



Swansea University  
Prifysgol Abertawe

# Swansea University

## Waste Management Guidance Note WMGN30 Biologicals

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<b>Creation date:</b>	10/12/2018

<b>Waste Management Guidance Note WMGN30 Biological Waste</b>	
Location Generated	<b>Laboratory Category CAT 1/2</b>
EWC	18 01 03* / 18 01 06* / 18 01 07 / 18 02 02* / 18 02 05*
Transport Class & UN Number	Class 6.2 / UN 3291
Type	<b>Waste Category CAT A / B</b> Controlled – hazardous waste
Disposal Method	Neutralised and segregated for incineration
Bin/Bag Type	Autoclave bag – Sterilised External disposal – Tiger Bag

### **Duty of Care Requirements**

Clinical 18 01 - wastes from natal care, diagnosis, treatment or prevention of disease in humans

EWC 18 01 03\* Wastes whose collection and disposal is subject to special requirements in order to prevent infection

EWC 18 01 06\* Chemicals consisting of or containing hazardous substances

EWC 18 01 07 Chemicals other than those mentioned in 18 01 06\*

Research 18 02 - Wastes from research, diagnosis, treatment or prevention of disease involving animals

EWC 18 02 02\* Wastes whose collection and disposal is subject to special requirements in order to prevent infection

EWC 18 02 05\* Chemicals consisting of or containing hazardous substances

**Description;** Biological waste, Genetically Modified Organisms, Cell and Tissue culture media.

It is a legal requirement to ensure all wastes are correctly classified. Incorrectly disposing of hazardous waste via a non-hazardous waste stream can lead to legal and financial penalties dependent upon the severity of the noncompliance.

Biological research and teaching laboratories generate certain wastes that should or in some cases must be decontaminated before disposal as they contain or might contain substances that are infectious (to humans, animals or plants) and/or because they contain genetically modified micro-organisms.

**Please note this WMGN provides guidance on disposal only, please consult the University's appointed Biological Safety Officers for further guidance.**

For Category A waste (Microbiological cultures Class 1/2 GMMs and HG2 pathogens), produced in CAT 2 Laboratories, on-site autoclaving is mandatory to ensure waste is inactivate due to the significant risks to the community in terms of human and animal

health. Furthermore for Class 1 and 2 GMMs, there is a specific requirement in the Genetically Modified Organisms (Contained Use) Regulations to inactivate the waste within the laboratory suite (Class 2) and within the laboratory (Class 3).

**Items including, but not limited to;**

- Petri dishes
- Pipettes, plastic tips, serological pipettes
- Tissue culture flasks
- Syringes
- Needles
- Cell culture media
- PPE – gloves, masks, aprons
- Blue roll/ paper towels

All biological waste (non-infectious and infectious) generated during laboratory research must be deactivated by autoclaving or **disinfected with Virkon, or similar before disposal**.

Consult the Faculties' appointed Biological Safety Officers (and/or health and safety leads) for further guidance.

**Biological Waste Table**

Waste Type	Waste Classification	Laboratory Type	Internal Waste Pre-treatment	Internal Disposal Route	External Disposal Route
GM Waste GMM Class 1/2/3	CAT A	CAT 2	Autoclave  Within the laboratory	Tiger Bag	ILS 1 Autoclave Skip
Biological Waste Pathogens HG2/3/4	CAT A	CAT 2	Autoclave  Within the laboratory	Tiger Bag	ILS1 Autoclave Skip
Tissue Waste	CAT B	CAT 1	Disinfect	Yellow Bag / Red lidded Sharps box	See WMNG24
Cell Culture Waste	CAT B	CAT 1	Disinfect	Yellow Bag / Yellow lidded Sharps box	Dedicated external Yellow Bin See WMGN26

Table 1 - Biological Waste Table

## GM & Biological waste

GM and biological waste must be autoclaved in the laboratory before disposal. Once the waste has been autoclaved it must be placed into tiger bags (yellow/black-striped) and placed into the relevant external autoclave waste skip, or bin.

## Tissue/Cell Culture Waste

Tissue and cell cultures must be disinfected before disposal. Sharps must also be disinfected before disposal via yellow lidded sharps boxes. Disposal of human tissue must comply with the requirements of the Human Tissue Act 2004. The COSHH Regulations stipulate;

- Tissue culture waste (culture medium only) – inactivate for at least 2 hours in a solution of hypochlorite (10,000ppm) prior to disposal to drain with an excess of water.
- Contaminated pipettes should be placed in hypochlorite solution (2500ppm) overnight before disposal by autoclaving and incineration.

## Transportation

If any CAT A waste needs to be transported to an autoclave external to the laboratory, waste must be transported via a sealed metal box. Waste must then be taken from the metal box and placed into the autoclave. The metal box must then be decontaminated for each consignment with Virkon, or similar.

For further guidance on autoclave management form HSE see; [Safe working and the prevention of infection in clinical laboratories and similar facilities](#)

## Disposal Instructions

### External Storage - Category A waste

- For FMHLS and FSE:



Figure 1: Cat A Waste disposal route for FMHLS/FSE

Once waste is autoclaved within the laboratory, autoclave bags must be placed into tiger bags. Once autoclaved and deactivated waste is classified Offensive Waste EWC 18 01 04 or 18 02 03 and can be placed into the Margam car park autoclave skip – access via Technicians.

## **External Storage - Category B waste**



Figure 2: Internal use yellow-lidded clinical waste box & external-based yellow autoclaved waste bin

**Please note;** Sharps must be disinfect before disposal via yellow-lidded sharps boxes.

Yellow bags can be obtained and signed out from the following locations;

### **Singleton Campus**

- FMHLS: ILS1 Stores
- FSE: Wallace Stores

### **Bay Campus**

- FSE: Engineering Service Yard Office

## **External - Disposal**

For disposal, please ensure the lid is sealed for transport and full sharps bins must be taken back to the following locations;

### **Singleton Campus**

- FMHLS: ILS1 Stores
- FSE: Wallace Stores (dedicated external 1100 yellow bins) See stores staff for access

### **Bay Campus**

- FSE: Engineering Service Yard Office (dedicated external 1100 yellow bins) See service yard office staff for access

## **Disposal Cost**

**For further guidance contact** [Estates-Waste@Swansea.ac.uk](mailto:Estates-Waste@Swansea.ac.uk) and the Universities Biological Safety Advisor.