Standard Operating Procedure Documents

Leslie Dan Faculty of Pharmacy, University of Toronto

These Standard Operating Procedures (SOPs) are controlled documents. They are authored and maintained by the Joint Health and Safety Committee (JHSC) at the Leslie Dan Faculty of Pharmacy, University of Toronto.

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Standard Operating Procedure – Master Listing

SOP #	SOP Title	Rev #	Approval Date	Filename
PBSOP001	Standard Operating Procedure Management	0	22-Mar-12	PBSOP001 Rev 0.pdf
PBSOP002	Solvent and Chemical Storage, Transport, and Disposal	3	05-Dec-17	PBSOP002 Rev 3.pdf
PBSOP003	Emergency Response and First Aid	2	05-Dec-17	PBSOP003 Rev 2.pdf
PBSOP004	Autoclaving Procedures	1	05-Dec-17	PBSOP004 Rev 1.pdf
PBSOP005	Cryogenics	1	05-Dec-17	PBSOP005 Rev 1.pdf
PBSOP006	Radioactive Material Handling and Disposal	1	05-Dec-17	PBSOP006 Rev 1.pdf
PBSOP007	Biohazardous Material Handling and Disposal	1	05-Dec-17	PBSOP007 Rev 1.pdf
PBSOP008	Electrical Safety	1	05-Dec-17	PBSOP008 Rev 1.pdf
PBSOP009	Laboratory Health and Safety Inspections	1	05-Dec-17	PBSOP009 Rev 1.pdf
PBSOP010	Emergency Procedures – Mercury Spills	1	05-Dec-17	PBSOP010 Rev 1.pdf

UNIVERSITY OF TORONTO
LESLIE DAN FACULTY OF PHARMACY

Standard Operating Procedure Document			
Title:	Standard Operating Procedure Management		
SOP #:	PBSOP001	Rev #:	0

Standard Operating Procedure

Title:	**Standard Operating Procedure Management**
Issue Date:	APPROVED MAR 2 2 2012
SOP #:	PBSOP001
Revision #:	0

This is a controlled document, authored and maintained by the Joint Health and Safety Committee (JHSC) at the Leslie Dan Faculty of Pharmacy, University of Toronto.

David Dubins — 20-Mar-12

Author of this Revision:
David Dubins, Ph.D., B.Eng.
Member, Joint Health and Safety Committee

Date

21-MAR-12

Reviewed by:
Zarko Zlicic
Faculty Technician
Member, Joint Health and Safety Committee

Date

Peter J. O'Brien — 22- March - 12

Approved by:
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Chair, Joint Health and Safety Committee

Date

22 - March - 12

Authorized by:
Henry J. Mann, Pharm.D., FCCP, FCCM, FASHP
Dean and Professor

Date

1. Scope

This specific SOP will describe procedures for the creation, maintenance, revision, distribution, and termination of JHSC SOPs in the Leslie Dan Faculty of Pharmacy. This series of SOPs specifically pertain to the health and safety of all students (undergraduate and graduate), faculty, staff, and visitors, unless otherwise specifically indicated. This system of SOPs is intended to provide building-specific guidelines concerning the policies outlined by the University of Toronto Office of Environmental Health and Safety (OEHS).

2. Objective

The objective of this SOP is define a structure and process for SOP document management. This includes authorship and signing authority for SOP creation, review, approval, authorization, and termination of JHSC SOPs.

3. Background

The Leslie Dan Faculty of Pharmacy is an organization committed to protecting and monitoring the health and safety of people in the building. The Joint Health and Safety Committee is the body responsible for overseeing this important task and reporting to the OEHS. SOPs are now required by the OEHS. This series of SOPs are compliant with this requirement.

4. Definitions and Abbreviations

A Standard Operating Procedure, or SOP, is defined as a document that outlines a specific procedure or set of procedures to be followed in carrying out a given operation or a given situation. An SOP provides enough detail so that a novice can identify the proper person or people who should be involved in carrying out the procedure, and after having read the SOP this person would have enough information to either carry out the task properly, provided the instructions are followed, or be referred to the appropriate resources (working documents, workshops, or designated people) so that the task would be carried out properly. An SOP is distinct from a working document or scientific protocol in that it is a controlled document, has revision tracking, with a review and authorization procedure pre-defined. In other words, creation, modification, and termination of the document follow an explicitly defined, monitored, and documented checkpoint process, with an audit trail. SOPs are ubiquitous across many industries, and are present in academia as well.

Abbreviations used in this document are defined in this section:

SOP	Standard Operating Procedure
JHSC	Joint Health and Safety Committee of the Leslie Dan Faculty of Pharmacy, at

	the University of Toronto
OEHS	Office of Environmental Health and Safety, University of Toronto
TBD	To be determined
N/A	Not Applicable
Rev.	Revision

5. Policies

1. The University of Toronto, as an employer, is responsible under the Ontario Occupational Health and Safety Act for establishing and maintaining joint health and safety committees in the workplace. SOPs controlled by the JHSC shall be limited to matters pertaining to the jurisdiction and scope of this committee.
2. Any member of the JHSC may create or revise an SOP.
3. References to authorship, review, approval, and authorization contained in the Policies or Procedures section of an SOP should refer to the involved person's job title, not their name.
4. Any disagreement regarding SOP related procedures or policies may be addressed and decided upon at JHSC meetings.
5. The original, signed hard copies of the most recent SOPs will be kept in an SOP library within the building, and an electronic (scanned) library will be maintained on the JHSC website.
6. An SOP can refer to other documents (e.g. working documents and protocols) to guide the reader to external policies and procedures.

6. Procedures

6.1.1 SOP Creation

1. The SOP template (PBSOP0xx Rev 0 (Draft) - Template.docx) should be used to create SOPs.
2. The SOP number will be in the format "PBSOP0xx", where "xx" is a currently un-used number.
3. The revision number of an SOP corresponds to the number of revisions of approved versions that have been made. The revision number of a draft document will be labeled "0 (Draft)". The first approved SOP version revision number will be 0. Subsequent revisions will increment the revision number by 1.
4. Once an SOP is written in draft form, it is circulated to members of the JHSC for comments. This can be in the form of a hard copy or email.
5. Members of the JHSC are to read the draft SOP and provide optional comments to the revision author within a reasonable time frame.
6. Comments are received by the revision author and incorporated.

7. Once comments are incorporated, the SOP is reviewed by the Faculty Technician, the JHSC Chair, and the Dean of the Faculty of Pharmacy.
8. Any comments by the Faculty Technician, JHSC Chair, and Dean of the Faculty, are addressed and incorporated into the SOP by the revision author.
9. Once all comments have been addressed, the revision number will be updated to "1"
10. The SOP is printed out for signing.
11. The signatory page will be signed by the revision author, Faculty Technician, JHCS Chair, and Dean of the Faculty. The roles of each party will be:

Signatory	Role
Any JHSC Member	Revision Author
Faculty Technician	Reviewer
JHSC Chair	Approval
Dean of the Faculty	Authorization

12. Once signed by all signatories, the SOP is considered finalized.
13. The signed hard copy of the SOP is to be included into the SOP library.
14. The signed SOP is scanned and included in the online SOP library in PDF format.
15. A notice is sent out to the Faculty that a new revision of the SOP is accessible on the JHSC website.
16. The master list of SOPs is updated to include the new SOP.

6.1.2 SOP Revision

1. The most recently approved word processor version of the SOP to be revised should be obtained from the previous revision author of the SOP.
2. The revision author will add their name to the signatory page of the SOP. The SOP will be revised in such a way as to make clear the changes made (e.g. using the "track changes" feature in Microsoft Word) or by using strikeout and alternate formatting.
3. The revision number of the draft document will be increased and followed with "(Draft)". E.g. the revision number of the first revision of an SOP will be "1 (Draft)".
4. Once an SOP is revised in draft form, it is circulated to members of the JHSC for comments. This can be in the form of a hard copy or email.
5. Members of the JHSC are to read the draft SOP and provide optional comments to the revision author within a reasonable time frame.
6. Comments are received by the revision author and incorporated.
7. Agreed upon changes that are made to the SOP are detailed in the "Revision History" section of the SOP. Sufficient details are provided regarding changes of the SOP, to enable the reader to understand what changes were made, and which sections of the SOP were amended.
8. Once all comments have been addressed, "(Draft)" will be removed from the revision number.
9. The SOP is printed out for signing.

10. The SOP is reviewed by the Faculty Technician, the JHSC Chair, and the Dean of the Faculty of Pharmacy. Any comments arising by the Faculty Technician, JHSC Chair, and Dean of the Faculty, are addressed and incorporated into the SOP by the revision author. Revisions at this stage are not expected to be significant or impactful, as the committee (including the JHSC Chair) will have already have reviewed the document in Draft form and provided comments. Signing may occur during this step.
11. The signatory page is then signed by the revision author, Faculty Technician, JHCS Chair, and Dean of the Faculty. The roles of each party will be:

Signatory	Role
Any JHSC Member	Revision Author
Faculty Technician	Reviewer
JHSC Chair	Approval
Dean of the Faculty	Authorization

12. Once signed by all signatories, the SOP is considered finalized.
13. The signed hard copy of the SOP is to be included into the SOP library.
14. The signed SOP is scanned and included in the online SOP library in PDF format.
15. The previous SOP revision is retained in a separate binder for archival purposes.
16. A notice is sent out to the Faculty that a new revision of the SOP is accessible on the JHSC website.
17. The master list of SOPs is updated to reflect the new revision number of the SOP.

6.1.3 SOP Termination

1. The decision to terminate an SOP should be arrived at by a vote of majority by voting members of the JHSC.
2. Following a majority vote, the electronic version of the SOP is removed from the SOP library online.
3. The hard copy of the SOP is retrieved from the SOP library. The word “CANCELLED” and the effective date are written on the signatory page.
4. The JHSC Chair and Dean will initial on the front page of the hard copy original that the SOP has been cancelled and removed from the SOP library.
5. A notice is sent out to the Faculty that the SOP has been cancelled, and has been removed from the JHSC website. The Faculty is informed to recycle any printed out copies they may have made.
6. The cancelled SOP is retained in a separate binder for archival purposes.
7. The master list of SOPs is updated to reflect removal of the terminated SOP.

7. Revision History

Revision #	Date	SOP Section(s)	Revision Description	Revised By
0	20-Mar-12		SOP PBSOP001 created.	David Dubins (revision author)

Standard Operating Procedure

Title:	**Solvent and Chemical Storage, Transport, and Disposal**
Issue Date:	APPROVED DEC 0 5 2017
SOP #:	PBSOP002
Revision #:	3

David Dubins — 05-Dec-17

Author of this Revision:
David Dubins, Ph.D., B.Eng.
Member, Joint Health and Safety Committee

Date

05.12.2017

Reviewed by:
Zarko Zlicic
Faculty Technician
Member, Joint Health and Safety Committee

Date

Carolyn Cummins — Dec 5, 2017

Approved by:
Carolyn L. Cummins, Ph.D.
Associate Professor
Chair, Joint Health and Safety Committee

Date

Dec 5, 2017

Authorized by:
Heather Boon, B.Sc.Phm., Ph.D.
Professor and Dean

Date

1. Scope

The scope of this SOP is to provide building-specific details regarding the safe transport, storage, and disposal of laboratory grade solvents, and solid material in contact with hazardous chemicals, in the Leslie Dan Faculty of Pharmacy.

This SOP is not intended to replace, supersede, or contravene any of the policies or training outlined by the Office of Environmental Health and Safety (OEHS), available online via the following website:

http://www.ehs.utoronto.ca/resources/

The SOP is intended to clarify how site-specific aspects of OEHS policies are dealt with in order to ensure they are appropriately implemented. OEHS policies will not be re-iterated in this document, but rather the reader is referred to the link above, to the Policies and Procedures Listing Health and Safety Manual.

The scope of this SOP does not include radioactive, cryogenic, or biohazardous substances, or chemical spills pertaining to these materials.

2. Objective

The objective of this SOP is to outline the appropriate training, resources, policies, and the building-specific procedures pertaining to solvent and chemical storage, transport, and disposal in the Leslie Dan Faculty of Pharmacy.

The SOP outlines the training students are provided with, as well as the logistics pertaining to solvent handling (both inorganic and organic), and chemical solid waste disposal.

3. Background

The Leslie Dan Faculty of Pharmacy is an organization committed to protecting and monitoring the health and safety of people in the building. The Joint Health and Safety Committee is the body responsible for overseeing this important task and reporting to the OEHS at the University of Toronto. SOPs are now required by the OEHS. This series of SOPs are compliant with this requirement.

Proper solvent handling and disposal are an essential aspect of safety, as improper storage, disposal, and even mislabelling can pose a risk to the public.

4. Definitions and Abbreviations

A "solvent" in this document is defined as a liquid intended for laboratory use, for research or educational use in a laboratory setting.

Abbreviations used in this document are defined in this section:

SOP	Standard Operating Procedure
JHSC	Joint Health and Safety Committee of the Leslie Dan Faculty of Pharmacy, at the University of Toronto
OEHS	Office of Environmental Health and Safety, University of Toronto
TBD	To be determined
N/A	Not Applicable
Rev.	Revision

5. Policies

5.1.1 Chemical Spill Kits

1. Chemical spill emergency procedures are available on the OEHS website: https://ehs.utoronto.ca/report-an-incident/emergency-procedures/
2. Safety training for graduate students and research associates is a Faculty requirement, and occurs twice yearly in the Leslie Dan Faculty of Pharmacy. Chemical spill response is a component of the safety training course.
3. Standard chemical spill kits are available for purchase through the OEHS.
4. Each research floor (floors 7-12) shall be equipped with its own spill kit, visibly located in a central place and accessible to everyone on the research floor.
5. Principal Investigators can also opt to stock their individual laboratories with a spill kit and include the appropriate hazard-specific materials in their laboratory spill kit.
6. Principal Investigators may also adapt or compliment the floor spill kit to comply with the requirements of their laboratory.
7. Each spill kit shall contain an inventory list of its contents.
8. The inventory list shall be checked on a yearly basis by the Faculty Technician to ensure that it is complete.
9. In the event that a spill kit is used, the person using the spill kit shall inform the Faculty Technician so that the kit may be replenished.

5.1.2 Solvent Storage Room

1. Chemical storage guidelines are available on the OEHS website: https://ehs.utoronto.ca/wp-content/uploads/2015/10/Storage-Rooms-Updated.pdf
2. "Flammable Liquid Storage: Standard for Storage Rooms" guidelines are available on the OEHS website: https://ehs.utoronto.ca/wp-content/uploads/2015/10/Storage-Rooms-Updated.pdf

3. Safety training for graduate students and research associates is a Faculty requirement, and occurs twice yearly in the Leslie Dan Faculty of Pharmacy. Proper solvent storage is a component of the safety training course.
4. Research laboratories in the Leslie Dan Faculty of Pharmacy are often limited in the quantities of specific chemicals they are permitted to store in their own laboratory space.
5. The Solvent Storage Room, located on the penthouse floor of 144 College Street, is designed to safely store chemicals which surpass the permitted storage quantity.
6. The Solvent Storage Room is designed to store only **new, unopened solvents and chemicals** only.
7. Access to the Solvent Storage Room is controlled and monitored via electronic FOB.
8. The Solvent Storage Room is protected by a preaction/foam sprinkler system.
9. The isolation valve of the Solvent Storage Room is located on the upper penthouse/north west corner.
10. The Solvent Storage Room contains separate sections for acids, and flammable solvents.

5.1.3 Solvent and Chemical Waste Room

1. Laboratory Hazardous Waste Management and Disposal Guidelines are available on the OEHS website: https://ehs.utoronto.ca/laboratory-hazardous-waste-management-and-disposal-manual/
2. Safety training for graduate students and research associates is a Faculty requirement, and occurs twice yearly in the Leslie Dan Faculty of Pharmacy. Solvent and chemical waste disposal is a component of the safety training course.
3. The Solvent and Chemical Waste Room, located on the penthouse floor of 144 College Street, is designed to safely store chemicals which are intended for disposal.
4. The Solvent and Chemical Waste Room is designed to store only **used solvents and chemicals**.
5. Access to the Solvent and Chemical Waste Room is controlled and monitored via electronic FOB.
6. Radioactive materials are not permitted in the Solvent and Chemical Waste Room.
7. Disposal of solid material in contact with hazardous chemicals may also be placed in the Solvent and Chemical Waste Room.

6. Procedures

6.1.1 Transport and Storage of Unopened Solvents

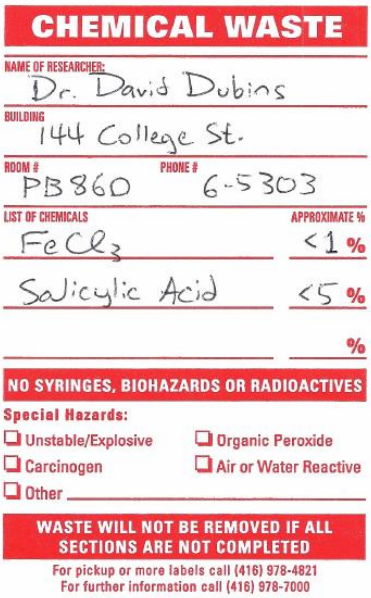
1. Solvents should be transported in their original packaging. The unopened bottles should be appropriately labeled (the product label is sufficient).
2. The unopened bottles should also be affixed with a label indicating which lab the chemicals belong to. A labeled box may also be used to group chemicals by laboratory.
3. Glass bottles and containers should be transported using one of the following two methods:

a) Using rubber carrying basket(s). These baskets are available in the Solvent Storage Room.
b) Using a laboratory cart. Glass Bottles on carts should be in a secondary container, e.g. a regular box or plastic tub to secure them on the cart.

4. Solvents are then transported via the service elevator to the Solvent Storage Room.
5. The bottles should be placed on the shelves in the Solvent Storage Room.
6. Each laboratory is responsible for maintaining their own inventory regarding what is stored in the Solvent Storage Room, in the appropriate designated area.

6.1.2 Disposal of Used Solvents

1. Solvents should be disposed of in an appropriate glass container, affixed with a chemical waste label. The label should be accurately and completely filled out:


CHEMICAL WASTE
NAME OF RESEARCHER: Dr. David Dubins
BUILDING 144 College St.
ROOM # PB860 PHONE # 6-5303
LIST OF CHEMICALS — APPROXIMATE %
$FeCl_3$ <1 %
Salicylic Acid <5 %
%
NO SYRINGES, BIOHAZARDS OR RADIOACTIVES
Special Hazards:
Unstable/Explosive
Organic Peroxide
Carcinogen
Air or Water Reactive
Other
WASTE WILL NOT BE REMOVED IF ALL SECTIONS ARE NOT COMPLETED
For pickup or more labels call (416) 978-4821
For further information call (416) 978-7000

2. Transport of glass containers should be done with a laboratory cart, or rubber carrying basket(s). These baskets are available in the Solvent Storage Room.
3. Solvents are then transported via the service elevator to the Solvent and Chemical Waste Room.
4. The bottles should be placed on the shelves in the Solvent and Chemical Waste Room, in the appropriate designated area.

6.1.3 Disposal of Solid Material in Contact with Hazardous Chemicals

1. Place solid materials in contact with hazardous chemicals into a clear plastic bag.
2. Completely fill out and attach a chemical waste label (as illustrated above).
3. Transport the solid waste via the service elevator to the Solvent Storage Room.

4. The bag is then placed in the Solvent Storage Room, in the appropriate designated area.

6.1.4 Darkroom Procedures: Darkroom Use and Chemical Disposal

1. Consult the MSDSs (Materials Safety Data Sheets) for the chemicals to be used. Moreinformation can be found on the EHS website under the Resources section: http://www.ehs.utoronto.ca/resources/
2. Use tongs for chemical baths.
3. Do not mix solutions in the sink. Mix solutions in your laboratory fumehood, then bring them to the Darkroom.
4. Do not touch electrical equipment with wet hands.
5. Wear protective personal protective equipment (latex or nitrile gloves, lab coat, and eye protection).
6. No food or drink is permitted in the Darkroom.
7. Take care not to splash chemicals while mixing solutions.
8. Avoid prolonged contact with chemicals.
9. Any spills should be cleaned up immediately.
10. No hazardous Darkroom chemicals should go down the sinks. A waste bucket is provided for developer waste solutions.
11. Notify the faculty technician if the waste bucket is more than ¾ full.
12. After using the darkroom, ensure that you clean up after yourself. Any objects left on the countertops should be stored neatly at the end of the counter, with an info label providing the name and contact information of the person.
13. Report any concerns to the Faculty Technician.

7. Revision History

Rev #	Date	SOP Section(s)	Revision Description	Revised By
0	20-Mar-12		SOP PBSOP002 created.	David Dubins (author)
1	05-Dec-12	6.1.1	• **Item 1:** Added the sentence "Solvents should be transported in their original packaging." Added the policy that Glass Bottles on carts should be in a secondary container, e.g. a regular box or plastic tub to secure them on the cart. • **Item 2:** Added the policy that Glass Bottles on carts should be in a secondary container, e.g. a regular box or plastic tub to secure them on the cart.	David Dubins (reviser)
2	29-Jan-14	6.1.2 5.1.3	• **Item 1:** Location of disposal of chemical solvents changed from "Solvent Storage Room" to "Solvent and Chemical Waste Room". • **Item 2:** Policy 5 removed (not applicable to solvent disposal): "Each laboratory is responsible for maintaining their own inventory regarding what is stored in the Solvent Storage Room, in the appropriate designated area." • **Item 3:** References to the "Solvent Storage Room" have been changed to the "Solvent and Chemical Waste Room" in section 5.1.3.	David Dubins (reviser)
3	05-Dec-17	6.1.4	Darkroom Procedures: Darkroom Use and Chemical Disposal policies added.	David Dubins (reviser)

Standard Operating Procedure

Title:	**Emergency Response and First Aid**
Issue Date:	APPROVED DEC 0 5 2017
SOP #:	PBSOP003
Revision #:	2

This is a controlled document, authored and maintained by the Joint Health and Safety Committee (JHSC) at the Leslie Dan Faculty of Pharmacy, University of Toronto.

Author of this Revision:
David Dubins, Ph.D., B.Eng.
Member, Joint Health and Safety Committee

05-Dec-17
Date

Reviewed by:
Zarko Zlicic
Faculty Technician
Member, Joint Health and Safety Committee

05.12.2017
Date

Approved by:
Carolyn L. Cummins, Ph.D.
Associate Professor
Chair, Joint Health and Safety Committee

Dec 5, 2017
Date

Authorized by:
Heather Boon, B.Sc.Phm., Ph.D.
Professor and Dean

Dec 5, 2017
Date

1. Scope

The scope of this SOP is to provide building-specific details regarding emergency response, including fire alarms, and the management and administration of first aid.

This SOP is not intended to replace, supersede, or contravene any of the policies or training outlined by the Office of Environmental Health and Safety (OEHS), available online via the following website:

https://ehs.utoronto.ca/resources/

The SOP is intended to clarify how site-specific aspects of OEHS policies are dealt with in order to ensure they are appropriately implemented. OEHS policies will not be re-iterated in this document, but rather the reader is referred to the link above, to the Policies and Procedures Listing Health and Safety Manual.

2. Objective

The objective of this SOP is to outline the appropriate training, resources, policies, and the building-specific procedures pertaining to the appropriate response to emergencies, specifically fire alarms, and administration of first aid in the Leslie Dan Faculty of Pharmacy. The SOP outlines the training available, as well as the logistics pertaining to emergency response.

The importance of the proper availability and administration of first aid is often overlooked, and is paramount to minimizing impact of an accident on a person's health. Having the proper infrastructure available, in addition to faculty who are properly trained in first aid, is a key component in ensuring and maintaining the health and safety in the Leslie Dan Faculty of Pharmacy.

In addition, an organized and efficient response to a fire alarm is an important aspect of emergency response. Building-specific policies and procedures are outlined in this SOP.

3. Background

The Leslie Dan Faculty of Pharmacy is an organization committed to protecting and monitoring the health and safety of people in the building. The Joint Health and Safety Committee is the body responsible for overseeing this important task and reporting to the OEHS at the University of Toronto. SOPs are now required by the Office of Environmental Health and Safety. This series of SOPs are compliant with this requirement.

An efficient and appropriate emergency response, whether on an individual level (first aid), or on a building-wide level (e.g. an organized response to a fire alarm), does not happen accidentally. It hinges on the responsible and/or designated parties reacting in a pre-defined and organized way in order to elicit the proper response. This SOP is designed to outline the current procedure for first aid kit management, first aid administration, and fire alarm response at the Leslie Dan Faculty of Pharmacy.

4. Definitions and Abbreviations

The injured person refers to someone who is in need of first aid. The responder refers to a person who is responding to an emergency, and in some cases may also be the injured person.

Abbreviations used in this document are defined in this section:

SOP	Standard Operating Procedure
JHSC	Joint Health and Safety Committee of the Leslie Dan Faculty of Pharmacy, at the University of Toronto
OEHS	The Office of Environmental Health and Safety, University of Toronto
TBD	To be determined
N/A	Not Applicable
Rev.	Revision

5. Policies

5.1.1 First Aid Kits

1. First Aid Guidelines are available on the OEHS website: https://ehs.utoronto.ca/wp-content/uploads/2017/01/First-Aid-Program.pdf This guideline includes requirements of the minimum contents of a first aid kit.
2. Safety training for graduate students and research associates is a Faculty requirement, and occurs twice yearly in the Leslie Dan Faculty of Pharmacy. The administration of first aid, including identifying the location of first aid kits, is a component of the safety training course.
3. An accredited safety training course, “Standard First Aid”, is offered by the OEHS: https://ehs.utoronto.ca/training/
4. First aid kits are provided on each research floor of the Leslie Dan Faculty of Pharmacy (floors 7-12). They are clearly marked, and mounted in a prominent location (usually the alcoves in the back hallway).
5. The first aid kits are freely accessible to anyone inside or outside the building requiring immediate first aid.
6. The first aid kit on each floor shall have 1 designated first aid person and 1 backup person assigned. Both these people are required to have taken the OEHS Standard First Aid training course.
7. The contact information of the designated first aid person and backup will be clearly marked on the first aid kit.

8. Each first aid kit shall contain an inventory list of its contents which shall comply with the OEHS First Aid guidelines.
9. The inventory list shall be checked on a yearly basis by the Faculty Technician to ensure that it is complete.
10. Principal Investigators can also opt to stock their individual laboratories with a first aid kit and insure that it is current and complete.

5.1.2 Fire Prevention and Response

1. Fire prevention and emergency procedure guidelines are available on the UTFP website: http://www.fs.utoronto.ca/main-property-management/fire-prevention/
2. Safety training for graduate students and research associates is a Faculty requirement, and occurs twice yearly in the Leslie Dan Faculty of Pharmacy. The proper response to a fire, including use of a fire extinguisher, is a component of the safety training course.
3. Fire extinguishers are provided on each floor of the building, and are clearly marked and mounted in prominent locations.
4. Fire extinguishers are checked on a yearly basis by the OEHS.

6. Procedures

6.1.1 First Aid Administration

1. If first aid is required, the responder or injured person may access the floor first aid kit.
2. The responder or injured person may choose to access the kit independently. If additional help is warranted, the designated first aid person for that floor may be contacted using the information provided on the first aid kit.
3. The number for the Campus Emergency Centre for St. George Campus is 8-2222. If the nature of the injury is not minor and medical attention needs to be sought, either 8-2222 is dialed from a university phone, 416-978-8222 from a land line, or 911 from any phone.
4. In the event that a first aid kit is used, the person using the first aid kit shall inform the Faculty Technician so that the kit may be replenished.
5. If the nature of the injury is not minor, the responder (usually the designated first aid person) shall complete an accident report form through the OEHS online system: https://ehs.utoronto.ca/report-an-incident/
   Separate forms are used for incidents involving employees: https://ehs.utoronto.ca/report-an-incident/online-accidentincident-eform-for-employees/ and for incidents involving students, contractors, and visitors: https://ehs.utoronto.ca/report-an-incident/online-accidentincident-eform-for-students-contractors-and-visitors/

6.1.2 Fire Emergency Procedures

1. Upon discovery of the fire, the responder should first call 911, then pull the fire alarm, or send a designate to perform the same. Then the Campus Police should be notified (416-978-2222, or 8-2222 from a University phone).

2. If the responder feels they can put out the fire safely with the use of one extinguisher, and it is rated appropriately for the type of fire presented, they may use the fire extinguisher.
3. If the responder feels that they cannot put the fire out safely, they shall close the door as they leave the affected room.
4. Elevators are not to be used during a building evacuation due to the fire alarm sounding.
5. Evacuation will reside in the designated waiting area outside the building, located between the Leslie Dan Faculty of Pharmacy and the Faculty of Medicine Building.
6. People are not permitted to re-enter the building for any reason until authorized by the Fire Officer.

6.1.3 Fire Emergency Procedures – Mobility Impaired

1. Details of fire emergency procedures are provided on the UTFP website: http://www.fs.utoronto.ca/main-property-management/fire-prevention/mobility-impaired/

2. If on ground floor, exit by normal means.

3. If above or below the ground floor:

   • Telephone the Campus Police emergency (416) 978-2222 from the nearest phone or cellular phone.
   • Tell the campus police dispatcher that the fire alarm in your building is sounding and you are mobility impaired and cannot leave your floor area. If you smell smoke, or are in immediate danger, inform the dispatcher.
   • Provide your exact location - Floor and Room Number.
   • Provide the phone number and extension you are calling from. Your information will be relayed to emergency response personnel who are en route or on scene. Toronto Fire Services will facilitate your evacuation if your safety is compromised.
   • In the conditions at your location deteriorate (any increased danger or hazard), call the dispatcher immediately with an update.

7. Revision History

Rev #	Date	SOP Section(s)	Revision Description	Revised By
0	20-Mar-12		SOP PBSOP003 created.	David Dubins (author)
1	05-Sep-12	5.1.2	• **Item 5** was removed: "Each floor shall have a designated fire warden to assist in the response to a fire or fire alarm.", as as EHS does not approve of the use of Fire Wardens.	David Dubins (reviser)
1	05-Sep-12	6.1.2	• **Item 1** was modified: Upon discovery of the fire, the responder should first call 911, then pull the fire alarm, or send a designate to perform the same. Then the Campus Police should be notified (416-978-2222, or 8-2222 from a University phone). • **Item 5** was removed: "Upon hearing the alarm, the designated fire warden on each floor will do a sweep of each room to make sure that everyone is aware of the alarm and leaves the building via the stairs and the nearest exit." as as EHS does not approve of the use of Fire Wardens.	David Dubins (reviser)
2	05-Dec-17	Various	OEHS and Fire Safety web links updated.	David Dubins (reviser)

Standard Operating Procedure

Title:	**Autoclaving Procedures**
Issue Date:	APPROVED DEC 0 5 2017
SOP #:	PBSOP004
Revision #:	1

This is a controlled document, authored and maintained by the Joint Health and Safety Committee (JHSC) at the Leslie Dan Faculty of Pharmacy, University of Toronto.

Author of this Revision:
David Dubins, Ph.D., B.Eng.
Member, Joint Health and Safety Committee

05-Dec-17
Date

Reviewed by:
Zarko Zlicic
Faculty Technician
Member, Joint Health and Safety Committee

05.12.2017
Date

Approved by:
Carolyn L. Cummins, Ph.D.
Associate Professor
Chair, Joint Health and Safety Committee

Dec 5, 2017
Date

Authorized by:
Heather Boon, B.Sc.Phm., Ph.D.
Professor and Dean

Dec 5/17
Date

1. Scope

The scope of this SOP is to provide building-specific details regarding the autoclaving of solids and liquids in the Leslie Dan Faculty of Pharmacy.

This SOP is not intended to replace, supersede, or contravene any of the policies or training outlined by the Office of Environmental Health and Safety (OEHS), available online via the following website:

https://ehs.utoronto.ca/resources/

The SOP is intended to clarify how site-specific aspects of OEHS policies are dealt with in order to ensure they are appropriately implemented. OEHS policies will not be re-iterated in this document, but rather the reader is referred to the link above, to the Policies and Procedures Listing Health and Safety Manual.

There are two autoclave rooms in the Leslie Dan Faculty of Pharmacy: PB 1049, and PB 1149. This SOP deals with building policies and procedures specific to these two rooms. The scope of this SOP does not include instrument-specific operation instructions for operating the autoclaves.

2. Objective

The objective of this SOP is to outline the appropriate training, resources, policies, and the building-specific procedures pertaining to autoclaving in the Leslie Dan Faculty of Pharmacy.

3. Background

The Leslie Dan Faculty of Pharmacy is an organization committed to protecting and monitoring the health and safety of people in the building. The Joint Health and Safety Committee is the body responsible for overseeing this important task and reporting to the OEHS at the University of Toronto. SOPs are now required by the OEHS. This series of SOPs are compliant with this requirement.

4. Definitions and Abbreviations

Abbreviations used in this document are defined in this section:

SOP	Standard Operating Procedure
JHSC	Joint Health and Safety Committee of the Leslie Dan Faculty of Pharmacy, at the University of Toronto
OEHS	The Office of Environmental Health and Safety, University of Toronto

TBD	To be determined
N/A	Not Applicable
Rev.	Revision

5. Policies

1. Autoclaving is discussed in the Laboratory Hazardous Waste Management and Disposal Manual, available on the OEHS website: https://ehs.utoronto.ca/laboratory-hazardous-waste-management-and-disposal-manual/
2. Safety training for graduate students and research associates is a Faculty requirement, and occurs twice yearly in the Leslie Dan Faculty of Pharmacy. Autoclaving is a component of the safety training course.
3. Students or faculty wishing to use the autoclave equipment in PB 1049 and PB 1149 must be authorized to do so, and shall be appropriately trained in the departmental safety training course.
4. If a particular lab has concerns regarding whether or not an item may be autoclaved, the Faculty Technician shall be consulted.

6. Procedures

6.1.1 Autoclaving

1. Equipment-specific procedures and guidelines pertaining to autoclaving are provided to the students during the departmental safety training course.
2. Refer to hand-outs of this course for the proper autoclaving procedures.
3. Use of the autoclave room must be in accordance with the training provided.

7. Revision History

Revision #	Date	SOP Section(s)	Revision Description	Revised By
0	20-Mar-12		SOP PBSOP004 created.	David Dubins (author)
1	05-Dec-17	1, 5.1	Web links to OEHS updated.	David Dubins (reviser)

Standard Operating Procedure

Title:	**Cryogenics**
Issue Date:	APPROVED DEC 0 5 2017
SOP #:	PBSOP005
Revision #:	1

David Dubins — 05-Dec-17

Author of this Revision:
David Dubins, Ph.D., B.Eng.
Member, Joint Health and Safety Committee

Date

05.12.2017

Reviewed by:
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Date

Carolyn Cummins — Dec 5, 2017

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Associate Professor
Chair, Joint Health and Safety Committee

Date

Dec 5, 2017

Authorized by:
Heather Boon, B.Sc.Phm., Ph.D.
Professor and Dean

Date

1. Scope

The scope of this SOP is to provide building-specific details regarding the safe transport and use of cryogenic fluids in the Leslie Dan Faculty of Pharmacy.

This SOP is not intended to replace, supersede, or contravene any of the policies or training outlined by the Office of Environmental Health and Safety (OEHS), available online via the following website:

https://ehs.utoronto.ca/resources/

The SOP is intended to clarify how site-specific aspects of OEHS policies are dealt with in order to ensure they are appropriately implemented. OEHS policies will not be re-iterated in this document, but rather the reader is referred to the link above, to the Policies and Procedures Listing Health and Safety Manual.

2. Objective

The objective of this SOP is to outline the appropriate training, resources, policies, and the building-specific procedures pertaining to cryogenic fluids (specifically liquid nitrogen) in the Leslie Dan Faculty of Pharmacy.

3. Background

The Leslie Dan Faculty of Pharmacy is an organization committed to protecting and monitoring the health and safety of people in the building. The Joint Health and Safety Committee is the body responsible for overseeing this important task and reporting to the OEHS at the University of Toronto. SOPs are now required by the OEHS. This series of SOPs are compliant with this requirement.

4. Definitions and Abbreviations

Abbreviations used in this document are defined in this section:

SOP	Standard Operating Procedure
JHSC	Joint Health and Safety Committee of the Leslie Dan Faculty of Pharmacy, at the University of Toronto
OEHS	The Office of Environmental Health and Safety, University of Toronto
TBD	To be determined
N/A	Not Applicable
Rev.	Revision

5. Policies

1. Two resources are available concerning cryogens on the OEHS website, under the policies and procedures section: https://ehs.utoronto.ca/resources/policies-and-procedures/
    - *Control Program for Liquid Cryogenic Transfer Facilities (PDF file)*
    - *Standard for Inert Cryogenic Liquid Usage in the Laboratory (PDF file)*
2. Safety training for graduate students and research associates is a Faculty requirement, and occurs twice yearly in the Leslie Dan Faculty of Pharmacy. Cryogenics is a component of the safety training course.
3. Students or faculty wishing to use cryogenic fluids must be authorized to do so, and shall be appropriately trained in the departmental safety training course.
4. The Leslie Dan Faculty of Pharmacy does not have its own cryogenics facility.
5. Cryogenics are to be obtained by each lab in small quantities from the Medical Sciences Building or on a contractual basis from other providers.

6. Procedures

6.1.1 Cryogenic Procedures

1. Equipment-specific procedures and guidelines pertaining to cryogenics are provided to the students during the departmental safety training course.
2. Refer to hand-outs of this course for the proper cryogenics procedures.
3. Use of cryogenics must be in accordance with the training provided.

6.1.2 Cryogenic Fluid Transport

1. Any elevator in the building (passenger or freight) may be used to transport cryogenic fluids, in quantities totaling less than 10 Litres.
2. Large quantities of cryogenic fluids must not be transported via elevator in the building (>10 Litres).
3. Cryogenic fluids must be transported in vessels approved for their storage and transport.

7. Revision History

Revision #	Date	SOP Section(s)	Revision Description	Revised By
0	20-Mar-12		SOP PBSOP005 created.	David Dubins (author)
1	05-Dec-17	1, 5.1	Updated web links to OEHS.	David Dubins (reviser)

Standard Operating Procedure

Title:	**Radioactive Material Handling and Disposal**
Issue Date:	APPROVED DEC 0 5 2017
SOP #:	PBSOP006
Revision #:	1

David Dubins — 05-Dec-17

Author of this Revision:
David Dubins, Ph.D., B.Eng.
Member, Joint Health and Safety Committee

Date

05.12.2017

Reviewed by:
Zarko Zlicic
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Date

Carolyn Cummins — Dec 5, 2017

Approved by:
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Associate Professor
Chair, Joint Health and Safety Committee

Date

Dec 5, 2017

Authorized by:
Heather Boon, B.Sc.Phm., Ph.D.
Professor and Dean

Date

1. Scope

The scope of this SOP is to provide building-specific details regarding the safe use and disposal of radioactive materials in the Leslie Dan Faculty of Pharmacy.

This SOP is not intended to replace, supersede, or contravene any of the policies or training outlined by the Office of Environmental Health and Safety (OEHS), available online via the following website:

https://ehs.utoronto.ca/resources/

The SOP is intended to clarify how site-specific aspects of OEHS policies are dealt with in order to ensure they are appropriately implemented. OEHS policies will not be re-iterated in this document, but rather the reader is referred to the link above, to the Policies and Procedures Listing Health and Safety Manual.

2. Objective

The objective of this SOP is to outline the appropriate training, resources, policies, and the building-specific procedures pertaining to the use and disposal of radioactive materials in the Leslie Dan Faculty of Pharmacy.

3. Background

The Leslie Dan Faculty of Pharmacy is an organization committed to protecting and monitoring the health and safety of people in the building. The Joint Health and Safety Committee is the body responsible for overseeing this important task and reporting to the OEHS at the University of Toronto. SOPs are now required by the OEHS. This series of SOPs are compliant with this requirement.

Radiation protection is a specific area with unique hazards, and consequently additional training is required for any person wishing to use radiolabels or radioactive materials in their experiments.

4. Definitions and Abbreviations

Abbreviations used in this document are defined in this section:

SOP	Standard Operating Procedure
JHSC	Joint Health and Safety Committee of the Leslie Dan Faculty of Pharmacy, at the University of Toronto
OEHS	The Office of Environmental Health and Safety, University of Toronto

TBD	To be determined
N/A	Not Applicable
Rev.	Revision

5. Policies

1. Radiation safety policies and procedures are available on the OEHS website: https://ehs.utoronto.ca/our-services/radiation-safety/
2. The OEHS offers the following accredited radiation safety training courses:
    - *Radiation Protection Training*
    - *Radiation Safety Online Refresher*
    - *Sealed Sources Safety Online Training*
    - *Sealed Sources Safety Online Training Refresher*
3. The OEHS offers the following useful online resources:
    - *A Laboratory Work Specific Training Form*
    - *EH&S Database Turorials*
        - *Receiving Radioactive Material*
        - *Entering Data in your Inventory Records*
        - *Contamination survey*
4. Radioactive Waste Management guidelines are available on the OEHS website: https://ehs.utoronto.ca/laboratory-hazardous-waste-management-and-disposal-manual/radioactive-waste-disposal/
5. Students or faculty wishing to use radioactive materials must be authorized to do so, and shall be appropriately trained in the appropriate OEHS training course(s).
6. It is each laboratory's own responsibility to ensure they are in compliance with OEHS policies, which include (not inclusively) safe and appropriate handling, documentation, keeping the appropriate logs, wearing the appropriate radiation tags, and conducting the required swipe tests.
7. Radioactive waste is to be stored in the appropriate covered containers.
8. Radioactive waste is picked up from each lab individually.

6. Procedures

6.1.1 Radiation Procedures

1. Equipment-specific procedures and guidelines pertaining to the safe use and disposal of radiation are provided to the students during the OEHS radiation protection training course.
2. Refer to hand-outs of this course for the proper radiation procedures.
3. Use of radioactive materials must be in accordance with the training provided.

7. Revision History

Revision #	Date	SOP Section(s)	Revision Description	Revised By
0	20-Mar-12		SOP PBSOP006 created.	David Dubins (author)
1	05-Dec-17	1, 5.1, 5.4	Web links updated.	David Dubins (reviser)

Standard Operating Procedure

Title:	**Biohazardous Material Handling and Disposal**
Issue Date:	APPROVED DEC 0 5 2017
SOP #:	PBSOP007
Revision #:	1

This is a controlled document, authored and maintained by the Joint Health and Safety Committee (JHSC) at the Leslie Dan Faculty of Pharmacy, University of Toronto.

David Dubins — 05-Dec-17

Author of this Revision:
David Dubins, Ph.D., B.Eng.
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Date

05.12.2017

Reviewed by:
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Carolyn Cummins — Dec 5, 2017

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Date

Dec 5/17

Authorized by:
Heather Boon, B.Sc.Phm., Ph.D.
Professor and Dean

Date

1. Scope

The scope of this SOP is to provide building-specific details regarding the safe use and disposal of biohazardous materials in the Leslie Dan Faculty of Pharmacy.

This SOP is not intended to replace, supersede, or contravene any of the policies or training outlined by the Office of Environmental Health and Safety (OEHS), available online via the following website:

https://ehs.utoronto.ca/resources/

The SOP is intended to clarify how site-specific aspects of OEHS policies are dealt with in order to ensure they are appropriately implemented. OEHS policies will not be re-iterated in this document, but rather the reader is referred to the link above, to the Policies and Procedures Listing Health and Safety Manual.

2. Objective

The objective of this SOP is to outline the appropriate training, resources, policies, and the building-specific procedures pertaining to the use and disposal of biohazardous materials in the Leslie Dan Faculty of Pharmacy.

3. Background

The Leslie Dan Faculty of Pharmacy is an organization committed to protecting and monitoring the health and safety of people in the building. The Joint Health and Safety Committee is the body responsible for overseeing this important task and reporting to the OEHS at the University of Toronto. SOPs are now required by the OEHS. This series of SOPs are compliant with this requirement.

4. Definitions and Abbreviations

Biological waste includes:

- liquids such as used cell culturing media, supernatant, blood or blood fractions (serum), etc., which contain viable biological agents;
- materials considered pathological, including any part of the human body, tissues and bodily fluids, but excluding fluids, extracted teeth, hair, nail clippings and the like that are not infectious;
- any part of an animal infected [or suspected to be infected] with a communicable disease;

- non-sharp, solid laboratory waste (empty plastic cell culture flasks and petri dishes, empty plastic tubes, gloves, wrappers, absorbent tissues, etc.) which may be, or is known to be, contaminated with viable biological agents;
- all sharp and pointed items used in medical care, diagnosis, and research, including the manipulation and care of laboratory animals, which should be considered potentially infectious;
- laboratory glassware which is known or suspected to be contaminated with hazardous biological agents.

Abbreviations used in this document are defined in this section:

SOP	Standard Operating Procedure
JHSC	Joint Health and Safety Committee of the Leslie Dan Faculty of Pharmacy, at the University of Toronto
OEHS	The Office of Environmental Health and Safety, University of Toronto
TBD	To be determined
N/A	Not Applicable
Rev.	Revision

5. Policies

1. The OEHS offers the following accredited Laboratory Biosafety Training course: https://ehs.utoronto.ca/our-services/biosafety/biosafety-manual/biosafety-training/
2. Biological Waste Management guidelines are available on the OEHS website: https://ehs.utoronto.ca/our-services/biosafety/
3. Students or faculty wishing to use biohazardous materials must be authorized to do so, and shall be appropriately trained in the appropriate OEHS training course(s).
4. It is each laboratory's own responsibility to ensure they are in compliance with OEHS policies, which include (not inclusively) safe and appropriate handling, documentation, keeping the appropriate logs, wearing the appropriate protection, and following the appropriate disposal procedures.
5. Biohazardous waste is to be stored in the appropriate covered yellow buckets bearing the biohazardous symbol.
6. Biohazardous waste is picked up from each lab individually.

6. Procedures

6.1.1 Biosafety Procedures

1. Equipment-specific procedures and guidelines pertaining to the safe use and disposal of biohazardous materials are provided to the students during the OEHS Laboratory Biosafety Training course.
2. Refer to hand-outs of this course for the proper biosafety procedures.
3. Use of biohazardous materials must be in accordance with the training provided.

4. Biohazardous waste bins are collected weekly every Monday, from the building hallways on research floors (7-12).
5. Biohazardous waste bins are stored inside individual laboratories appropriately authorized to handle biohazardous materials (i.e. Level 2 and above laboratories).
6. Biohazardous waste bins from these laboratories are to be placed in the hallway on Monday morning for collection.
7. Biohazardous waste bins are not to be placed in the hallway overnight, or over the weekend.

7. Revision History

Revision #	Date	SOP Section(s)	Revision Description	Revised By
0	20-Mar-12		SOP PBSOP007 created.	David Dubins (author)
1	05-Dec-17	1, 5.1, 5.2	Web links updated.	David Dubins (reviser)

Standard Operating Procedure

Title:	**Electrical Safety**
Issue Date:	APPROVED DEC 0 5 2017
SOP #:	PBSOP008
Revision #:	1

This is a controlled document, authored and maintained by the Joint Health and Safety Committee (JHSC) at the Leslie Dan Faculty of Pharmacy, University of Toronto.

David Dubins — 05-Dec-17

Author of this Revision:
David Dubins, Ph.D., B.Eng.
Member, Joint Health and Safety Committee

Date

Reviewed by:
Zarko Zlicic
Faculty Technician
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05.12.2017.
Date

Carolyn Cummins — Dec 5, 2017

Approved by:
Carolyn L. Cummins, Ph.D.
Associate Professor
Chair, Joint Health and Safety Committee

Date

Heather Boon — Dec 5, 2017

Authorized by:
Heather Boon, B.Sc.Phm., Ph.D.
Professor and Dean

Date

1. Scope

The scope of this SOP is to provide building-specific details regarding the safety issues concerning aging and/or faulty electronic laboratory instruments and equipment.

This SOP is not intended to replace, supersede, or contravene any of the policies or training outlined by the Office of Environmental Health and Safety (OEHS), available online via the following website:

https://ehs.utoronto.ca/resources/

The SOP is intended to clarify how site-specific aspects of OEHS policies are dealt with in order to ensure they are appropriately implemented. OEHS policies will not be re-iterated in this document, but rather the reader is referred to the link above, to the Policies and Procedures Listing Health and Safety Manual.

2. Objective

The objective of this SOP is to outline the appropriate policies, and the building-specific procedures pertaining to electrical safety issues inherent in the use of electronic devices in the Leslie Dan Faculty of Pharmacy.

3. Background

The Leslie Dan Faculty of Pharmacy is an organization committed to protecting and monitoring the health and safety of people in the building. The Joint Health and Safety Committee is the body responsible for overseeing this important task and reporting to the OEHS at the University of Toronto. SOPs are now required by the OEHS. This series of SOPs are compliant with this requirement.

4. Definitions and Abbreviations

Abbreviations used in this document are defined in this section:

SOP	Standard Operating Procedure
JHSC	Joint Health and Safety Committee of the Leslie Dan Faculty of Pharmacy, at the University of Toronto
OEHS	The Office of Environmental Health and Safety, University of Toronto
TBD	To be determined
N/A	Not Applicable
Rev.	Revision

CSA	Canadian Standards Association

5. Policies

1. Electrical safety policies pertaining to the laboratory are available through the Laboratory Fire Safety guidelines posted by Facilities and Services website: http://www.fs.utoronto.ca/main-property-management/fire-prevention/lab/
2. Electrical Safety Guidelines are available through the Facilities and Services website: http://www.fs.utoronto.ca/wp-content/uploads/2015/07/Electrical_Fire_Safety_guidelines_Checklist.pdf
3. Safety training for graduate students is a degree requirement, and occurs twice yearly in the Leslie Dan Faculty of Pharmacy. Electrical safety is a component of the safety training course.

6. Procedures

6.1.1 Identification of Electrical Safety Hazards

1. Laboratory equipment should be periodically checked for the following symptoms:
    - Fraying cords
    - Improper grounding (i.e. no third/grounding prong)
    - Aging electronics
    - Smoking or sparking during operation
    - Intermittent operation or shorting
2. It is the responsibility of the Principal Investigator and members of the laboratory to identify, and service or replace faulty laboratory equipment.
3. Any concerns should be brought to the attention of the Faculty Technician.

6.1.2 A Circuit Breaker Engages

1. Laboratory equipment should never be plugged directly into an electrical outlet. A power bar with a built-in CSA-approved circuit breaker will protect the equipment, and help prevent a circuit breaker engaging.
2. If an electrical outlet is overloaded, or there is an electrical problem (e.g. a short) with a specific piece of lab electrical equipment, the circuit breaker might engage and turn off the power.
3. If the power is cut suddenly from a given piece of laboratory equipment, the user shall unplug the device from the outlet and try to determine the source of the problem, which may include:
    - Too many instruments plugged into one outlet
    - An electrical problem with the electronic device
    - An electrical problem with the building (e.g. a power failure)

4. Another device that is known to be working is plugged into the outlet to determine whether or not the outlet is live. If there is a power bar, locate and depress the circuit breaker reset button.
5. If the outlet is not live (i.e. a working device does not power on), then the user shall take a note of the exact room and location of the outlet, and call the University of Toronto Call Centre (8-3000 from a University phone, or 416-978-3000 from any phone) to report the incident. The University of Toronto Call Centre will dispatch an electronics technician (during work hours) or an engineer (after office hours, in the event of an emergency) to assess the incident and take the appropriate action.
6. If the outlet is live, then the laboratory equipment is faulty. A fuse may have blown, or there may be a more impactful electrical problem. Consult the Faculty Technician for further assistance.

7. Revision History

Revision #	Date	SOP Section(s)	Revision Description	Revised By
0	20-Mar-12		SOP PBSOP008 created.	David Dubins (author)
1	05-Dec-17		Web links updated. Video links removed (no longer available).	David Dubins (reviser)

Standard Operating Procedure

Title:	**Laboratory Health and Safety Inspections**
Issue Date:	APPROVED DEC 0 5 2017
SOP #:	PBSOP009
Revision #:	1

This is a controlled document, authored and maintained by the Joint Health and Safety Committee (JHSC) at the Leslie Dan Faculty of Pharmacy, University of Toronto.

David Dubins — 05-Dec-17

Author of this Revision:
David Dubins, Ph.D., B.Eng.
Member, Joint Health and Safety Committee

Date

Reviewed by:
Zarko Zlicic
Faculty Technician
Member, Joint Health and Safety Committee

05.12.2017
Date

Carolyn Cummins — Dec 5, 2017

Approved by:
Carolyn L. Cummins, Ph.D.
Associate Professor
Chair, Joint Health and Safety Committee

Date

Authorized by:
Heather Boon, B.Sc.Phm., Ph.D.
Professor and Dean

Dec 5/17
Date

1. Scope

The scope of this SOP is to provide building-specific details regarding workplace safety inspections (Laboratory Health and Safety Inspections) conducted by the Joint Health and Safety Committee (JHSC) of the Leslie Dan Faculty of Pharmacy.

This SOP is not intended to replace, supersede, or contravene any of the policies or training outlined by the Office of Environmental Health and Safety (OEHS), available online via the JHSC website:

https://ehs.utoronto.ca/resources/policies-and-procedures/

The SOP is intended to clarify how site-specific aspects of OEHS policies are dealt with in order to ensure they are appropriately implemented. OEHS policies will not be re-iterated in this document, but rather the reader is referred to the link above, to the JHSC Handbook Templates, and Policies and Procedures Listing Health and Safety Manual.

2. Objective

The objective of this SOP is to outline the appropriate resources, policies, and the building-specific procedures pertaining to workplace inspections in the Leslie Dan Faculty of Pharmacy.

3. Background

The Leslie Dan Faculty of Pharmacy is an organization committed to protecting and monitoring the health and safety of people in the building. The Joint Health and Safety Committee is the body responsible for overseeing this important task and reporting to the OEHS at the University of Toronto. SOPs are now required by the OEHS. This series of SOPs are compliant with this requirement.

Laboratory inspections are an integral part of identifying, monitoring, and correcting safety issues in the building laboratories (floors 7-12).

4. Definitions and Abbreviations

Abbreviations used in this document are defined in this section:

SOP	Standard Operating Procedure
JHSC	Joint Health and Safety Committee of the Leslie Dan Faculty of Pharmacy, at the University of Toronto
OEHS	The Office of Environmental Health and Safety, University of Toronto
TBD	To be determined

N/A	Not Applicable
Rev.	Revision

5. Policies

1. A Workplace Inspection Checklist for Laboratories is available on the OEHS website: https://ehs.utoronto.ca/wp-content/uploads/2016/06/JHSC-Workplace-Inspection-Checklist.doc
2. The committee must establish a schedule of inspections when it is not practical to inspect the entire workplace once a month, such as when the workplace is too large or complex. At least part of the workplace is inspected monthly and the entire workplace is inspected at least once a year. Workplace inspections are to be conducted in accordance with this schedule. [7.7, pg8, JHSC Handbook 2007]

6. Procedures

6.1.1 Inspection Teams

1. Research floors (7-12 only) are allocated for inspection.
2. Each research floor is allocated an Inspection Team.
3. Each Inspection Team consists of at least 1 student, and at least one faculty member. Inspection Teams may be larger, depending on the size of the research floor.
4. All members of the Inspection Team must be current members of the JHSC.
5. Members of inspector teams must not be involved in inspecting their own floor.

6.1.2 Performing the Laboratory Inspection

1. The exact time and date of inspection is not announced.
2. The Inspection Team enters the lab and announces the health and safety inspection.
3. Members of the lab being inspected shall make every effort to accommodate and facilitate the inspection.
4. If a lab is closed during the planned inspection period, the Inspection Team must return and conduct their inspection when there is at least one member of the laboratory present.
5. The Inspection Team will fill out an Inspection Checklist (“U of T Joint Health and Safety Committee: Building Inspection Checklist”) for each Principal Investigator on the research floor.
6. The Inspection Checklist is a working document, and is subject to modification, to suit the needs and requirements of the Laboratory Health and Safety Inspection.
7. If a lab has more than one room on the research floor, the same Inspection Checklist may be used. Notes or comments on the Inspection Checklist should be room specific.
8. Any findings of the Inspection Team are recorded on the Inspection Checklist.
9. Once the inspection is complete, the Inspection Checklist will be returned to the JHSC.
10. The JHSC will send a summary of findings to the Principal Investigator of the laboratory.

11. The laboratory will take corrective action to the inspection findings.
12. The laboratory will provide documentation to the JHSC that any safety issues have been dealt with and are now compliant with OEHS and departmental policies.

7. Revision History

Revision #	Date	SOP Section(s)	Revision Description	Revised By
0	20-Mar-12		SOP PBSOP009 created.	David Dubins (author)
1	05-Dec-17	1, 5.1.	Web links updated. Workplace Inspection Schedule link removed (no longer active).	David Dubins (reviser)

Standard Operating Procedure

Title:	**Emergency Procedures – Mercury Spills**
Issue Date:	APPROVED DEC 0 5 2017
SOP #:	PBSOP010
Revision #:	1

David Dubins — 05-Dec-17

Author of this Revision:
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Member, Joint Health and Safety Committee

Date

J. Zlicic — 05.12.2017.

Reviewed by:
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Faculty Technician
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Date

Carolyn Cummins — Dec 5, 2017

Approved by:
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Date

1. Scope

The scope of this SOP is to provide building-specific details regarding the safety issues concerning mercury spills in the Leslie L. Dan Faculty of Pharmacy building.

This SOP is not intended to replace, supersede, or contravene any of the policies or training outlined by the Office of Environmental Health and Safety (OEHS), available online via the following website:

https://ehs.utoronto.ca/resources/

The SOP is intended to clarify how site-specific aspects of OEHS policies are dealt with in order to ensure they are appropriately implemented. OEHS policies will not be re-iterated in this document, but rather the reader is referred to the link above, to the Policies and Procedures Listing Health and Safety Manual.

2. Objective

When mercury thermometers, mercury-containing UV lamps, lab equipment containing mercury switches, or other vessels containing mercury are broken, they pose specific hazards that need to be dealt with differently than regular spills. The objective of this SOP is to outline the appropriate policies, and the building-specific procedures pertaining to mercury spills in the Leslie Dan Faculty of Pharmacy.

3. Background

The Leslie Dan Faculty of Pharmacy is an organization committed to protecting and monitoring the health and safety of people in the building. The Joint Health and Safety Committee is the body responsible for overseeing this important task and reporting to the OEHS at the University of Toronto. SOPs are now required by the OEHS. This series of SOPs are compliant with this requirement.

4. Definitions and Abbreviations

Abbreviations used in this document are defined in this section:

SOP	Standard Operating Procedure
JHSC	Joint Health and Safety Committee of the Leslie Dan Faculty of Pharmacy, at the University of Toronto
OEHS	The Office of Environmental Health and Safety, University of Toronto
EPS	Environmental Protection Services (Hazardous Materials)

TBD	To be determined
N/A	Not Applicable
Rev.	Revision

5. Policies

1. Emergency procedures for mercury spills pertaining to the laboratory are available through the OEHS website: https://ehs.utoronto.ca/report-an-incident/emergency-procedures/mercury-spill-procedures/
2. Safety training for graduate students is a degree requirement, and occurs twice yearly in the Leslie Dan Faculty of Pharmacy. Mercury spill response is a component of the safety training course.
3. If there is a specific hazard of a mercury spill in a laboratory, the Principal Investigator should purchase a commercial mercury spill kit for the laboratory.

6. Procedures

6.1.1 Assessment of the Spill Magnitude

1. The first step in properly responding to a mercury spill is to qualitatively assess the magnitude of mercury accidentally released.
2. It is the responsibility of the Principal Investigator and members of the laboratory to identify and assess mercury spills in the laboratory, and respond immediately and appropriately to prevent contamination and limit exposure.
3. A regular mercury thermometer typically contains less than 5 mL of mercury metal. Mercury thermometers are typically out of circulation and have mostly been replaced with alcohol thermometers. However, a number of mercury thermometers nonetheless are still in the building. If a single mercury thermometer breaks releasing mercury metal, the spill is considered to be small.

6.1.2 Responding to Large Mercury Spills

1. If a large spill is identified during office hours (8:30am – 4:30pm weekdays), the Environmental Protection Services (EPS) division of the OEHS should be contacted directly, at 416-978-7000 (or 8-7000 from a University of Toronto telephone).
2. If a large spill is identified outside of office hours, the University of Toronto Campus Police should be contacted, at 416-978-2222.
3. The area containing the spill should be evacuated immediately, and sealed off until assistance arrives.
4. The spill should be reported to the Principal Investigator or supervisor of the laboratory, and to Environmental Health and Safety using the Accident/Incident/Occupational Disease Report form, available through the OEHS website:

https://ehs.utoronto.ca/report-an-incident/

6.1.3 Responding to Small Mercury Spills

1. A small spill should be immediately cleaned up by the appropriate laboratory person who has been appropriately safety trained.
    - **ATTEMPT TO PREVENT THE SPREAD OF MERCURY OUTSIDE OF THE CONTAMINATED AREA.**
2. The mercury spill should be cleaned up immediately with an aspirator bulb, medicine dropper, or a mercury sponge.
3. The mercury should then be placed in a sealed container. The device used to collect the spilled mercury (along with any contaminated items, e.g. broken thermometer pieces, gloves, suction bulbs) should be placed in the sealed container.
4. A vacuum cleaner should not be used to clean the spill, regardless of the size of spill.
5. The sealed container should be affixed with a chemical waste label. The label should be accurately and completely filled out.
    - The sealed container should not misrepresent the waste; *i.e.* do not use a biowaste bag or pail, or anything with a Rad label.
6. Wash the surface with mercury neutralizing solution such as 20% sodium sulphide or sodium thiosulphate.
7. If mercury has broken up into smaller globules, sprinkle with sulphur powder or commercial product and leave for several hours before cleanup.
8. Transfer the sealed container to the Solvent and Chemical Waste Room in the penthouse of the Leslie L. Dan Faculty of Pharmacy building.
   The spill should be reported to the Principal Investigator or supervisor of the laboratory, and to Environmental Health and Safety using the Accident/Incident/Occupational Disease Report form, available through the OEHS website: https://ehs.utoronto.ca/report-an-incident/
9. The OEHS can optionally be contacted to take measurements at the site of the spill, to ensure there is no remaining mercury contamination. The OEHS requires a few days' notice for this service.

7. Revision History

Revision #	Date	SOP Section(s)	Revision Description	Revised By
0	29-Jan-14		SOP PBSOP010 created.	David Dubins (author)
1	05-Dec-14	1, 5.1, 6.1.2.4, 8.	Web links updated.	David Dubins (reviser)