Spill Kit Planning Guideline

WHS-PRO-GUI-010f

Intent

This document forms a part of the laboratory safety series and outlines the base guidelines for spill management in laboratories and workshops to assist laboratory and workshop users in chemical and biological spill management in James Cook University (JCU) facilities.

Scope

The requirements of this guideline are mandatory for safe spill management and to ensure the safety of persons, JCU facilities and the environment when stored in a general space identified as:

- A laboratory;
- Associated storerooms or spaces which are support areas to the laboratory; and
- Should be applied where other locations that are not laboratories have equipment or processes mentioned within this guideline. Such examples would be fuel storage.

This guideline applies to all JCU employees, adjuncts, students, visitors, volunteers and contractors conducting activities associated with laboratories for the purpose of:

- Research;
- Teaching;
- Study;
- Maintenance or construction and/or
- Cleaning.

Worker	A person who carries out work in any capacity for JCU, and includes working as: an employee a volunteer an apprentice or trainee a student gaining work experience (paid or unpaid) a contractor or subcontractor and their employees labour hire company employees assigned to work for JCU.
Workplace	A workplace is the place where work is carried out for JCU and includes any place where a Worker goes, or is likely to be, while at work.
Workshop	Space identified by JCU Estate Directorate and the relevant Division as a Workshop.

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1 Duty Obligations and Responsibilities

1.1 James Cook University

JCU is responsible for:

- Maintaining laboratories to the minimum standard that is outlined in the relevant Australian Standards and managing spills.

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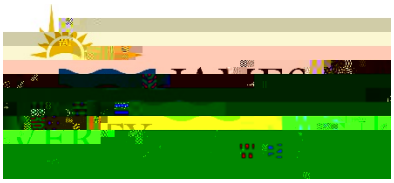


- Universal Spill Absorbent: 1:1:1 mixture of Flor-

3.2 Cytotoxic Spill Kit

Kit inclusions:

- Disposable face mask / eye protection fluid-shield;
- Half face respirator mask and P2 ABE1 cartridge set;
- Chemical safety goggles;
- Single use disposable nitrile gloves, (inner level protection) 2 pairs;
- Single use long cuff heavy-duty nitrile gloves, (outer level protection) 2 pairs;
- Disposable laminated plastic full body overalls, 2 units, 1 x medium & 1 x large;
- Protective over shoe covers (non skid), 2 pairs;
- 1 scooper and scraper, 1 set;
- Absorbent cleaning cloths, 2 units;
- Lilac cytotoxic waste bags with ties, 2 units;
- Unisafe absorbent powder, 2 x 100gm unit, absorbs in excess of 2.5 litres;
- Virkon, Trigene, 70% Ethanol disinfectant;
- Cytotoxic waste bins, well marked, comply to Australian Standards.

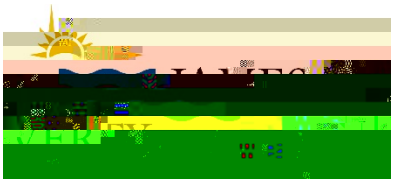
3.3 Mercury Spill Kit

Kit inclusions:

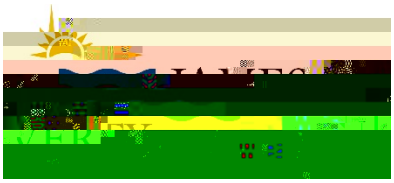
- Disposable face mask / eye protection fluid-shield;
- Half face respirator mask and P2 ABE1 cartridge set;
- Chemical safety goggles;
- Single use disposable nitrile gloves, (inner level protection) 2 pairs;
- Single use long cuff heavy-duty nitrile gloves, (outer level protection) 2 pairs;
- Disposable laminated plastic full body overalls, 2 units, 1 x medium & 1 x large;
- Protective over shoe covers (non skid), 2 pairs;
- 1 scooper and scraper, 1 set;
- Absorbent cleaning cloths, 2 units;
- Lilac cytotoxic waste bags with ties, 2 units;
- Unisafe absorbent powder, 2 x 100gm unit, absorbs in excess of 2.5 litres;
- Virkon, Trigene, 70% Ethanol disinfectant;
- Cytotoxic waste bins, well marked, comply to Australian Standards.

It is advisable to buy a commercial kit for Mercury spill kits.

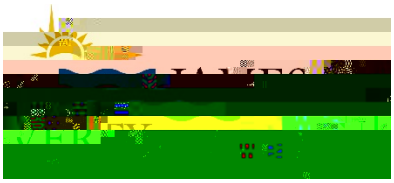
4 Tabulated Spill Kit Neutralisers & Additional Information



Cleaning Items	Scooper and scraper.	
Absorbents/ Neutralisers / Disinfectant	See specific areas below; Provide appropriate supply for quantity that could be spilled.	
GENERAL SPILLS		
Absorbents	• Universal – pads, booms, pillows, vermiculite, granular, and loose sorbents.	
Additional Information	These universal/commercial absorbents may be used for most liquid chemical spills; Check the product label or other manufacturer's information for recommended uses and compatibility.	
PPE	A P2 dust mask/ABEK chemical cartridges will apply to the majority of acids, bases, organics and aerosol; HG filter for large quantities of mercury; P2 for biological spills.	
CORROSIVES – Acids		
Neutralisers	Weak bases Sodium carbonate (soda ash); Sodium bicarbonate; Calcium carbonate.	Commercial neutralizers Ensure that commercial brought products are suitable for purpose against the SDS.
Additional Information	Okay to neutralize Hydrochloric acid; Sulfuric acid; Nitric acid; Phosphoric acid; WARNING: DO NOT USE PAPER TOWELS OR SAWDUST TO CLEAN OXIDISING ACID SPILLS; The safety data sheet must always be consulted when dealing with these types of spills. In particular the hazards of the chemical (including acute and chronic health effects), reactivity information, safety precautions for handling and specific information for dealing with spills.	Do not neutralize Acids that contain heavy metals; Oxidizing acids such as chromic acid, perchloric acid, and fuming nitric acid.
PPE	• Gloves example PVC, Viton butyl; • P2 respirator.	
CORROSIVES – Bases		
Neutralisers	Weak acids Citric acid; Sodium bisulfate; Dilute acetic acid (vinegar); For small spillages of acids use dry sand or carbonate to contain spill; The area should be flushed with water but not to the extent that the spillage is spread unnecessarily; Neutralise an acid with sodium bicarbonate by sprinkling generously over spill.	Commercial neutralizers Ensure that commercial brought products are suitable for purpose against the SDS.
PPE	Gloves example PVC, Viton butyl, nitrile; P2 respirator.	
FLAMMABLE LIQUIDS and SOLVENTS		
Absorbents	Activated charcoal; Soda ash (sodium bicarbonate) to sprinkle liberally over the spill. If necessary wear a P1 mask to avoid breathing soda ash dust.	



Additional Information	Absorbents reduce vapour level; Degree of flash point reduction depends on quantity used. Refer to manufacturer's directions; Absorbents may also be used for other toxic, noxious liquids such as carbon tetrachloride and chloroform; Do not use these absorbents with oxidizing liquids.
PPE	ABEK1 chemical filter on respirator if potential for large spills.



Schedules/Appendices

Work Health and Safety Act 2011
Work Health and Safety Regulation 2011
Managing Risks of Hazardous Chemicals in the Workplace Code of Practice 2013
How to Manage Work Health and Safety Risks Code of Practice 2011