

# FNU HAZARDOUS MATERIAL MANAGEMENT POLICY FOR RESEARCHERS

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# 1.0 Purpose

The purpose of this policy is to provide directions for properly managing hazardous material used in research projects at FNU. The policy also aims to reduce and eliminate researchers' risk of working with the hazardous material. FNU uses hazardous materials in research, and to eliminate their adverse effects, proper ordering, storage, use, and disposal are required. Therefore, only trained personnel, including research supervisors (who are adequately trained on managing hazardous material), must be allowed to monitor its use for research at FNU. Research students should only handle hazardous material under the close supervision of their supervisors.

# 2.0 Application

This is a University-wide policy that includes all FNU academics and professional staff, HDR candidates, and external researchers undertaking research at FNU.

# 3.0 Definitions

For the purpose of this policy, the following definitions shall apply:

Hazardous Material	any substance that poses a potential or actual hazard to human health and safety or the environment when improperly treated during its application, transport, storage, and disposal. The material is hazardous because of its ignitable, toxic, reactive, corrosive, application, reactive, corrosive, application, and the same set of the s
	explosive, radioactive, or infectious nature.

- Hazardous Waste is any hazardous material considered without future need, either as excess material, material that has expired, and cannot be used, or material with unacceptable properties.
- Material Safety Data Sheet Material Safety Data Sheet (MSDS) is a technical document that provides information on a controlled product related to producer and product name, physical data, handling, storage, hazardous ingredients/identification, fire or explosion, hazards data, and measure to protect users. Safety Data Sheet (SDS) is simultaneously used for MSDS in different country classifications.
- **Research Student** means students enrolled in any Higher Degree by Research programme at FNU.



# 4.0 Methods for Managing Hazardous Material

#### 4.1 By Trained Personnel, Supervisors and Researchers

- a. Only trained persons are allowed to handle or use hazardous material while conducting research.
- b. Supervisors are required to be trained at a level equal to their duties to handle hazardous material in their disciplines.
- c. All lab demonstrators, lab and field technicians working with researchers are required to be trained to manage (handle, use, and dispose of) hazardous material.
- d. Student researchers shall be provided adequate training by the supervisors or lab demonstrators, or lab/field technicians on handling hazardous material. All student research shall be conducted under the close supervision of their research supervisors or lab demonstrators, or lab and field technicians.

# 4.2 Supervision

All research involving the use of hazardous material and its management shall be undertaken under close supervision. Every research student must have a qualified supervisor trained adequately to handle hazardous material.

# 4.3 Orientation, Induction and Training

All researchers shall go through the orientation, induction, and training process before handling or using hazardous material. It is the responsibility of every College Dean or ADR to administer the orientation, induction, and training on the management of hazardous material. Note: different Colleges and disciplines may use different material classified as a hazardous material and may have different handling procedures. Therefore, specific training must be provided to the researchers by the Colleges.

# 5.0 Ordering Hazardous Material

The following general rules have to be applied when hazardous material is ordered for research purposes at FNU:

- a. College Deans or ADRs should authorise the order for the purchase of hazardous material for research.
- b. Excessive hazardous material has to be avoided; therefore, inventory is to be checked before ordering hazardous material to ensure that only required material and quantity are purchased.
- c. Hazardous material is to be purchased in the smallest quantities available, which meet the maximum usage requirements for a reasonable time to minimise hazardous waste.
- d. Purchase orders used for ordering hazardous material must contain the name of a person responsible for handling the material in their respective Colleges endorsed by the Dean or ADR.
- e. Purchase order information has to be entered into the College Inventory System when the material is received by the person who ordered the hazardous material and signed off by the Dean or ADR.
- f. A bar code label has to be affixed to the container of the hazardous material, including the expiration date of the hazardous material.



# 6.0 Use of Hazardous Material for Research

While using hazardous material for research purposes, the following procedure must be followed:

- a. Supervisors, lab demonstrators, lab and field technicians who are using hazardous material have to read the Material Safety Data Sheet (MSDS) to be informed of how to use the hazardous material.
- b. Research students shall be allowed to use hazardous material, where necessary, under strict guidance and supervision of trained staff, research supervisors, lab demonstrators, or lab and field technicians.
- c. Supervisors, student researchers, lab demonstrators, lab and field technicians handling or using hazardous material have to use Personal Protective Equipment (PPE), as noted in the MSDS or as indicated in the FNU Occupational Health and Safety (OHS) policy.
- d. Supervisors, student researchers, lab demonstrators, lab and field technicians handling explosive material have to use protective shielding following the directions in the MSDS.
- e. The labelling of hazardous material containers must be up to date and accurate.
- f. Containers of hazardous material are not to be left on bench tops or in the field when not in use. They have to be returned immediately to appropriate cabinets for safekeeping after use by persons trained to handle hazardous material.

# 7.0 General Rules for the Storage of Hazardous Material for Research Purposes

- a. Hazardous material has to be stored in indoor or outdoor storage facilities following the manufacturers' Material Safety Data Sheet (MSDS) or label warnings and the appropriate sections of FNU OHS policy.
- b. All hazardous material must be stored in appropriate containers in appropriate storage cabinets, flammable material storage cabinets, special cabinets, or lockers until its use.
- c. Inventory must be updated continuously and accurately.
- d. Each container has to be adequately labelled with:
  - i. the material name;
  - ii. the quantity or volume;
  - iii. the concentration(s);
  - iv. the date the material was received; and
  - v. the expiry date of the material.
- e. Storage rooms have to be equipped with exterior signs to show a warning of hazardous material stored on-site according to Fiji laws on signs for storage of hazardous material.
- f. Hazardous material should be returned immediately to storage for safekeeping after use.
- g. Hazardous material has to be separated from non-hazardous material during storage.
- h. All hazardous material stored together must be compatible. Incompatible material should be separated by storing them in separate cabinets or shelves. Generally,



classifications such as ignitable, toxics, reactive, corrosives, explosives, radioactive, and infectious should be segregated.

- i. Only trained persons in their respective Colleges are allowed to handle hazardous material; therefore, the material has to be securely locked.
- j. Inventories have to be reviewed at least once a year, and waste has to be separated and disposed of as hazardous waste by trained persons in their respective Colleges or by qualified vendors outsourced by FNU.

# 8.0 Waste Minimisation

All researchers at FNU are encouraged to reduce the amounts of hazardous waste produced by the University for research purposes. Waste minimisation reduces the expenses of disposal costs and pollution. Each College should develop its own procedure in minimising waste; however, the following waste minimisation principles should be followed:

- a. Reactive waste should be purchased in quantities that are assured of being used within the time-frame indicated by the producer. Containers of the material should be labelled with the date they are opened.
- b. Quantities of hazardous material have to be minimised. The disposal cost of waste is much greater than the saving on volume discounts. In addition, smaller inventories reduce potential hazards, thus minimising the risks and severity of accidents.
- c. Waste reduction can be achieved by transferring unopened or unused hazardous material to laboratories where it can be used.
- d. Hazardous material should be substituted with non-hazardous or less hazardous material, wherever possible, to reduce hazardous waste. The use of potentially explosive material is to be avoided whenever possible.
- e. The generation of 'unknowns' is to be prevented by incorporating maintenance schedules and inspections of laboratory inventories. Container labels have to be replaced if faded, and outdated and unwanted hazardous material has to be disposed of.

# 9.0 Approving Agency

Senior Management Group

#### 10.0 Revision Log

This table will be used to insert the dates of the different versions made on the policy.

Version	Date of Approval	Comment
1.0	21 September 2020	Approved by SMG
2.0	2 March 2021	Approved by Senate

#### 11.0 Policy Sponsor

Pro Vice Chancellor Research



# 12.0 Contact Person

The following person may be contacted in relation to this policy: <u>EO-PVCR</u> Office of the Pro Vice Chancellor - Research Fiji National University Phone: +679 3394000 Extension: 2042

# 14.0 References

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Sutton, P., 2006. Transforming medical waste disposal practices to protect public health: Worker health and safety and the implementation of large scale, off-site steam autoclaves. In Annual Meeting.

WHO. 2002. Fundamentals of health-care waste management. (Online) Available at: <u>https://www.who.int/water\_sanitation\_health/medicalwaste/en/guidancemanual1.pdf</u> (Accessed: 4<sup>th</sup> March 2020)

WHO. 2014. Safe management of wastes from health-care activities. (Online) Available at: <a href="http://www.euro.who.int/\_\_\_data/assets/pdf\_file/0012/268779/Safe-management-of-wastes-from-health-care-activities-Eng.pdf">http://www.euro.who.int/\_\_data/assets/pdf\_file/0012/268779/Safe-management-of-wastes-from-health-care-activities-Eng.pdf</a> (Accessed: 4<sup>th</sup> March 2020)

#### Other information used

WHO- Information Sheet: Handling, storage, and transportation of health-care waste. (Online) Available at: <u>https://www.who.int/water\_sanitation\_health/medicalwaste/061to076.pdf</u> (Accessed: 4<sup>th</sup> March 2020)