

**CHEMICAL WASTE MANAGEMENT IN THE LABORATORIES
(special edition for PJAB)**

ACCOMPLISHED BY :

- Any person producing chemical waste.

NOTE :

- The residual dangerous materials collection and elimination procedure [SST-PR-4-CHM] is available at dangerous materials management advisers at DPS-SST. Contact the Health and Safety service by e-mail or by phone (340-5283 or SST@UMontreal.ca) for any material required for recuperation or for any particular collection.

REQUIRED EQUIPMENTS :

- Lab coat ;
- Safety Eyewear ;
- Appropriate labels ;
- High density polyethylene (HDPE) 1L, 4L or 10L cans.

LIST OF WASTES :

Type of residual materials	Definitions and/or examples	Preparation by users Since the first use, cans must be clearly identified (i.e. stickers must be properly filled).
1. Flammable used solvents	- Flammable non halogenated used solvents (acetone, toluene, etc.)	<ul style="list-style-type: none"> ▪ Pour in yellow 10L HDPE cans. When can is full, put it in a safety cabinet for flammables. ▪ Complete the white label with flame « mélange de solvants usés » with the flame, fill every space and stick it on the can without masking the red transport labels (cans are collected according to a schedule or on demand).
2. Used aqueous solutions	- Photographic or radiological solutions - Aqueous solutions containing organic or inorganic contaminants	<ul style="list-style-type: none"> ▪ Pour in yellow 10L HDPE cans. When can is full, put it in a safety cabinet for flammables. ▪ Complete the white label with flame « mélange de solvants usés », fill every space and stick it on the can without masking the red transport labels (cans are collected according to a schedule or on demand).
3. Used halogenated solvents	Ex. : Chloroform, dichloromethane	<ul style="list-style-type: none"> ▪ Pour in blue 10L HDPE cans. When can is full, put it in a safety cabinet for flammables. ▪ Complete the yellow label « mélange de solvants usés halogénés », fill every spaces and stick it on the can without masking the red transport labels (cans are collected according to a schedule or on demand).



PROCÉDURE APPLIQUÉE PA-305-eng (PJAB)

Page : 2 de 3
 Émise le : 8 sept. 2000
 Révisée le : 26 oct. 2012

4. Used oil	Used oil	<ul style="list-style-type: none"> Pour in yellow 10L HDPE cans. When can is full, put it in a safety cabinet for flammables. Complete the white label with flame «huiles usées» with the flame, fill every space and stick it on the can without masking the red transport labels (cans are collected according to a schedule or on demand).
5. Mixture containing metals	Ex. Acid solutions with Ni, Cd, Ag, Fe, etc.	<ul style="list-style-type: none"> Pour in HDPE 4L containers. Identify with the yellow label « résidus chimiques ».
6. Laboratory products	Expired, outdated products, laboratory samples	<ul style="list-style-type: none"> Make a list of products to eliminate, send it to DPS-SST (SST@umontreal.ca). Place products in boxes identified properly with the yellow label « résidus chimiques ».
7. Acids and bases solutions	Avoid mixing acids and bases. Heat release or violent reaction risk.	
	Diluted solutions (< 0,1N)	<ul style="list-style-type: none"> Neutralize and throw in sewer.
	Concentrated solutions (> 0,1N)	<ul style="list-style-type: none"> Pour in white 10L HDPE cans. Complete the appropriate label (pink for acids solutions, blue for bases solutions), fill every space and stick it on the can without masking the red transport labels.
	HF, HClO ₄ , and HNO ₃	<ul style="list-style-type: none"> Pour every solution in different white cans; do not mix these acids together. Complete the appropriate label (pink for acids solutions), fill every space and stick it on the can without masking the red transport labels.
	Chromerge solutions	<ul style="list-style-type: none"> Pour every solution in white cans, do not mix with others acids. Complete the appropriate label (pink for acids solutions), fill every space and stick it on the can without masking the red transport labels.
8. Special reactives	Ex. : Butyllithium, LiAlH ₄ , Grignard, etc.	<ul style="list-style-type: none"> Deactivate, write "DEACTIVATED" on the bottle. Follow the steps for laboratory products (#6).
9. Gas cylinders	Big cylinder	<ul style="list-style-type: none"> Contact the Merchandises Reception for a pick-up # (514) 340-5283.
	Small cylinder (lecture bottle)	<ul style="list-style-type: none"> Contact DPS-SST for collection.
10. Used silica		<ul style="list-style-type: none"> Store in a container and identified with « gel de silice », max. 30L. Contact DPS-SST for collection.
11. Highly toxics waste from special manipulations	Ex. : Tetroxyde d'osmium, KCN, etc.	<ul style="list-style-type: none"> Store in a closed container (HDPE 4L) and identify with the yellow label « résidus chimiques ». Separate liquid from solid, use two different containers. Contact DPS-SST for collection.
12. Sharps	Pasteurs pipettes, needles, strips, etc.	<ul style="list-style-type: none"> Dispose in HDPE 4L containers. When full, dispose in domestic garbage.
13. Empty containers	Empty metal containers	<ul style="list-style-type: none"> Eliminate the cap; let the residual product evaporate for 24 hours in a ventilated room or in a chemical fume hood. Invalidate the label by crossing out every indication of the chemical product with a marker. Dispose in domestic garbage by putting the containers outside the laboratory.
	Empty containers (plastic and glass)	<ul style="list-style-type: none"> Rinse the empty containers; eliminate the cap. Pour the washing water in the appropriated recuperation containers. Remove or cross out the label. Dispose in domestic garbage.



PROCÉDURE APPLIQUÉE PA-305-eng (PJAB)

Page : 3 de 3
Émise le : 8 sept. 2000
Révisée le : 26 oct. 2012

14. Broken glassware	Broken glassware not contaminated with chemical products.	<ul style="list-style-type: none">▪ Store in a cardboard box identified with « verre brisé », available at DPS-SST.▪ When full, close tightly, identify with the lab number and dispose in domestic garbage. Maximum 30 pounds.
-----------------------------	---	---

PROCÉDURE APPLIQUÉE EN SANTÉ ET SÉCURITÉ
Direction prévention et sécurité – Division santé et sécurité au travail

RISQUES CHIMIQUES

