



Biological Risk Management and Containment

DISPOSAL OF LABORATORY WASTE GUIDE



INTRODUCTION

This is a support guide to the Laboratory Users' Quick Reference Guide and it is designed to provide you with guidance on disposal of specific waste according to the level of containment.

More detailed guidelines are available from the [BRMC Expert User Guidelines](#).

CONTENTS

DISPOSAL OF WASTE FROM PC1 LABORATORIES	2
<i>GM bacterial and yeast cultures</i>	2
<i>Media and aqueous solutions came in contact with GMOs and imported cell lines</i>	2
<i>Viral vectors, media, and aqueous solution came in contact with viral vectors during transfection.</i>	2
<i>Pipette tips and laboratory consumable plastic from PC1 labs</i>	2
<i>Solutions made up using Imported Risk Goods.</i>	2
<i>Plasticware and more, agarose gels containing recombinant DNA, plastic pipettes</i>	3
<i>Animal tissue and fluids</i>	3
<i>Glassware</i>	3
<i>Syringes, needles, glass pasteur pipettes, hard plastic pipettes and razor blades</i>	3
<i>Recycling material</i>	3
DISPOSAL OF WASTE FROM PC2 LABORATORIES	4
<i>GM bacterial, yeast cultures and RG 2 bacterial cultures</i>	4
<i>Media and aqueous solutions that have come in contact with GMOs and imported cell lines</i>	4
<i>Viral vectors, media, and other aqueous solutions came in contact with viral vectors.</i>	4
<i>Pipette tips and consumables came in contact with RG2 micro-organisms or viral vector packaging</i>	4
<i>Solutions made up using Imported Risk Goods.</i>	5
<i>Plasticware and more not came in contact with RG2 micro-organisms or used in viral vector packaging.</i> <i>Agarose gels containing recombinant DNA.</i>	5
<i>Animal tissue</i>	5
<i>Glassware not came in contact in contact with RG2 micro-organisms or used in viral vector packaging</i>	5
<i>Syringes, needles, glass pasteur pipettes, hard plastic pipettes and razor blades</i>	5
<i>Recycling material</i>	5
HOW TO TIE-UP A BAG: EXAMPLES	6



DISPOSAL OF WASTE FROM PC1 LABORATORIES

GM bacterial and yeast cultures (either on agar plates or in solution)

- Must be autoclaved in an approved autoclave with a holding time of 20 minutes at 121 degrees Celsius.
- Send out autoclaved solid waste material via the Medical Waste stream.

Media, and other aqueous solutions that have come in contact with GMOs and imported cell lines. Includes supernatants, aspirates and other aqueous solutions that have come in contact with cell lines

- Chemically sterilised using an approved decontamination agent as per *Expert User Guidelines* on “Chemical decontamination of liquid biohazardous waste” and Page 3 of the *Quick Reference Guide*.
- Alternatively, may be autoclaved in an approved autoclave with a holding time of 20 minutes at 121 degrees Celsius.

Viral vectors, media, and other aqueous solutions that have come in contact with viral vectors during transfection

- Chemically sterilised using an approved decontamination agent as per *Expert User Guidelines* on “Chemical decontamination of liquid biohazardous waste” and Page 3 of the *Quick Reference Guide* before removal from biohazard hood. Refer also to *Expert User Guidelines* on “Sendai and replication-defective viral vectors”.
- Send out any chemically sterilised solid waste material via the Medical Waste stream.

Pipette tips and laboratory consumable plastic from PC1 labs (not sharp materials which are to be disposed directly to approved plastic pails specifically used for sharp rubbish - see below)

- Send out via the Medical Waste stream.

Solutions made up using Imported Risk Goods

- Chemically sterilised in situ using an Approved Decontamination Agent as per *Expert User Guidelines* on “Chemical decontamination of liquid biohazardous waste” and Page 3 of the *Quick Reference Guide*. Refer also to specific protocols in Tissue Culture areas for treatment of Tissue culture waste.
- Alternatively, may be autoclaved in an approved autoclave with a holding time of 20 minutes at 121 degrees Celsius.
- Send out any treated or autoclaved solid waste material via the Medical Waste stream.

Plasticware (plastic dishes, tubes, and flasks), gloves, agar plates and contaminated wipes. Agarose gels containing recombinant DNA. Hard disposable plastic pipettes.

- Send out via the Medical Waste stream.

Animal tissue and fluids

- Animal tissue bagged and taken to Vernon Jansen Unit for freezing and disposal
- Blood and plasma may be chemically sterilised using an Approved Decontamination Agent as per ***Expert User Guidelines*** on “Chemical decontamination of liquid biohazardous waste” and Page 3 of the ***Quick Reference Guide***.

Glassware

- Washed in normal manner with laboratory detergent. May be autoclaved before use.

Syringes, needles, glass pasteur pipettes, Hard plastic pipettes and razor blades

- Place in approved plastic pails specifically used for sharp rubbish. Dispose via the Medical Waste stream.

Recycling material

- Uncontaminated packaging material can be disposed as recycled waste using the appropriate disposal stream.

NB: Approved Decontamination Agents are those with proven efficacy shown in peer reviewed journals, EPA approval or by European Testing regimes to be effective. Refer to Page 3 of the ***Quick Reference Guide*** and ***Expert User Guidelines*** on “Chemical decontamination of liquid biohazardous waste” for details.

Please also refer to Page 5 of the ***Quick Reference Guide*** for more guidance on autoclaving.



DISPOSAL OF WASTE FROM PC2 LABORATORIES

GM bacterial and yeast cultures and RG2 bacterial cultures (either on agar plates or in solution)

- Must be autoclaved in an approved autoclave with a holding time of 20 minutes at 121 degrees Celsius.
- Send out autoclaved solid waste material via the Medical Waste stream.

Media, and other aqueous solutions that have come in contact with GMOs and imported cell lines. Includes supernatants, aspirates and other aqueous solutions that have come in contact with cell lines.

- Chemically sterilised using an approved decontamination agent as per *Expert User Guidelines* on “Chemical decontamination of liquid biohazardous waste” and Page 3 of the *Quick Reference Guide*.
- Alternatively, may be autoclaved in an approved autoclave with a holding time of 20 minutes at 121 degrees Celsius. Material is contained in an autoclave bag for transport from Class 2 biohazard hood to autoclave.

Viral vectors, material derived from packaging cell lines, media, and other aqueous solutions that have come in contact with viral vectors.

- Chemically sterilised using an approved decontamination agent as per *Expert User Guidelines* on “Chemical decontamination of liquid biohazardous waste” and Page 3 of the *Quick Reference Guide* before removal from biohazard hood. Refer also to *Expert User Guidelines* on “Sendai and replication-defective viral vectors”.
- Send out chemically sterilised solid waste material via the Medical Waste stream.

Pipette tips, plastic consumables, laboratory glassware and gloves that have come in contact with RG2 micro-organisms or viral vector packaging (not sharp materials which are to be disposed directly to approved plastic pails specifically used for sharp rubbish - see below)

- Autoclaved in an approved autoclave with a holding time of 20 minutes at 121 degrees Celsius. Material is wrapped in an autoclave bag for transport to autoclave.
- Chemically sterilised using an approved decontamination agent as per *Expert User Guidelines* on “Chemical decontamination of liquid biohazardous waste” and Page 3 of the *Quick Reference Guide* before disposal via medical waste stream.
- Send out autoclaved or chemically treated solid waste material via the Medical Waste stream.

Solutions made up using Imported Risk Goods.

- Chemically sterilised *in situ* using an Approved Decontamination Agent as per **Expert User Guidelines** on “Chemical decontamination of liquid biohazardous waste” and Page 3 of the **Quick Reference Guide**. Refer also to specific protocols in Tissue Culture areas for treatment of Tissue culture waste.
- Alternatively, may be autoclaved in an approved autoclave with a holding time of 20 minutes at 121 degrees Celsius.
- Send out autoclaved solid waste material via the Medical Waste stream.

Plasticware (plastic dishes, tubes, and flasks), gloves, agar plates and contaminated wipes that have not come in contact with RG2 micro-organisms or used in viral vector packaging. Agarose gels containing recombinant DNA.

- Autoclaved in an approved autoclave with a holding time of 20 minutes at 121 degrees Celsius. Material is wrapped in an autoclave bag for transport to autoclave.
- Send out via the Medical Waste stream.

Animal tissue

- Animal tissue double bagged and taken to Vernon Jansen Unit for freezing and disposal
- Blood and plasma may be chemically sterilised using an Approved Decontamination Agent as per **Expert User Guidelines** on “Chemical decontamination of liquid biohazardous waste” and Page 3 of the **Quick Reference Guide**.

Glassware that have definitely not come in contact in contact with RG2 micro-organisms or used in viral vector packaging

- Glassware is washed in normal manner with laboratory detergent and may be autoclaved before use.

Syringes, needles, glass pasteur pipettes, Broken glass, Hard plastic pipettes and razor blades

- Placed in approved plastic pails specifically used for sharp rubbish. When full, sharps pails are autoclaved and then disposed via the Medical Waste stream.

Recycling material

- Uncontaminated packaging material can be disposed as recycled waste using the appropriate disposal stream.

NB: Approved Decontamination Agents are those with proven efficacy shown in peer reviewed journals, EPA approval or by European Testing regimes to be effective. Refer to Page 3 of the **Quick Reference Guide** and **Expert User Guidelines** on “Chemical decontamination of liquid biohazardous waste” for details.

Please also refer to Page 5 of the **Quick Reference Guide** for more guidance on autoclaving.



HOW TO TIE-UP A BAG: EXAMPLES

Different methods for tying up bags have been adopted by University laboratories. Make sure you know which method is used in your laboratory. Below you can find two examples.

Twist tie



Cable tie method





Approved by: Assoc. Director, HSW
Document Owner: Assoc. Director, HSW
Content Manager: Hazard & Containment Manager

Version: 1
Issue Date: 27/08/2021
Review Date: 27/08/2024

Once printed this document is uncontrolled. Health Safety and Wellbeing Management System.