HAZARDOUS AND LABORATORY WASTE MANAGEMENT POLICY AND PROCEDURES

1 Policy Statement

Misamis University commits to preventing harm to people and the environment through the safe, lawful, and traceable management of hazardous and laboratory wastes. All wastes shall be minimized at source; identified and segregated where generated; contained, labeled, stored, transported, treated, and disposed of according to their hazards; and transferred only to duly authorized transporters and treatment, storage, and disposal facilities when off-site management is required. Disposal through sinks, toilets, storm drains, open ground, ordinary waste bins, uncontrolled burning, or unauthorized burial is prohibited.

This policy covers used and unused needles and other sharps; cultures and microbiological materials; animal tissues, carcasses, preserved specimens, and bedding; blood- or body-fluid-contaminated materials; reagents, solvents, acids, bases, heavy metals, formalin and formaldehyde solutions, stains, fixatives, pesticides, and other laboratory chemicals; contaminated glassware and personal protective equipment; expired chemicals; spill residues; and containers or absorbents contaminated with hazardous substances.

2 Purpose

This policy establishes institutional controls that protect learners, personnel, contractors, visitors, the community, and the environment; demonstrate compliance with applicable legal and regulatory requirements; support the University's ISO 21001 Educational Organizations Management System; and provide auditable evidence for sustainability reporting, including the Times Higher Education Impact Rankings.

3 Scope

This policy applies to the MU campuses including colleges, laboratories, clinics, research facilities, stockrooms, maintenance areas, animal-handling activities, fieldwork returning waste to campus, and temporary storage areas. It binds employees, learners, researchers, visitors, suppliers, concessionaires, service providers, tenants, contractors, subcontractors, and other outsourced entities that generate, handle, store, transport, or dispose of waste arising from University activities.

4 Definitions

Term	Definition
a. Hazardous waste	Waste that presents chemical, toxic, corrosive, reactive, ignitable, infectious, or other risks and is regulated or requires special management.
b. Sharps	Items capable of cutting or puncturing skin, including needles, syringes with attached needles, lancets, scalpel blades, pipette tips that can puncture, and contaminated broken glass.

c. Biological and infectious waste	Cultures, stocks, specimens, tissues, blood-contaminated materials, animal remains, and other materials known or reasonably suspected to contain viable biological agents.
d. Chemical waste	Discarded chemicals, mixtures, residues, contaminated materials, and containers, including solvents, acids, alkalis, heavy metals, formalin, stains, fixatives, and expired reagents.
e. TSD facility	A treatment, storage, and disposal facility authorized by the Department of Environment and Natural Resources Environmental Management Bureau.
f. Waste manifest	The prescribed tracking record documenting the transfer of regulated hazardous waste from generator through transporter to the authorized receiving facility.
g. Outsourced entity	A contractor, supplier, concessionaire, tenant, laboratory service provider, or other third party operating for or within the University.

5 Responsibilities

1. University President or authorized official	Approves the policy and ensures institutional resources and accountability.
2. Environmental Health and Safety or designated office	Maintains compliance requirements, waste-generator registrations, inventories, storage controls, manifests, contractor records, training, inspections, and incident follow-up.
3. Deans, directors, laboratory heads, and principal investigators	Implement controls in their areas; approve laboratory procedures; assign trained custodians; maintain chemical and waste inventories; and stop unsafe work.
4. Laboratory personnel, faculty, researchers, and learners	Follow segregation, labeling, PPE, spill, and disposal requirements; report incidents immediately; and never remove or abandon regulated waste.
5. Property, procurement, and finance offices	Purchase safer and right-sized materials where practicable and engage only qualified, permitted providers with enforceable waste-management clauses.
6. Clinic or health personnel	Direct the management of healthcare and infectious waste, including needles and sharps, consistent with applicable DOH requirements.
7. Contractors and service providers	Comply with this policy, applicable permits, site rules, training, reporting, manifests, and audit requirements; remain responsible for their personnel and subcontractors.
8. Security and facilities personnel	Control access to storage areas, support emergency response, and prevent unauthorized removal or disposal.

6 Procedure

6.1 Waste Prevention and Pre-Activity Planning

a. Before an activity begins, the responsible unit identifies anticipated waste streams, hazards, quantities, compatible containers, treatment or disposal route, emergency controls, and required records.
b. Units shall prioritize substitution with less hazardous materials, microscale experiments, inventory sharing, first-expiry-first-out use, and purchasing quantities that can be used before expiration.
c. No new hazardous material or waste-generating process shall be introduced without available storage, spill response, and compliant treatment or disposal arrangements.

6.2 Segregation at the Point of Generation

Waste shall be segregated immediately and shall not be mixed merely to simplify collection. Unknown waste shall be isolated and treated as hazardous until identified. The following minimum controls apply:

Waste stream	**Segregation**	**Minimum container**	**Special control**
Needles and sharps	Immediately after use; do not recap, bend, break, or remove needles by hand.	Leak-resistant, puncture-resistant, closable sharps container bearing the biohazard symbol when contaminated.	Seal at the marked fill line or not more than three-fourths full; never compact.
Cultures, stocks, plates, swabs, and microbiological materials	Separate from ordinary waste in the laboratory.	Leak-proof biohazard container or bag inside a rigid covered bin.	Validated on-site decontamination where authorized, or transfer to an authorized facility.
Animal tissues, carcasses, organs, contaminated bedding, and zoological specimens	Separate infectious, preserved, and noninfectious materials.	Leak-proof, labeled container; refrigeration or freezing when necessary to prevent decomposition.	Preserved specimens and formalin-containing materials are managed as chemical hazardous waste; no disposal in ordinary bins.
Solvents and flammable liquids	Segregate halogenated and non-halogenated streams and keep away from ignition.	Compatible, closed, grounded container where required, with secondary containment.	No evaporation as a disposal method and no drain disposal.
Acids, alkalis, oxidizers,	Separate incompatible classes	Compatible closed container	Neutralization or treatment only under an

reactives, and toxic chemicals	using safety-data-sheet information.	with secondary containment.	approved procedure by competent personnel.
Heavy metals, stains, fixatives, formalin, and expired reagents	Collect separately by hazard and chemical compatibility.	Compatible labeled container in secondary containment.	Transfer through the regulated hazardous-waste route.
Contaminated broken glass and rigid plastics	Separate from sharps when not needle-like; treat as infectious or chemical waste if contaminated.	Rigid puncture-resistant container.	Clean uncontaminated glass may follow the approved recyclable or residual-waste route.
Ordinary laboratory waste	Confirm it is free of chemical, biological, radiological, and sharps hazards.	Designated solid-waste receptacle.	Manage under the University solid-waste system.

6.3 Container Labeling

Every hazardous-waste container shall be labeled in legible English with the words HAZARDOUS WASTE or the applicable biohazard warning; the waste name and composition; principal hazards; source unit or room; accumulation start date; responsible person and contact details; and any applicable waste classification or code. Labels shall remain visible and resistant to the stored material. Containers shall not be described only as "waste," "used chemical," or "unknown."

6.4 Temporary Storage

a. Keep containers closed except when waste is being added or removed; inspect them for leakage, corrosion, incompatibility, and overfilling.
b. Provide secondary containment, ventilation where required, spill kits, fire protection, warning signs, controlled access, and separation of incompatible wastes.
c. Maintain an updated inventory showing quantity, container, location, hazard, generation date, and planned removal date.
d. Do not store waste beyond regulatory limits. The laboratory In-Charge shall arrange timely collection based on hazard, volume, storage capacity, and legal requirements.

6.5 On Site Treatment and Decontamination

On-site treatment may be performed only when authorized, risk-assessed, technically validated, and covered by a written operating procedure. Autoclaves or other decontamination systems shall have documented operating parameters, routine maintenance, operator training, and effectiveness verification using appropriate indicators. Chemical disinfection shall not be used indiscriminately and shall consider worker exposure, compatibility, and the hazardous characteristics of the resulting liquid. Treatment does not remove any requirement to manage residual chemical hazards appropriately.

6.6 Collection, Transport, and Final Disposal

1. The designated office verifies the University's applicable registration and reporting obligations as a hazardous-waste generator.
2. Regulated hazardous waste leaving the campus shall be collected only by an authorized transporter and delivered only to an authorized TSD facility permitted for the relevant waste stream.
3. The University shall use the required manifest or tracking system and retain transporter and facility permits, collection receipts, certificates of treatment or disposal, and completed manifests.
4. No employee, learner, janitor, contractor, or unverified collector may transport hazardous waste off campus or place it in municipal collection, recycling, junk-shop, septic, sewer, drainage, open-burning, or burial systems.
5. Rejected loads, discrepancies in quantity, missing manifests, or failure to provide treatment or disposal certificates shall be investigated and escalated before further engagement of the provider.

6.7 Spill Exposure and Sharps Injury Response

All faculty, staff, laboratory personnel shall stop work, restrict the area, warn others, and follow the applicable spill or exposure response procedure. Only trained persons wearing appropriate PPE may clean a spill. Needlestick or sharps injuries, splashes to eyes or mucous membranes, inhalation, ingestion, and skin exposure shall receive immediate first aid and prompt medical evaluation. Incidents and near misses shall be reported, documented, investigated, and subjected to corrective action. Emergency contacts and spill instructions shall be posted in laboratories and storage areas.

6.8 Outsourced Services and Third-Party Controls

All contracts, purchase orders, concessions, leases, and service agreements involving chemicals, laboratories, cleaning, pest control, maintenance, healthcare, animal handling, or waste management shall require compliance with this policy and applicable laws. The requirement extends to contractors, suppliers, tenants, and all subcontractors operating on campus or handling University-generated waste.

At a minimum, the agreement shall require the provider to:

a. maintain current licenses, registrations, permits, trained personnel, suitable vehicles and equipment, insurance where applicable, and emergency-response capability;
b. identify every proposed transporter and receiving TSD facility and obtain written University approval before any substitution;
c. use prescribed containers, labels, manifests, chain-of-custody controls, and certificates of treatment or disposal;
d. report spills, injuries, rejected loads, regulatory notices, permit suspension, and subcontracting immediately;
e. allow document review, site inspection, performance monitoring, and audit by the University; and

f. indemnify and protect the University as legally appropriate and correct noncompliance at its cost, without transferring the University's non-delegable responsibilities.

7. Competence and Communication

Personnel and learners shall receive role-appropriate orientation before handling hazardous materials or waste. Training shall cover hazard recognition, safety data sheets, segregation, labeling, container closure, PPE, sharps safety, spill and exposure response, emergency reporting, storage, manifests, and prohibited practices. Competence shall be evaluated through observation, demonstrations, quizzes, drills, or inspection results. Contractors shall provide evidence of equivalent competence before work begins.

8. Records

- Approved policy and implementing procedures
- Waste characterization and inventory records
- Chemical inventory and safety data sheets
- Hazardous-waste generator registration and regulatory reports, as applicable
- Laboratory inspection and storage-area inspection checklists
- Training, competency, and drill records
- Waste manifests and chain-of-custody records
- Transporter and TSD facility permit and verification records
- Collection receipts and certificates of treatment or disposal
- Contracts and outsourced-services compliance clauses
- Spill, exposure, injury, near-miss, investigation, and corrective-action reports
- Autoclave or treatment logs, maintenance records, and effectiveness-verification results
- Internal audit and management review records

Records shall be controlled, protected, retrievable, and retained according to the University retention schedule and any longer period required by law or permit conditions.

9. Monitoring and Evaluation

The designated office shall monitor implementation through routine inspections, waste inventories, manifest reconciliation, contractor verification, incident analysis, internal audit, and Management Review. At minimum, the University shall evaluate:

- quantity of hazardous waste generated by type and unit;
- percentage of regulated waste supported by a completed manifest and certificate of treatment or disposal;
- percentage of laboratories passing waste-segregation and labeling inspections;

- number and severity of spills, exposures, needlestick injuries, unauthorized disposal events, and overdue corrective actions;
- percentage of assigned personnel and contractors with current training; and
- contractor permit validity and service-performance results.

Results shall inform risk controls, procurement, laboratory design, training, resource allocation, corrective action, and continual improvement. Significant legal noncompliance, uncontrolled release, or serious injury shall be reported promptly to University leadership and relevant authorities when required.

10. Review and Continual Improvement

This policy shall be reviewed at least annually and whenever there is a change in law, permit, process, facility, waste stream, incident trend, audit finding, contractor, ISO requirement, or sustainability-reporting criterion. Corrective actions shall address root causes and be verified for effectiveness. Good practices and lessons learned shall be communicated across relevant units.

11. Noncompliance

Noncompliance may result in suspension of work, removal from the laboratory or campus, corrective or disciplinary action under University rules, contract sanctions, recovery of response and disposal costs, and referral to regulatory authorities, without prejudice to applicable civil, administrative, or criminal liability.

12. Related Documents and Legal References

Reference	Application
ISO 21001	Educational organizations management systems, particularly risk-based planning, resources and safe operational environment, competence, control of externally provided processes, operational control, documented information, performance evaluation, corrective action, and continual improvement.
Republic Act No. 6969	Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990.
DENR Administrative Order No. 2013-22	Revised Procedures and Standards for the Management of Hazardous Wastes, including generator, transporter, TSD, storage, labeling, manifest, contingency, and training requirements.
Republic Act No. 9003	Ecological Solid Waste Management Act of 2000; ordinary solid waste controls do not authorize mixing regulated hazardous waste with municipal waste.
Republic Act No. 11058 and applicable OSH rules	Occupational safety and health requirements, including safe workplaces, information, training, PPE, and incident controls.
DOH Health Care Waste Management Manual and applicable DENR-DOH issuances	Guidance for infectious waste, sharps, segregation, treatment, and safe disposal where applicable.

University documents	EOMS Manual; Chemical Hygiene or Laboratory Safety Manual; Biosafety Manual; Emergency Preparedness and Response Procedure; Procurement Policy; Contractor Safety Rules; Documented Information Control Procedure; Records Retention Policy; and Solid Waste Management Policy.

APPROVED BY:

KAREN BELINA F. DE LEON, M.D.,Ed.D
Vice Chair, Board of Directors / University President