INDIANA UNIVERSITY

OFFICE OF THE EXECUTIVE VICE PRESIDENT
FOR UNIVERSITY ACADEMIC AFFAIRS

University Environmental Health and Safety

IUPUI EHS Compliance Guide

Handling and Disposal of Contaminated Laboratory Sharps and Debris

This document provides guidance on the proper handling and disposal of contaminated sharps and debris generated in the laboratory for procedures that involve the use of chemicals. Examples include plastic pipettes, pipette tips, cuvettes, syringes and needles, contaminated personal protective equipment (PPE) and any other similar debris. It is important to distinguish the difference for handling and disposal of these wastes from those generated through biological procedures. A summary table is provided to help illustrate these differences, as well as the key points of this guide. More information can be obtained from the IUPUI Office of Environmental Health & Safety website at www.ehs.iupui.edu, or by calling our office at 274-2005.

Chemically Contaminated Sharps

Rigid plastic pipettes are often used for dispensing a variety of chemicals in the laboratory setting. Needles can also be used for a number of procedures, including solvent injection into analytical equipment. Under normal circumstances, chemical transfer results in a minimal amount of residue left behind inside these sharps. Very little, if any free liquid may be present. However, IUPUI uses best management practices for disposal of chemically contaminated material. *Therefore, any sharps contaminated with chemicals considered flammable, corrosive, reactive or toxic as indicated on the Safety Data Sheet should be referred to Environmental Health & Safety (EHS) for disposal. Common examples of chemical contaminated sharps and debris that EHS collects regularly include phenol: chloroform, ethidium bromide, formalin and Bouin's fixative among others.

Chemical residues and odors can persist and pose problems if placed in the general trash. These items are also **not suitable for autoclave**. Therefore, any sharps used in laboratory procedures involving chemicals should be placed in their own rigid, puncture and leak proof disposal container with a tight-fitting lid (example shown in Figure 1). This container should **not** be labeled as a biohazard, but **must** have a label listing the chemical contaminants contained in the waste using a *Waste Chemical Label* (Figure 2). If using a sharps container for disposal of these sharps, de-face or cover the pre-printed universal biohazard symbol. If using a cardboard box, you must line the box with a clear or black plastic bag to prevent leakage. If you need assistance selecting the appropriate container for your chemical sharps waste, please contact our office.

Do not co-mingle biological sharps waste into the same containers as chemical waste sharps. Biological sharps waste should be handled according to laboratory protocols and standard procedures outlined in the *IUPUI Biological Safety Manual.*

Chemical Contaminated Debris

Cuvettes, microwell plates, Eppendorf tubes, and other types of debris that contain or are contaminated with chemicals should also be collected by EHS for disposal. These items are not considered sharps; however they should still be placed in a labeled, leak-proof waste container with a tight-fitting lid, such as a small plastic bucket.

*Any sharps or debris contaminated with chemicals that meets the definition for "suitable for drain disposal" according to the *IUPUI Waste Disposal Guidelines* can be discarded either with the biological sharps or placed in a container suitable for sharps and thrown in the regular trash. If you are unsure if the chemicals you are using meet these criteria, contact our office for guidance.

Figure 1: *Example of rigid, puncture proof and properly labeled container for chemically contaminated sharps.*

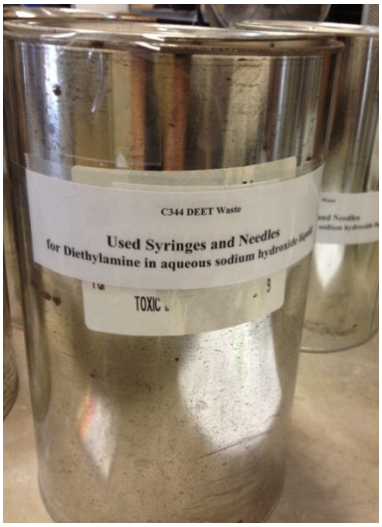

Figure 2: *Label all containers with the chemical contaminants present in the waste.*

WASTE CHEMICAL LABEL

Building:_____ Contact Person: _____
Room #: _____ Phone #:_____

EHS date

COMPOSITION OF WASTE: (Please list ALL chemicals and % composition)
DO NOT USE ACRONYMS OR ABBREVIATIONS!

Waste Name: _____

Chemical Name:	**% Composition:**
_____	_____%
_____	_____%
_____	_____%
_____	_____%
_____	_____%
_____	_____%
	TOTAL: 100%

IUPUI Environmental Health & Safety, 278-3328
980 Indiana Ave. Room 4419
To request a waste pick-up: http://www.ehs.iupui.edu/ehs/manifest_form.asp

Summary Table

Waste	Waste Type	Label	Recommended Disposal Method
Rigid plastic pipettes used for solvent transfer	Chemical Sharp	Waste Chemical Label	Plastic bucket or other rigid/leak-proof container for EHS collection
Needles & syringes used for solvent injection	Chemical Sharp	Waste Chemical Label	Sharps container with the biohazard symbol de-faced for EHS collection
Plastic pipette tips used for DNA isolation (phenol: chloroform)	Contaminated Debris	Waste Chemical Label	Lined cardboard box, plastic or glass container with lid for EHS collection
Cuvettes containing trace amounts of phenol	Contaminated Debris	Waste Chemical Label	Any leak-proof container with tight-fitting lid for EHS collection
Serological Pipettes used for BL2 work	Biological Sharp	Biohazard symbol	Biohazard sharps container for autoclave
Pipette tips used in BL1 work	Biological Sharp	Biohazard symbol	Bag-lined sharps container on bench-top or any other sharps container for autoclave
Transfer pipettes used to add neutral buffer to a solution	Non-hazardous	None	General trash

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