

SILVER RECLAMATION TIPSHEET

Campus Waste Minimization Program

In compliance New York State Department of Environmental Conservation (NYSDEC) regulations, Cornell University has an ongoing obligation to reduce hazardous waste generated on campus. One way this is accomplished is with the <u>Silver Reclamation</u> <u>Program</u>. Silver is found to be toxic to aquatic species. In concentrations of 5 parts per million (ppm) or greater, silver must be managed as hazardous waste or reclaimed for recycling. If your work consists of darkroom use, silver stains or other uses of silver products, you too should be part of Cornell University's Silver Reclamation Program.

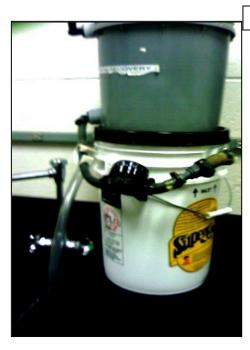


Photo 1. Silver Reclamation Unit

Procedure 1: Metallic Replacement: Photo 1 illustrates one type of *Silver Reclamation Unit* that is used across campus. This free-standing unit has a trickle bucket attached to the top of the reclaiming bucket. The fixer is poured into the top bucket and "trickles" into the lower bucket which contains an iron compound. An ionic exchange with the silver in solution and the iron occurs and the silver is removed from solution. The reacted fixer solution is then drained directly into the sink and may be washed down with water. Similar units are attached directly into

automatic developing machines. These machines are self contained and this recovery becomes part of the developing process.

No Silver Reclamation Unit near your work space? Digital photography has reduced the need for chemical fixer use in many labs. If you are using any other silver

Approved by: Brian Seward	Tip_sheet_5_2015_Silver Recovery
Last Reviewed by: Brian Seward	Page 1 of 1
Review Date: 5/7/15	

containing chemicals, please label with the waste container shown below in Procedure 2 and submit an online <u>Chemical Waste Disposal Pickup Request</u>.

Procedure 2: EH&S Pick-up:

Photo 2 shows the EH&S tag for the collection of contaminated waste. The solution that contains silver that will be reclaimed is considered <u>Contaminated Waste,</u> <u>and should be labeled as such</u>. (This is similar to the hazardous waste tag and pick-up procedure.)

- Fill out the tag completely and affix to the bottle.
- Disregard the information on the label that says "Send the top copy to Environmental Health &
 Safety, 201 Palm Road., Ithaca NY"
- Place the containers in a UN rated box and
- Place the box in an obvious place in the work area.
- Fill out a Chemical Waste Disposal Pickup Request Form

If you have questions on locations of Silver Reclamation Units, specific silver containing chemicals or film collection, please submit your question to <u>"askEHS"</u>.

Approved by: Brian Seward	Tip_sheet_5_2015_Silver Recovery
Last Reviewed by: Brian Seward	Page 2 of 2
Review Date: 5/7/15	

PRESS HARD WITH BALL-POINT PEN AND PEEL AT SLIT! DETACH TOP COPY AND CARBON AT PERFORATION! ATTACH BOTTOM COPY TO CONTAINER. SEND TOP COPY TO: ENVIRONMENTAL HEALTH & SAFETY, 201 PALM RD., ITHACA NY Cornell University Laboratory Contaminated Waste Collection Tag 00101 С Cornell Univ. Environmental Health & Safety 201 Palm Road, Ithaca, NY 14853 BLDG. & RM. DATE TEL.# NAME Type of Waste Chemical Check all that apply Contaminants & Volume/Weight S/# 2 Dry Gels Ethidium Bronnes
Propidium Iodide
Syber Safe Ethidium Bromide \$0 □ Toxic metals ☐ Mercury for recycling □ Silver

Photo 2. Contaminated Waste Tag