Hazardous Waste Disposal	Effective Date: 15 August 2022
	Amended:

1.0 Purpose

1.1 The Hazardous Waste Disposal policy applies to all staff members and students at Sunway University.

1.2 It is developed to ensure that proper procedures for the safe packaging, labelling and handling hazardous waste are followed.

2.0 Packing Hazardous Waste

2.1 Waste must be packed according to the following guidelines;

- Do not mix waste types. Always use a separate container for each type of waste.
- All material must be placed in an appropriate container that will not be degraded by the waste contents.
- Seal all containers. Leaky containers will not be accepted.
- Containers with liquid material should only be 80% full.
- Containers must be labelled with 100% of the components of the waste.

3.0 Labeling Hazardous Waste

3.1 Waste must be labelled according to the following guidelines;

- Containers in a laboratory must be appropriately labelled.
- Labelling is the responsibility of the individual laboratory or department.
- Each individual item (bottle, bag, box, etc.) must be clearly labelled with a hazardous waste label.
- All required information must appear on the label to ensure safe handling and to enable proper disposal.
- Ensure that 100% of the components of the waste are listed, even if one component is a non-hazardous substance such as water.
- Full chemical names must be used, as short forms or acronyms do not provide accurate identification.

4.0 Hazardous Waste Collection Guidelines

4.1 Lab coat, safety glasses and gloves should be worn when moving waste containers.

4.2 Waste containers must remain closed except when adding more waste into them.

4.3 Only non-hazardous chemicals can be disposed of using the sink.

4.4 Biological wastes such as those derived from cell, bacterial, and virology cultures should be treated with sodium hypochlorite solution (bleach).

- The bleach solution should be prepared in a well-ventilated area.
- An appropriate contact time of bleach with liquid waste is at least 30 minutes, after which the disinfected liquid waste can be poured down the sink and the drain flushed with water.

4.5 Biological specimens should be separated from the chemicals before being disposed of for example, formalin should be disposed of as chemical waste, whereas biological specimens should be treated as clinical waste.

5.0 Safety

5.1 When 1 pint or more of a hazardous material or any amount of an extremely hazardous substance is spilt, evacuate the room, close the door, and wait for the safety officer.

5.2 If the substance spilt is flammable, turn off all ignition sources before securing the room.

5.3 In case of chemical contact with skin or eyes, flood the affected area immediately with water; continue for at least 15 minutes.

5.4 Seek medical assistance at Sick Bay for skin irritation, contact with an extremely toxic substance, any eye injury or any adverse reaction.

5.5 All contaminated clothing must be removed immediately. Clothes must be laundered before reuse or disposed of as hazardous waste.

5.6 When incidental to one's duties, small spills (1 pint or less) may be cleaned up by laboratory personnel.

- Most strong acids may be absorbed and then neutralised with aqueous solutions of sodium bicarbonate, calcium hydroxide (slaked lime), or sodium carbonate (soda ash).
- Caustic solutions and flammable liquids may be absorbed with an inert absorbent
- Formaldehyde spills may be absorbed with an inert absorbent.
- For mercury spills, use the Mercury Spill kit, which is available in all laboratories.
- Solid spills are not usually emergencies. If the material spilt is toxic, use dampened cloths or paper towels to transfer it to plastic bags. Brushing dry material may cause dust to become airborne.

5.7 All absorbed spill material must be collected in double plastic bags or plastic containers with secure lids and disposed of as hazardous waste. If the absorbent has been used for a flammable or volatile compound, it must be stored in a well-ventilated area away from sources of ignition while awaiting pickup. A fume hood is a good temporary storage area.

Waste Category	Radioactive Waste 	Hazardous Chemical Waste 	Biological Waste 	Mixed Waste		
				Biological & Chemical	Biological & Radioactive	Chemical & Radioactive
Liquid	-use 5L plastic containers pre-filled with gel/celite as provided by waste management company -label with isotope and activity and radiation symbol -user proper shielding depending on isotope -call the EOHS office at extension 3108 to arrange for pickup	-collect in a chemical resistant container that is compatible with the waste -complete a hazardous waste label and attach to waste container -list container on waste inventory form when full and await pickup from lab	-collect in leak-proof, autoclavable containers -autoclave at 121°C for 30 min and according to Autoclave SOP -decontaminate using appropriate disinfectant	-disinfect first as biological waste, ensuring that the disinfectant is compatible with the chemicals in solution -handle remaining waste as chemical	-disinfect to eliminate biological component -handle as liquid radioactive waste	-collect waste in a compatible container -label with name of isotope and chemical(s) -call the EOHS office at extension 3108 to arrange for pickup
Solid	-use a designated container lined with a polyethylene bag -label with isotope and activity and radiation symbol -use proper shielding depending on isotope -call the EOHS office at extension 3108 to arrange for pickup	-collect in a chemical resistant container that is compatible with the waste -complete a hazardous waste label and attach to container -list container on waste inventory form when full and await pickup from lab	-collect in plastic bag labelled "Biological Waste" and autoclave at 121°C for 30 min and according to Autoclave SOP -when autoclave is complete, transfer into regular garbage bag and dispose into municipal garbage	-call the EOHS Office at extension 3108 for instruction	-call the EOHS Office at extension 3108 for instruction	-call the EOHS Office at extension 3108 for instruction
Sharps	-place in an approved sharps container with the radioactive label affixed -container must be monitored and shielded if necessary -call the EOHS office at extension 3108 to arrange for pickup	-use a puncture and leak proof sharps container -label container with contents and identify chemical contaminants -discontinue use of container when 3/4 full -list container on waste inventory form when full and await pickup from lab	-contact EOHS office at extension 3108 to obtain a puncture and leak proof sharps container with a biohazard label -discontinue use of container when 3/4 full -call the EOHS office at extension 3108 for instruction	-collect in a leak-proof, puncture resistant container -disinfect biological agents present and dispose of as chemical waste	-call the EOHS Office at extension 3108 for instruction	-collect in a leak-proof, puncture resistant container -label with radioactive symbol, name of isotope and chemical(s)
Animal & Human Pathological	-keep frozen until ready for removal -identify the isotope on the container label -call the EOHS office at extension 3108 to arrange for pickup	-call the EOHS office at extension 3108 for instruction	-keep frozen until ready for removal -call the EOHS office at extension 3108 for instruction	-keep frozen until ready for removal -clearly label the waste with the name of the chemical it contains -call the EOHS office at extension 3108 for instruction	-keep frozen until ready for removal -label with the isotope -call the EOHS Office at extension 3108 to arrange for pickup	-keep frozen until ready for removal