



LABORATORY WASTE DISPOSAL SEGREGATION AND DISPOSAL PRACTICES

Waste Disposal Route/Container	Typical Contents	Description
Hazardous Stock Chemicals/Solvents 	<ul style="list-style-type: none"> • Old/unwanted stock chemicals • Water miscible solvents (e.g. acetone, acetonitrile, ammonia, ethanol, methanol) • Halogenated (e.g. chloroform) • Ethereal (e.g. diethyl ether) • Hydrocarbon (e.g. xylene, toluene, hexane, pentane) 	<ul style="list-style-type: none"> • Dispose of through the chemical disposal route via Biology Stores. A chemical waste Internal Transfer Note form (available for download from the Forms and Documents section of the Biology Safety website) will need to be completed • Dispose of all old/unwanted chemical stocks. Group leaders are responsible for organising disposal of chemical stocks from their laboratories before leaving the department
Autoclave Bags 	<ul style="list-style-type: none"> ✓ Solid waste contaminated with all GM microorganisms (Class 1 GMMs or above) ✓ Solid waste contaminated with ✓ Hazard Groups 1-3 microorganisms ✓ GM soil and plant material ✓ Imported soil from outside EU ✓ Tissue culture contaminated waste 	<ul style="list-style-type: none"> ✓ Waste must be treated by validated autoclave cycle ✓ All bins used to hold autoclave waste bags to be labelled 'Autoclave Waste Only' (labels available from Biology Stores) ✓ Waste that has been autoclaved is no longer considered infectious. However, all waste contaminated with Hazard Group 3 organisms must also be sent for incineration following autoclaving ✓ Solid plastic bins must only be used to hold autoclave bags if the waste is: ✓ GM' plant & soil material from CL1 labs. handling non-pathogenic organisms



***Chemical Waste Threshold Levels**

Some hazardous chemicals have threshold levels, below which they can be classified as non-hazardous (these are called 'mirror entry wastes', i.e. depending on the concentration they can be either hazardous or non-hazardous). To determine whether a 'mirror entry' waste is hazardous the chemical composition of the waste and the hazardous properties of the chemicals must be identified. It must be determined if the concentration of these chemicals are sufficient to render the waste hazardous. Threshold values are given as percentage of weight for weight i.e. the percent by weight of the hazardous component in the total weight of the waste item.

LABORATORY CONSUMABLES CONTAMINATED WITH RESIDUAL CHEMICALS (E.G. MICRO-TUBES) CAN BE DISPOSED OF IN THE 'OFFENSIVE WASTE' BAGS PROVIDED THE WEIGHT OF THE HAZARDOUS COMPONENT(S) IN THE TOTAL WEIGHT OF THE WASTE ITEM IS BELOW THE FOLLOWING RELEVANT THRESHOLD LEVELS:

HARMFUL: the concentration of a harmful substance must be <25% for it to be classed as non-hazardous

IRRITANT: the concentration of an irritant substance must be <20% (R36, R37, R38) or <10% (R41) for it to be classed as non-hazardous

CORROSIVE: the concentration of a corrosive substance must be <5% (R34) or <1% (R35) for it to be classed as non-hazardous

TOXIC: the concentration of a toxic substance must be <3% for it to be classed as non-hazardous

VERY TOXIC: the concentration of a very toxic substance must be <0.1% for it to be classed as non-hazardous

- ✓ Cat. 1 & 2 Carcinogens & Mutagens: the concentration of Cat. 1 & 2 Carcinogens & Mutagens must be <0.1% to be classed as non-hazardous
- ✓ Cat. 3 Carcinogens & Mutagens: the concentration of Cat. 3 Carcinogens & Mutagens must be <1% to be classed as non-hazardous
- ✓ Cat. 1 & 2 Toxic for Reproduction (Teratogens): the concentration of substances toxic for reproduction (Cat. 1 & 2) must be <0.5% to be classed as non-hazardous
- ✓ Cat. 3 Toxic for Reproduction (Teratogens): the concentration of substances toxic for reproduction (Cat. 3) must be <5% to be classed as non-hazardous

EXPLOSIVES: explosives do not have a threshold level (i.e. automatically classified as hazardous) unless:

- ✓ the waste has been modified to the extent that it is not explosive and/or
- ✓ the waste is not more explosive than dinitrobenzene

****Waste contaminated with the following should never be disposed of through the sewerage system:**

Antimony (*10mg/l)	Antimony (*10mg/l)	Antimony (*10mg/l)	Antimony (*10mg/l)	Antimony (*10mg/l)
Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride
Fenthion	Fenthion	Fenthion	Fenthion	Fenthion
Parathion-methyl	Parathion-methyl	Parathion-methyl	Parathion-methyl	Parathion-methyl
Tributyl-tin compounds	Tributyl-tin compounds	Tributyl-tin compounds	Tributyl-tin compounds	Tributyl-tin compounds