

Cytotoxic Drugs and Related Waste Operating Procedure

1. Scope

Cytotoxic waste is material that is, or may be, contaminated with a cytotoxic drug during the preparation, transport or administration of chemotherapy. Cytotoxic drugs are toxic compounds known to have carcinogenic, mutagenic and/or teratogenic potential.

This policy applies to all Cytotoxic Drugs and Related waste (refer to definitions in Section 5) from The University of Queensland campuses and sites (where site-specific EMSs are not in place).

For distinction within the University environment, only those drugs that fit the following criteria **and** are used in a therapeutic capacity and/or disposed of at such concentrations as still pose a cytotoxic risk are included as cytotoxic wastes:

- Cytotoxic drugs and related waste
- Any disposable laboratory consumables that may have become contaminated
- Sharps and pharmaceuticals
- Animal carcasses and cage linings only if they are contaminated
- Animal waste if contaminated with cytotoxic waste.

This policy **excludes** the following:

- Any cytotoxic materials (as defined above) in an experimental environment (excluding those administered to human patients) **and** are at a concentration less than that that will pose a cytotoxic risk;
- Animal carcasses –uncontaminated (refer 7D Animal Waste);
- Cage lining – non infected or uncontaminated (sawdust, animal faeces, fur and lining) (refer 7D Animal Waste), and
- Clinical and Related Waste (refer to 7B)
- Cadavers (human).

2. Objectives

- Segregate contaminated waste from other waste streams;
- Ensure that the cytotoxic drugs and related waste is managed in an environmentally sound manner;
- Comply with environmental and health legislation as well as waste disposal regulations; and
- Avoid risk to health, safety and the environment.

3. Procedure

- Procedures at some campuses and sites are different. **Please refer to site specific work instructions for collection times, contacts and other details for your campus or site.**
- To ensure safe and correct handling and disposal of Cytotoxic Drugs and Related Waste, refer to:
 - Guide for Handling Cytotoxic (Anti neoplastic) Drugs and Related Waste. It may be accessed at:
http://www.deir.qld.gov.au/workplace/resources/pdfs/cytotoxicdrugs_guide2006.pdf
- Regardless of campus or site, the following measures must be taken for disposal of wastes.

3.1 Bins and Receptacles

- All Cytotoxic Drugs and Related wastes must be placed in purple sharps containers and/or purple liners and waste bins with the white telophase cytotoxic symbol.
- Purple bin liners are available from the UQ Central Store: Please refer to:
<http://www.pf.uq.edu.au/StoresCatalog.html>
- The bins should be identified as 'Cytotoxic waste – incinerate at 1100°C'.



3.2 Waste at Source (e.g. Laboratories)

Cytotoxic Drugs and Related Waste must be managed as follows:

- The bags/bins shall be removed from the initial collection containers and sealed before transferring to the contractor supplied purple 240 litre wheelie bins for collection from a dedicated storage area.
- Glass bottles with liquid waste should be wrapped in bubblewrap and/or absorbent material to avoid breakages.
- Cytotoxic waste bins should be located as close as practicable to the site of generation to minimize the handling and transport of cytotoxic waste from the site of generation.
- Bins should be emptied at least weekly or before the volume in the bin exceeds two thirds the volume of the liner or 6 kilograms, whichever is the lesser, and kept in a secured area.

3.3 Collection for Disposal

Cytotoxic Drugs and Related Waste must be:

- Collected in purple liners and transferred to the purple, 240 litre wheelie bins.
- Put out for collection within 7 days of being generated. Wastes shall be held for as long as possible (without exceeding the 7 day limit) to fill the bin.
- A wheelie bin need not be full if the contents of the bin require immediate disposal and the volume cannot be made up. For perishable waste, try to prolong the disposal time (eg. Refrigeration) then transfer to fill a bin for disposal.
- When bins are placed in public areas they must be locked at all times. Lost locks will be replaced and charged to the University. Where possible, Property and Facilities will recover these charges from the school or centre.

3.4 Storage

All bins used to store Cytotoxic Drugs and Related Waste must be:

- Placed in such a manner as to reduce the risk of spill and/or contamination. Schools and Centres should ensure that a cytotoxic waste collection area is:
 - a dedicated storage area with adequate lighting and ventilation. This may be situated within the main waste storage area, provided there is adequate room to separate cytotoxic waste material from the other waste streams.
 - able to be secured.

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- located away from stormwater drains and other sensitive areas.
- designed for ease of cleaning, decontamination and maintenance of hygiene standards.
- appropriately signed for the type of waste stored.
- Cytotoxic waste should be stored in containers (identified as being used for cytotoxic waste) that are capable of being secured. These containers are not to be re-opened on-site once they have been secured.

3.5 Spills

- Every School and Centre that generates or operates with Cytotoxic Drugs and Related waste must hold equipment to, and have staff who are trained to carry out cleanup of spills. Please refer to the Guide for Handling Cytotoxic (Anti neoplastic) Drugs and Related Waste and/or National Guidelines for Waste Management in the Health Care Industry for further information.
- Schools and Centres are responsible for the wastes until the time the contractor arrives to take it from the collection area.
- Spills of any wastes must be cleaned up by the generating school or centre. Any school or centre that has a spill will be instructed by Security to effect clean up.

In the event that a Cytotoxic Drugs and Related Waste bin has spilled its contents, contact

Security on 53333 or other nominated person on your campus/site.

3.6 Transporters of Cytotoxic Drugs and Related Waste

- Cytotoxic Drugs and Related Waste shall be collected and transported only by a person or company with a licence for handling regulated wastes (cytotoxics). A copy of the licence cover sheet must be supplied by the contractor to the University before any waste is removed from site;
- No University or private vehicle is to be used to transport Cytotoxic Drugs and Related waste generated by the University; and
- Transportation shall be in accordance with the Transport Operations (Road Use Management) Act 1995.

Attention

Cytotoxic Drugs and Related Waste (eg. contaminated animal carcasses) must not be placed in the Animal waste that is sent out to the Pinjarra Hills incinerator. This facility is not licensed to accept such waste.

4. Responsibilities

Table 4 outlines responsibilities for Cytotoxic Drugs and Related waste disposal:

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Laboratory technicians, Researchers, Academic staff, Clinical, Medical staff, Consultants, Animal attendants and Postgraduate students.	<ul style="list-style-type: none"> ● Segregate the Cytotoxic Drugs and Related wastes from other wastes; ● Use clearly labelled, purple containers for Cytotoxic Drugs and Related Waste; ● Tightly seal cytotoxic wastes bags/bins, prior to disposal in the Cytotoxic Drugs and Related 240 litre purple waste bins; ● Lock the purple Cytotoxic Drugs and Related Waste wheelie bins, and place them in a dedicated area for collection; and ● Hold all necessary equipment to clean and disinfect the area, in the case of accidental spillage.
Heads of Schools and	<ul style="list-style-type: none"> ● Ensure that students and staff are trained in the operating procedure for

Centres	Handling Cytotoxic Drugs and Related Waste.
Property and Facilities Division	<ul style="list-style-type: none"> • Provide contractual Cytotoxic Drugs and Related Waste collection service; • Liaise with Heads of Schools and Centres, and Executive Officers to ensure that the Cytotoxic Drugs and Related Waste management is effectively carried out at the University campuses; and • Review the Cytotoxic Drugs and Related Waste procedure at least every 3 years.

5. Definitions

5.1 *Cytotoxic Drugs and Related Waste*

Cytotoxic waste includes any residual cytotoxic drug following patient treatment and the materials or equipment associated with the preparation, transport or administration of cytotoxic drug therapy such as:

- cytotoxic pharmaceuticals passed recommended shelf life, or returned from patients
- sharps and syringes
- IV infusion sets and containers
- ampoules and vials
- the cotton wool from bottles containing cytotoxic drug
- remaining solutions, expired or contaminated stock
- HEPA filters
- contaminated PPE - gloves, disposable gowns and shoe covers, etc
- swabs and materials used to clean and contain spills
- dressings and bandages
- contaminated cleaning equipment (mops, cloths).

5.2 *Experimental Use*

Cytotoxic wastes generated as a result of experimentation or research, not involving a patient (either human or animal) constitutes wastes generated as a result of experimental use.

5.3 *Therapeutic Use*

Any cytotoxic waste generated as a result of treatment of patients (either human or animal) is generated as a result of therapeutic use.

5.4 *Waste*

Under Section 13 of the Environmental Protection Act, 1994, **waste** is defined as “any gas, liquid, solid or energy (or a combination of wastes) that is surplus to, or unwanted from, any industrial, commercial, domestic or other activity, whether or not of value.”

6. References

- Environmental Protection Act 1994
- Environmental Protection (Waste Management) Regulation 2000
- Health Act 1937
- Workplace Health and Safety Act 1995 and Regulations
- Transport Operations (Road Use Management) Act 1995
- Guide for Handling Cytotoxic (Anti neoplastic) Drugs and Related Wastes

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