PROCEDURES: MANAGING HAZARDOUS CHEMICAL SUBSTANCES IN THE FACULTY OF SCIENCE

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Related documents

UJ documents (e.g. Policies, Regulations, Guidelines, Contracts)	**Other** (e.g. Legislation, DoE and HEQC directives and guidelines) • •
Stakeholders affected by this document (units and divisions who should be familiar with it):	•
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CONTENT

1. PREAMBLE

The UJ recognizes the right of persons on its premises to an environment that is not harmful to their health. The amended occupational health and safety act (Act No 85 of 1993) (OHSA) requires that UJ as employer, should bring about and maintain, as far as is reasonably practicable, a work environment that is safe and without risk to the health and safety of employees and other persons.

This holds true for work with Hazardous Chemical Substances (HCS). HCS is defined in the HCS regulations under the OHSA as 'any toxic, harmful, corrosive, irritant or asphyxiant substance, or a mixture of such substances for which an occupational exposure limit is prescribed, or an occupational exposure limit is not prescribed; but which creates a hazard to their health'. The HCS regulations apply to 'an employer… who carries out work at a workplace which may expose any person to the intake of a HCS at the workplace'.

Every division/unit in the Faculty of Science which may expose a person to an HCS is herewith included under the scope of this policy.

2. PURPOSE

To eliminate and mitigate the risks to health for employees and persons potentially exposed to HCS.

This purpose will be achieved by

- Identifying all applicable HCS;
- Application of appropriate risk reduction strategies;
- By ensuring safe storage and handling of chemicals;
- Carrying out medical surveillance of personnel involved in the handling of HCS, for possible effects on their health as a result of any such exposure;
- Monitoring workplaces where exposure to HCS may take place
- To ensure compliance with the requirements of South African law, notably:
  - Integrated Pollution and Waste Management Act.
  - Occupational Health and Safety Act 85 of 1993.
  - National Environmental Management Act
  - Hazardous Chemical Substances regulations, 1995
  - Hazardous Substances Act

3. KEY WORDS

Hazardous Chemical Substance
Chemical risk management
Exposure risk
Air monitoring
Assessment of potential exposure
Medical Surveillance
Chemical Hygiene Plan

4. DEFINITIONS

"Assessment" means a programme to determine any risk from exposure by any route of intake to a hazardous chemical substance associated with any hazard thereof at the workplace to identify the steps needed to be taken to remove, mitigate or control such hazard

"Air monitoring" means the monitoring of the concentrations of airborne HCS

"Hazard" means a source of or exposure to danger

''Hazardous Chemical Substances" (HCS) means 'any toxic, harmful, corrosive, irritant or asphyxiant substance, or a mixture of such substances for which an occupational exposure limit is prescribed, or an occupational exposure limit is not prescribed; but which creates a hazard to their health'

"Monitoring" means the planning, carrying out and recording of the results of a measurement programme

"Risk" means the probability that injury or damage will occur

"Engineering control measures" means control measures that remove or reduce the exposure of persons in laboratories by means of structural installations designed for this purpose, included for example, but not limited to, air extractors, forced air ventilation equipment, emergency showers and washbasins, etc.

"Personal Protective Equipment" (PPE) refers to protective clothing, helmets, goggles, or other garments or equipment designed to protect the wearer's body from injury. The hazards addressed by protective equipment include physical, electrical, heat, chemicals, biohazards and/or airborne particulate matter.

"Occupational Exposure Limits" (OEL) means a limit value set by the Minister for a stress factor in the workplace as revised from time to time by a notice in the Government Gazette.

"Medical surveillance" means the measurement of potential health effects of an HCS on an employee, from absorption to clinical disease, and includes biological monitoring to measure the extent of absorption and medical screening to detect adverse effects of the HCS on the employee.

"Respirator zone" is an area where respiratory protection is required if engineering and administrative controls and work practices are not adequate to control worker exposure to airborne contaminants to safe levels.

"Intake" includes inhalation, ingestion or absorption through the skin or mucous membranes

5. PROCEDURES

A structured approach has been followed in terms of the management of HCS at the University of Johannesburg. The procedures as laid down below must at all times be followed to ensure safe handling and storage of HCS.

5.1 HAZARDOUS CHEMICAL INVENTORY

Each chemical storage facility on campus or laboratory using any hazardous chemicals shall ensure that a full inventory of such HCS as provided in this procedure is completed within three months of the coming into force of this procedure document. The senior laboratory technician, manager of a department or any other person with the responsibility to manage HCS shall ensure that the relevant hazardous chemical substance inventory is fully completed and maintained in an up to date version at all times. In instances where HCS are limited to research laboratories, each supervisor is responsible for this inventory and the upkeep thereof.

This section must be read together with section 5.2: Material Safety Data Sheets. No hazardous chemical may be brought into any area within the campus without the appropriate MSDS being readily available for such HCS.

5.2 MATERIAL SAFETY DATA SHEET (MSDS)

No chemicals may be stored or used within any area unless the relevant and appropriate MSDS data sheets are readily available in a print or electronic copy format at all times. The MDSD's must also be correlated with the inventory list as considered above. It is the responsibility of each department with an inventory list(s) to provide direct access to either the print or electronic copy format of MSDS's. In most instances, the supplier of HCS has accompanying MDSD's information and is appropriate for use.

Prior to HCS being used the MSDS must be available to the user who must first familiarize him or herself with the hazards attached to such hazardous chemical substance when work commences with such substances.

The MSDS's must meet the requirements of the Regulations for HCS in that they must contain the full sixteen paragraphs as contained in those regulations. Supplier of HCS with accompanying MDSD's information will comply and are updated regularly.

MSDS's not provided by suppliers must be reviewed and revised at least every five years to ensure that the relevant parties are in possession of the updated MSDS's.

5.3 CHEMICAL STORAGE

All HCS should be stored safely and securely with due regard to the appropriate separation and segregation of incompatibles.

The safe storage of chemicals is essential to provide for the effective management of chemicals, lessen the risk of fire, prevent accidental mixing in emergencies, and to minimise exposure to corrosive and toxic chemicals.

The person who brings, or causes others to bring, HCS on to a campus of the UJ will be responsible for the safe and controlled storage, use and disposal of such substances. This responsibility cannot be avoided or abdicated.

The safe storage of HCS will be done in secure spaces with restricted access under the supervision of the responsible person. These secure spaces could be cupboards, rooms or cages, as appropriate.

5.4 LABELING OF HAZARDOUS SUBSTANCES

The University shall, to avoid the spread or contamination of an HCS, take steps, as far as is reasonably practicable to ensure that the HCS (or its container) in storage, to be distributed or transported are property identified, classified and handled.

No chemicals may be stored or used within any area unless the containers are appropriate for the HCS and are correctly labelled. Original labels on containers of purchased HCS should be preserved and be replaced in the event of damage.

In the event of any HCS being decanted from the primary container into a secondary container, such containers need to be labelled with the identical information as the primary container.

5.5 ASSESSMENT OF HAZARDOUS SUBSTANCES

The Hazardous Chemical Substances Regulations require that suitable and sufficient chemical hazard risk assessments must be carried out in advance of work commencing. This assessment may be carried out in house. However, it is highly recommended that an approved inspection authority be considered for this purpose and, if not, the person carrying out the assessment must be competent and experienced to do this.

The Occupational Health Practice conducts biennial risk assessments and surveys as the OHS-Act requires (since 2004) and acts appropriately in mitigating any identified risks involved.

5.6 WORKPLACE AIR MONITORING

Approved Inspection Authorities conduct these assessments in a cyclic fashion in accordance with the recommendations by the Occupational Medicine Practitioner.

In the case where the assessment identifies that persons may be exposed to occupational exposure levels (OEL) in excess of those stipulated in the legislation or where it cannot be confirmed that the OEL is below the limit then an approved inspection authority must carry out air monitoring where required.

5.7 MAINTENANCE, INSPECTION AND TESTING OF ENGINEERING CONTROL MEASURES

All aspects pertaining to the above have to be dealt with by UJ's division of Operations and fall under the auspices of the ED Operations. The current lack of such measures should by no means negate the importance of the implementation thereof.

5.8 HAZARDOUS CHEMICAL WASTE DISPOSAL

HCS waste disposal has been implemented in appropriate and relevant areas as per OSH act by the relevant divisions/sections of UJ.

5.9 HAZARDOUS CHEMICAL SPILLS AND EMERGENCIES

Suitable spill kits appropriate to the size of the spills that could be expected to generally occur within the laboratories must be provided and made use of. This would require the relevant training of the appropriate staff within these areas.

In the case of a spill that would be declared an emergency or of such a nature that it could not be deemed a minor spill the waste disposal contractor must be called to deal with such emergency and the normal waste procedure as listed above must be followed.

All staff and students should act responsibly and immediately call Campus Security on ext. 2555 to deal with emergencies.

5.10 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Each area where HCS are used must ensure that an assessment is carried out as to what PPE is required for the safe usage of the HCS.

On establishing what PPE is required such PPE must be issued to all employees or students concerned and must be made available for visitors to relevant areas.
If PPE is required for the safe usage of the HCS, its use is compulsory to all relevant persons.

The policy of UJ in respect to students requiring PPE must be applied.

Disposable PPE must be deemed hazardous waste and must be treated accordingly.

5.11 RESPONSIBLE PERSONS

A person who will be deemed responsible for the implementation of this procedure needs to be identified in each department of the faculty or area where HCS are to be used, must be identified and accordingly appointed in writing.

This person will form part of the HCS committee *proposed* in section 5.13.

5.12 CHEMICAL HYGIENE PLAN

A plan will be developed and implemented within one year from final approval date of the policy and procedure to ensure compliance with the Act.

5.13 HAZARDOUS CHEMICAL SUBSTANCES COMMITTEE

The Faculty shall form a Hazardous Chemicals Committee and such committee is to be chaired by the Safety Manager or alternately by the Occupational Medical Practitioner.

The committee serves in an advisory capacity to the Executive Dean to comply with the Occupational Health and Safety Act (85 of 1993).

The HCS Committee cannot be held legally responsible for non-compliance with the OHS Act. This responsibility lies with line management.