

**STANDARD OPERATING PROCEDURE FOR HANDLING AND RECEIVING OF HAZARDOUS
 SUBSTANCES WASTE IN THE HAZARDOUS WASTE HOLDING FACILITY**

Faculty of Health Science

Scope

The Faculty of Health Science is committed to providing a place of employment and learning that is as free as possible from hazards. The Hazardous Waste disposal procedure is developed to ensure the proper handling, collection and disposal of hazardous biological, hazardous chemical and radioactive waste at the University of Cape Town in accordance with Health and Safety legislation, Cape Town City bylaws, Environmental Legislation and best practices.

Objective

This is a guideline to all generators of all types of hazardous substances and their waste products as users of the Hazardous Waste holding facility for holding the hazardous waste for a period of no more than 90 days, to ensure a safe and controlled service to the Faculty of Health Science of the University of Cape Town and regulatory compliance.

Documentation

Addendum A – Biohazardous Disposal Form

Addendum B – Stock Supply Form

Addendum C – Hazardous Chemical Waste Form

Addendum D – Waste Declaration/Profile Sheet

Addendum E – Radioactive Waste Disposal Sheet

Addendum F – Empty Hazardous Chemical Glass Containers to be Crushed Form

Abbreviations:

HWHF- Hazardous Waste Holding Facility

Procedure

General Information

Operational times for the collection of stock and/or disposal of hazardous waste material is daily from 9:30am – 10:30am.

Green anatomical waste bags MUST be double bagged, securely tied with cable ties, and must be brought to the Hazardous Waste Holding Facility ONLY on Mondays, Wednesdays and/or Fridays by 9:30am. NO EXCEPTIONS.

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DESCRIPTION OF DIFFERENT TYPES OF WASTE STREAMS AND HOW TO HANDLE EACH BEFORE BRINGING THIS WASTE TO THE WASTE HOLDING FACILITY

1	<i>Hazardous Biological waste</i>
2	<i>Liquid biological or liquid chemical waste generated in the laboratories as a once off or regular waste stream</i>
3	<i>Chemical waste</i>
4	<i>Pharmaceutical waste</i>
5	<i>Radioactive waste</i>
6	<i>Glass waste in the form of broken glass or primary empty chemical glass bottles</i>
7	<i>Schott glass bottles</i>
8	<i>Stock supply form</i>

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1. Hazardous Biological Waste Disposal

Hazardous Biological waste is disposed of in the following containers:

- 45L and 90L RUC Bins
- 50L Biohazardous Waste boxes
- 10L, 20L and 25L Plastic T/H Drums
- 20L Red Medical Waste Bucket

A completed Addendum A is always required when the disposal of any of the above-mentioned hazardous biological waste containers are brought to the Hazardous Waste Holding Facility. No hazardous waste will be accepted by the Hazardous Waste Holding Facility without the completed Addendum A.

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Addendum A

FACULTY OF HEALTH SCIENCES WASTE AREA

BIOHAZARDOUS DISPOSAL				
Item	Size	Qty	Weight	
Biohazardous Box	50L			
R.U.C.	90L			
Sharps container	5L			
Sharps container	7,6L			
Sharps container	20L			
Red Medical Waste bucket	20L			
Green Pharmaceutical Bucket	20L			
Green anatomical bags				
T/H Plastic Drum	10L			
T/H Plastic Drum	25L			

NAME:

DATE:

DEPARTMENT:

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COVID-19 OR CORONA VIRUS WASTE MANAGEMENT GUIDELINES

1. **What Is COVID-19/ Corona Virus Waste?** Laboratory waste generated during the processing of suspected and/ or confirmed COVID-19/ Corona virus specimens.

2. **UCT Waste Management Policy and Procedures:** All laboratory waste produced during the processing of specimens should be managed in line with the laboratory procedures.

3. **Staff Training:** Staff handling laboratory waste must be trained on COVID-19, and other relevant laboratory specific waste management protocols.

4. **Personal Protective Equipment (PPE):** Staff handling laboratory waste should be provided with appropriate PPE and trained to use the PPE in line with the documented risk assessment.

5. **Waste containers and accessories:** Ensure that you have enough waste buckets, liquid waste drums, infectious waste boxes, plastic liners, plastic cable ties, biohazard tape and waste container labels (stickers). Use the appropriate size of the waste container in line with the amount of waste generated. Assemble your waste containers before use and keep the lid of the container safely secured on it. Only dispose waste into the container through the front flap of an infectious waste box or the opening on top of a sharps container.

6. COVID-19 waste containers:

- Safely place hazardous waste into **double-lined red rucs.**
- These Rucs are to be labelled with the date that they were placed in use, the department name and must **display the word COVID-19 waste on the label** as well.
- Bags are to be secured with a cable tie and the black plastic lid is to be secured (tightly closed).

Type of Waste Containers:

- Anatomical waste Red plastic bucket
- Infectious waste Single-use infectious waste box lined with two plastic liners
- Sharps waste Yellow plastic bucket Liquid waste
- Clear drums or container supplied by service provider - 25L plastic drums for liquid waste

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PROCEDURE:

Fill the waste containers up to $\frac{3}{4}$ and do not exceed the fill-line on the container

- a. When the infectious waste box is full, close and seal the plastic liners with a cable tie or biohazard tape and then seal the secondary container (e.g. infectious waste box) with biohazard tape.
- b. Seal infectious waste buckets with biohazard tape. Available in the HWF.

7. Labelling of COVID-19 waste containers:

- Write on the container the date you started using it.
- Clearly write “COVID-19” or “Corona Virus” with a marker.

8. Temporary storage and removal of waste containers:

- Safely store COVID-19 waste in a designated waste storage area in the laboratory.
- The hazardous waste area co-ordinator will observe the removal of waste by the service provider (in this case BCL).
- A separate waste manifest must be issued by the service provider and it must be clearly marked “COVID19” or “Corona Virus”
- Hazardous waste area Co-ordinator will record all waste manifests and destruction certificates and keep them in a file.

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Addendum A

FACULTY OF HEALTH SCIENCES WASTE AREA

BIOHAZARDOUS DISPOSAL				
Item	Size	Qty	Weight	
Biohazardous Box	50L			
R.U.C.	90L			
Sharps container	5L			
Sharps container	7,6L			
Sharps container	20L			
Red Medical Waste bucket	20L			
Green Pharmaceutical Bucket	20L			
Green anatomical bags				
T/H Plastic Drum	10L			
T/H Plastic Drum	25L			

NAME:

DATE:

DEPARTMENT:

COVID-19 WASTE

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RED RUC BINS WITH LINERS

ALL biological waste containers MUST be labelled with the following information:

- NAME
- DEPARTMENT
- RESEARCH LAB
- DATE

All RUC bins and biohazardous boxes MUST be lined, and the liner MUST be tied securely with a cable tie before you close the container with the required lid. In this case, a black lid.

Hazardous biological waste may be brought to the HWHF daily between the stipulated times. BCL is the current service provider and they arrive on Mondays, Wednesdays and Fridays to collect waste. The waste they collect will be in either red rucs, cardboard boxes, sharps bins or green bag (animals).

GLOVES, LABORATORY PAPER ETC. NO SHARP OBJECTS LIKE PIPETTE TIPS OR BROKEN GLASS

INTO RED LINER, FILL, SECURE WITH CABLE TIE

ENSURE CORRECTLY LABELLED



THESE COME IN TWO SIZES- 90L AND 45L

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BIOHAZARDOUS BOXES AND LINERS

All biohazardous boxes, complete with liner, **MUST** be securely taped with packaging tape to ensure **NO** spillage when handled.

Ensure the box is aptly labelled as instructed above

Secure the bottom of the box when building it with packaging tape and ensure that when the red liner is full and it has been closed and secured with a cable tie, that you use the same packaging tape to secure the lid to the box. The tape must tie the lid to the box. Wrap it around the box and the lid several times then over the lid in a criss-cross fashion for additional strength.



THESE COME IN TWO SIZES: 90L AND 140L

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2. LIQUID WASTE- BIOLOGICAL OR CHEMICAL

T/H plastic containers should be filled up to $\frac{3}{4}$ full and securely closed to ensure no leakage. If any leakage by damage or improper handling occurs, the respective T/H container will NOT be accepted by the Hazardous Waste Holding Facility.

If ANY T/H plastic container is filled beyond the required filling standard, the respective T/H plastic container will NOT be accepted by the Hazardous Waste Holding Facility.

10L and 25L available

If biological liquid waste is collected in the plastic container: just use a marker (indelible ink), and write "BIOLOGICAL WASTE" onto the container.



If chemical waste, use the red and white label.

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20L Red Medical Waste buckets MUST be securely closed to ensure NO spillage.

THIS RED BUCKET IS TO BE USED FOR ANATOMICAL WASTE
 GOES INTO PLASTIC BAG INTO BUCKET
 SECURE BAG WITH CABLE TIE ONCE FILLED
 LABEL CORRECTLY



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3. Hazardous Chemical Waste

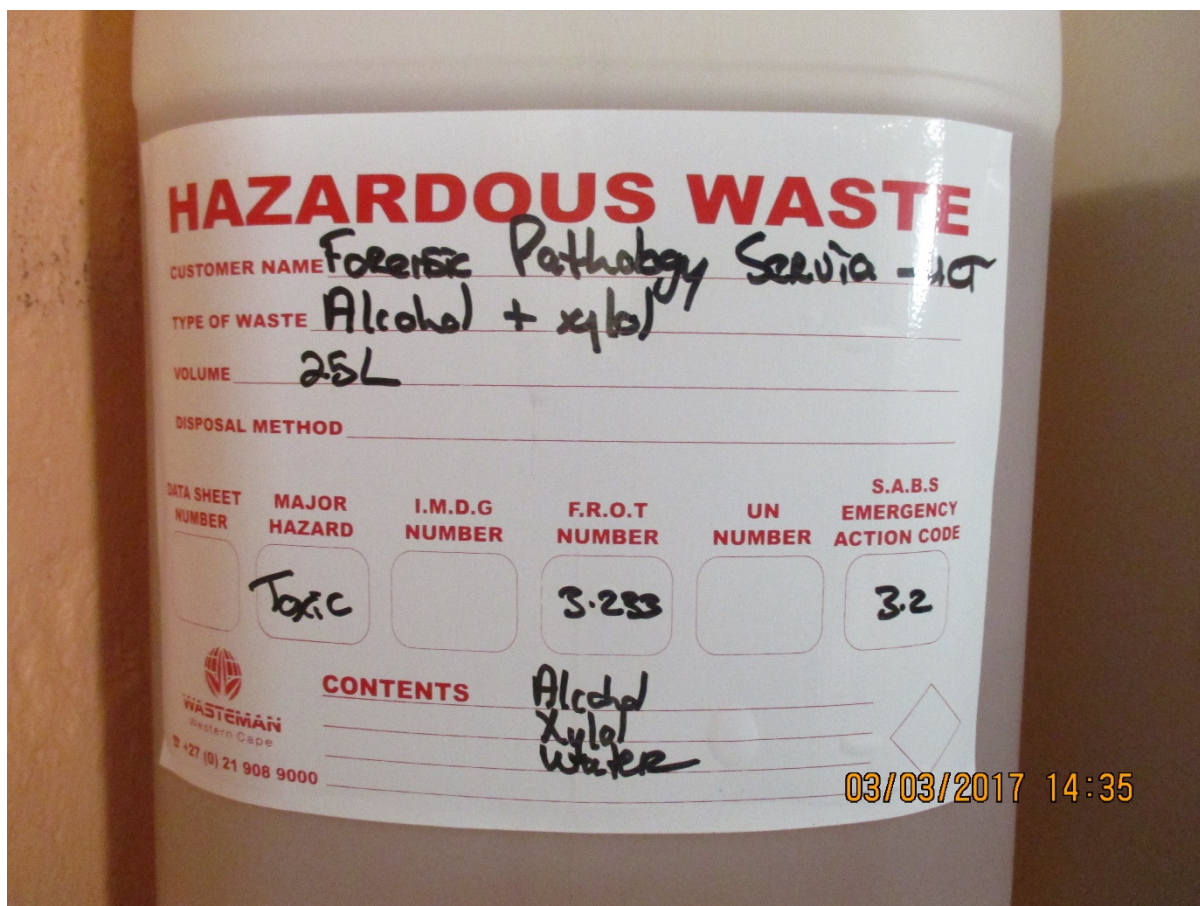
Hazardous chemical waste is disposed of in the following containers:

- 10L, 20L and 25L T/H Drums (Plastic drums) for liquid waste

This is an example of what the chemical label must look like:

Once all the documentation and Material safety data sheets have been provided to the Hazardous Waste Co-ordinator, the waste disposal method is provided by Vissershok (disposal site), after submission and subsequent approval by Vissershok (this process is a timeous one)

The label must however be placed onto the plastic drum on the space away from the opening to avoid spillage and removal of writing. Use indelible ink when writing all the relevant information onto the label



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- 5L, 25L and 100L O/H Metal drums

This drum must have the same red and white label on it and must be labelled as per instruction in the previous picture



A completed Addendum C and Addendum D is always required when Hazardous chemical waste is brought to the Hazardous Waste Holding Facility.

Addendum C and Addendum D **MUST** be e-mailed to the Hazardous Waste Co-ordinator a day prior to the delivery of the hazardous chemical waste to the HWHF. **NO EXCEPTIONS.**

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ADDENDUM C

HAZARDOUS CHEMICAL WASTE				
DEPARTMENT:				
CONTAINER, i.e. Plastic drum/steel drum e.g. Plastic drum	TYPE OF WASTE, Chemical waste as per list e.g. Ethidium Bromide	VOLUME, (i.e. 25 L or 100L) and Quantity of drums 25L	DISPOSAL METHOD To be obtained by Hazardous chemical store co-ordinator from Service Provider	DATE Date the container is filled and ready to be taken to waste store
e.g. plastic	e.g. formalin 3% water 5%	e.g. 1 X 25L		
CONTENTS LIST AND CONCENTRATIONS				
Please ensure all chemical names are written out in full – i.e. no formulas or abbreviations. One chemical per line and the relevant concentration (if known)				

INTERNAL WASTE STORE INFORMATION

DATE RECEIVED INTO STORE:
RECEIVED BY:
ALLOCATED NUMBER:
DISPOSAL METHOD

This form must be a duplicate of each label on each container to be taken to the waste store

All concentrations of chemicals must also be added to this form

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ADDENDUM D



Frankdale Road, Vissershoek, Mthetheni, 7405 P.O. Box 60865, Flingo Square, 7441 Tel: (021) 557 6160 Fax: (021) 557 7511

ISSERSHOK WASTE MANAGEMENT FACILITY (PTY) LTD

ALWAYS AT YOUR DISPOSAL

Reg. No. 1994/010200/07

WASTE DECLARATION/PROFILE SHEET

Please ensure legibility of this form prior to submission.

WASTE TRANSPORTER INFORMATION

Transporting Company Name	
Physical Address	
Contact Person	
Telephone	

WASTE GENERATOR INFORMATION/DECLARATION

Generator Name			
Physical Address			
Contact Person			
Telephone			
WIR Number			
Waste Stream/Name			
Classification of waste (✓)	HAZ	NON HAZ	SDS's provided
Process generating waste			
Have any <i>changes</i> in processes generating waste been declared?	YES	NO	New application
Major Components	Concentration		

WASTE VOLUME

Volume			
Rate of generation			
Clean up		Permanent	

- All samples must be submitted together with relevant SDS's
- All fields are compulsory and must be completed in full

I hereby certify to the best of my knowledge that the information supplied is a true and accurate description of the waste.

Name and Title : _____ Generator Signature

Date :

Submitted by :	Company:	Date
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ALL hazardous chemical waste containers MUST be labelled with the following information:

- DEPARTMENT
- RESEARCH LAB
- A FULL list of the chemical content that MUST be securely labelled on the hazardous chemical waste container and should correspond EXACTLY as on Addendums C and D. PLEASE ENSURE THAT THE FULL CHEMICAL NAMES ARE TO BE USED AND NOT FORMULAS.

Chemical waste disposed of in O/H Metal drums MUST be packed in Vermiculite.

The Metal container must be filled with at least a 10cm layer of Vermiculite prior to filling it with redundant chemical waste (Solids, small bottles of chemical waste, etc). pack the drum leaving space between the primary chemical container (they must not touch), then leaving some headspace, use vermiculite to cover all the gaps and top up to just below the lid. Then you can secure the drum lid.

RULE OF THUMB: ALWAYS PLACE THE LABEL ONTO THE DRUMS/CONTAINERS FIRST AND ENSURE THE CORRECT INFORMATION OF THE CONTENTS OF THE DRUM HAVE BEEN WRITTEN ON INITIALLY TO PREVENT ANY CONFUSION OF UNLABELLED CONTAINERS.

4. Hazardous Pharmaceutical waste

Hazardous Pharmaceutical waste is disposed of in the following containers:

- 20L Green Pharmaceutical Bucket



A completed Addendum A is required prior to acceptance of waste container. NO EXCEPTION.

ALL hazardous pharmaceutical waste containers MUST be labelled with the following information:

- DEPARTMENT
- RESEARCH LAB
- A FULL list of the pharmaceutical content MUST be securely labelled on the hazardous pharmaceutical waste container.

All hazardous pharmaceutical waste containers MUST be sealed securely to ensure NO spillage when handled.

Any damage to- or spill of container will NOT be accepted by the Hazardous Waste Facility.

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5. Radioactive Waste

It is the responsibility of each RPO/ARPO to ensure that adequate records are kept of radionuclide usage in their respective Authorities.



PLEASE NOTE THAT ADDENDUM E MUST BE COMPLETED THEN E MAILED TO THE OPERATIONS ASSISTANT A DAY PRIOR TO DELIVERY. NO EXCEPTIONS.

Radioactive waste will NOT be accepted by the Hazardous Waste Holding Facility without the adequate information.

ADDENDUM E

RECEIPT OF RADIOACTIVE SOURCES FROM VARIOUS DEPARTMENTS – FACULTY HEALTH SCIENCES			
DATE:			
DEPARTMENT	NAME AND SURNAME OF RESPONSIBLE PERSON	SIGNATURE OF RESPONSIBLE PERSON	RECEIVED BY FACULTY HEALTH AND SAFETY MANAGER
e.g. 1. M/OO06/11 Medicine			
1.			
2.			
3.			
4.			
5.			
6.			

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6. GLASS: Broken glass and/or cleaned and dried (empty primary containers-chemical)

Broken glass is disposed of in the following containers:

- 5L and 20L Sharps
- 100L O/H Metal Drum

ALL Sharps waste containers MUST be labelled with the following information:

- NAME
- DEPARTMENT
- RESEARCH LAB

5L and/or 20L Sharps containers require a completed Addendum A form and MUST be securely sealed to avoid spillage. PLEASE MAKE SURE THAT THE LIDS ARE PROPERLY CLOSED. If Sharps containers are NOT properly sealed, the respective container will NOT be accepted by the Hazardous Waste Holding Facility.

All pipette tips (whether glass or plastic) must be placed into sharps bins



Empty hazardous chemical glass containers in need of disposal must be accompanied by a completed Addendum F. These glass containers will be crushed and disposed of collectively in a 100L O/H metal container in the Hazardous Waste Holding Facility.

Alternatively consult with the Hazardous Waste area co-ordinator who will assist in getting the bottles collected as they are from your departments.

PLEASE ENSURE THAT THE INSTRUCTIONS ON ADDENDUM F WERE COMPLETED PRIOR TO SIGNING THE DECLARATION AND ACCEPTED BY HAZARDOUS WASTE FACILITY.

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ADDENDUM F

EMPTY HAZARDOUS CHEMICALS GLASS CONTAINERS TO BE CRUSHED

DATE	DEPARTMENT	CHEMICAL NAME	CONTAINER CAPACITY	QTY

DECLARATION BY DEPARTMENT	
I, _____, the undersigned declare that: <ul style="list-style-type: none"> All the containers listed above have been rinsed and dried thoroughly. These containers are free from any hazardous residue and are safe to dispose of in the current manner used by the University of Cape Town's Waste Area 	
DATE	
NAME AND SURNAME	
SIGNATURE	

DECLARATION BY WASTE AREA SUPERVISOR	
DATE BOTTLES ARE CRUSHED	
NAME AND SURNAME	
SIGNATURE	

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7. SCHOTT BOTTLES

ALL Schott bottles must be rinsed. The lids are to be removed and placed into red plastic bags which line the red plastic rucs.

The bottles are then to be placed into 20L sharps buckets, labelled “glass” and which are to be closed properly once filled.

The name of the department is to be written onto the sharps bucket in permanent ink.

Then the sharps bucket is brought to the waste holding facility for disposal by BCL.



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8. STOCK SUPPLY FORM

Biohazardous Stock Supply AND drums for hazardous chemical waste

Supply of stock is requested by use of Addendum B.

Stock MUST be collected on the day of request and will NOT be stored in the Hazardous Waste Holding Facility for later collection.

ADDENDUM B

FACULTY OF HEALTH SCIENCES WASTE AREA DAILY SUPPLY

Item	Size	Quantity
O/H Metal Drum	5L	
O/H Metal Drum	25L	
O/H Metal Drum	100L	
T/H Plastic Drum	10L	
T/H Plastic Drum	25L	
Vermiculite	Bag	
Sharps container	5L	
Sharps container	20L	
Red Medical Waste bucket	20L	
Green Pharmaceutical Bucket	20L	
Anatomical bag 150micron (green)	Med	
Anatomical bag 150micron (green)	Lrg	
Biohazardous Box + Liner	50L	
R.U.C. + lid	90L	
R.U.C. Liners 60micron	90L	
Cable Ties	Sgl	
Packaging Tape	Roll	
Chemical absorbent mats	Sheet	

NAME:

DATE:

DEPARTMENT:

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CONTACT INFORMATION

Should ANY information or assistance be required contact the following Operations Department staff members:

Health and Safety Manager – Anita Kruger
anita.kruger@uct.ac.za

Hazardous Waste Co-ordinator – Carin Liebenberg
carin.liebenberg@uct.ac.za

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