mr. Patrick Waldron, School Hazardous Waste Coordinator, at ext. 2301 or office S0.96.)
- Place the green waste bag into a labelled cardboard box and then into a freezer.
- Once this waste is packaged, labelled and frozen appropriately, a time can be arranged with Patrick for the container to be brought to Chemistry Stores for collection and disposal.



Recognizable animal tissue waste bag

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SOP for the disposal of general waste generated in the School of Chemistry (*ie. non-chemically/biologically contaminated waste*):

- Place the waste in the general waste bin (see photograph below).
- When the bin is 2/3 full; close and seal the bin.
- Place the bin outside the laboratory for collection by cleaners.
- *Note: blue nitrile gloves must not be placed in this bin.*



General waste bin

SOP for the disposal of empty glass bottles generated in the School of Chemistry:

- Completely empty the bottle.
- Rinse the bottle with hot water 3 times.
- Remove the label.
- Bring the bottle to Chemistry Stores and carefully place into a glass wheelie bin.



Brown glass wheelie bins

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SOP for the disposal of empty plastic/aluminium bottles generated in the School of Chemistry:

- Completely empty the bottle.
- Rinse the bottle with hot water 3 times.
- Remove the label.
- Bring the bottle to the waste compound behind Science North and place into a 720L Greyhound wheelie bin.



720L Greyhound wheelie bins

SOP for the disposal of paper waste generated in the School of Chemistry:

- Place the waste in the paper and cardboard recycling bin or the general waste bin (see photographs below).
- When the bin is full, place it outside the laboratory for collection by cleaners.



Paper and cardboard recycling bin



General waste bin

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SOP for the disposal of Irregular laboratory smalls generated in the School of Chemistry (i.e. all waste which does to fit into the waste streams handled regularly by Chemistry Stores and for which there is no specific SOP.):

- Fill out an irregular laboratory smalls waste form (see Appendix 1).
- Print a copy of this form, sign it and contact Mr. Patrick Waldron, School Hazardous Waste Coordinator, at ext. 2301 or office S0.96.
- Patrick will also ask you to email a copy of this form to patrick.waldron@ucd.ie
- After consultation with SRCL, he will provide the appropriate packaging and labelling for this waste.
- Once this waste is packaged and labelled appropriately, a time can be arranged with Patrick for the container to be brought to Chemistry Stores for collection and disposal.

School of Chemistry Hazardous Waste Management Manual

SOP for the disposal of Genetically Modified Materials generated in the School of Chemistry:

- Contact Mr. Patrick Waldron, School Hazardous Waste Coordinator, at ext. 2301 or office S0.96.
- After consultation with SRCL, he will provide the appropriate packaging and labelling for this waste.
- Once this waste is packaged and labelled appropriately, a time can be arranged with Patrick for the container to be brought to Chemistry Stores for collection and disposal.

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Irregular Lab Smalls Waste Form:

| |
|--|
| Identifying label on container (this should be written: Group - Producer - Short description) : |
| Produced by: |
| Group: |
| Description: |
| Solvents (if applicable): |
| Solutes (if applicable): <i>(including approx. concentrations)</i> |
| pH (if applicable): |
| Hazards: |
| Volume and container type: |

I declare that the above information is accurate.

Signed:

Date:

For School Hazardous Waste Coordinator's use only.

Form no.:

| | |
|-----------------------|--|
| Location of waste | |
| Classification | |
| Container type | |
| Container tag no. | |
| P.O. no. for disposal | |

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Store Compound Layout:

