

STANDARD OPERATING PROCEDURE

Washing Soil Samples with Hydrofluoric Acid

Location(s): REIC 151

Chemical(s): Hydrofluoric acid (48% and 10%)

Specific Hazards:

List specific hazards for each chemical here (by chemical). This information is in the SDS.

1. Purchasing:

Include this verbage if chemicals or hazardous materials are being purchased for use in this SOP. If not, just write "N/A".

All purchases of these materials must have approval from _____ before ordering. The user is responsible to ensure that a current Safety Data Sheet (SDS) is obtained unless a current one is already available within the laboratory. Quantities of this material will be limited to the smallest amount necessary to complete the experiments.

2. Storage:

Include this verbage if chemicals or hazardous materials are being used as part of this SOP. If not, just write "N/A".

Materials will be stored according to compatibility and label recommendations in the designated _____ storage area. Storage areas will be regularly inspected by lab personnel to ensure safety. Periodic inventory reductions will be scheduled.

3. Authorized personnel:

Include this verbage if the use of this procedure should be limited in any way. If not, just write "N/A".

Use will be limited to the following personnel (check all that apply):

Principal Investigator _____	Graduate students _____	Technical staff _____
Post-doctoral employees _____	Undergraduates _____	Other (_____) _____

4. Training requirements:

The user must demonstrate competency and familiarity regarding the safe handling and use of these materials prior to using them. Training shall include the following:

Review of this SOP

Other examples: UAF Laboratory Safety training
 UAF Hazardous Waste Management training

5. Use location:

This procedure will be done in [BUILDING AND ROOM HERE]. Also specify any other specific location, such as fume hood or biosafety cabinet.

6. Personal protective equipment (PPE):

All personnel are required to wear the following personal protective equipment (PPE) whenever conducting this procedure:

Examples: Lab coat
 Safety goggles or safety glasses
 Gloves: [must specify glove type, and thickness if necessary; may also include warnings against other types of gloves that are not recommended for that chemical]

7. Spill equipment: List spill response equipment here, including neutralizer, universal pads, etc.

8. Procedure:

Materials needed:

Number list of materials needed for procedure, including pipets, tips, beakers, hot plates, chemicals, etc.

Procedure Notes:

Provide any notes for the procedure. This will mostly be scientific or technical in nature, but may include any specific warnings about serious safety hazards. May not have this section in some SOPs.

Procedure Steps:

Numbered list of steps in procedure, beginning with “don PPE” and “gather materials”.

1. Don PPE.
2. Gather materials.
3. Continue here.

9. Waste disposal and clean up:

If no wastes are generated, just write “It is not anticipated that any wastes will be generated during this procedure.” Otherwise, include this:

The authorized person using this material is responsible for the safe collection, preparation and proper disposal of waste unless otherwise stated below. Waste shall be disposed of as soon as possible and in accordance with all laboratory and University procedures.

Then, write specific instructions for liquid and solid wastes:

Specific instructions:

1. Liquid wastes
 - a. Obtain a [specify type if relevant] bottle and label with “[concentration and name of waste that will be generated]”. Note, this should be specified for EACH bottle of waste if more than one type of waste will be generated.
 - b. Further instructions here, if necessary (e.g., using a funnel, carefully decant the supernatant into the waste bottle and recap waste bottle.)
 - c. Store liquid wastes in secondary containment until the bottles are full or they are no longer needed (all samples have been prepared). Store in [list appropriate area here]. DO NOT store in a fume hood.

2. Solid wastes
 - a. Specific instructions here, including labeling of bag and storage of bag.
3. Complete request for Hazardous Waste pickup online (ask EHSRM or _____ to show you how to do this if you don't know), or call 474-5617 for assistance.

10. Decontamination:

Instructions for decontaminating items (Example: Triple-rinse any non-disposable items with water.)

11. Exposures: Emergency procedures to be followed (from SDS):

Eye contact for any or all chemicals used in these procedures

Symptoms:

List symptoms for each chemical from SDS.

First aid:

Describe first aid measures for each chemical as they are given in the SDS.

Call a physician. During business hours, call EHSRM immediately to report the exposure (474-6771 or 474-5413).

Skin contact for any or all chemicals used in these procedures

Symptoms:

List symptoms for each chemical from SDS.

First aid:

Describe first aid measures for each chemical as they are given in the SDS.

Call a physician if necessary. Call EHSRM immediately to report the exposure (474-6771 or 474-5413).

Ingestion for any or all chemicals used in these procedures

Symptoms:

List symptoms for each chemical from SDS.

First aid:

Describe first aid measures for each chemical as they are given in the SDS.

Call a physician immediately. Call EHSRM immediately to report the exposure (474-5413).

Inhalation

Symptoms:

List symptoms for each chemical from SDS.

First aid:

Describe first aid measures for each chemical as they are given in the SDS.

Call a physician immediately. Call EHSRM immediately to report the exposure (474-5413).

12. Spills:

May adjust this area to fit particular chemical(s) and circumstances. Here is an example:

In case of a spill outside of the fume hood: evacuate the area. Immediately call 474-5617 (EHSRM Hazmat), 474-7721 (UAF Dispatch), or 911 (if serious injury or exposure has occurred) to report the spill and request cleanup assistance.

In case of a spill inside the fume hood:

Do not turn the fume hood off until area is cleaned. Continue to wear gloves, lab coat, and chemical safety goggles. Absorb the spill with gray absorbent pads. Wash the area with water.

Place all pads in plastic bag. Place gloves in bag. Call EHSRM immediately to report the spill and to request waste pickup (474-5617). Wash hands and forearms thoroughly after cleaning up the area.

13. Phone numbers:

EHSRM Hazardous Materials (to report spills, request assistance, request pickup of wastes)	474-5617
EHSRM Industrial Hygiene (if Hazardous Materials not available; assistance with exposures)	474-6771
EHSRM office (if Hazardous Materials or Industrial Hygiene not available)	474-5413
University of Alaska Fairbanks Emergency Response (serious accidents, fire)	911

14. Other important information:

N/A

Prepared by: Name(s) here

Date: Date here

Reviewed/Revised: _____