

UW Medicine - Pathology

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Formalin (or 10% Formaldehyde) Small Spill Cleanup Procedure

Adopted Date: 05/16/11

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PURPOSE

To ensure that the clean up of small spills, less than 250ml / 1 cup, of formalin is handled accordingly.

Examples of a small formalin spill:

- Fixative during dispensing to fill specimen container
- Waste formalin during specimen discard

Permissible Exposure Limit (PE):

- Permissible Exposure Limit (PEL): 0.75 ppm
- Short Term Exposure Limit (STEL): 2.0 ppm

Physical Properties of Spilled Material:

- Liquid
- Some evaporation

SCOPE

All staff, faculty and residents/fellows who work in areas with formalin.

MATERIALS

Personal Protective Equipment for Spill Clean Up:

- Disposable apron / disposable gown
- Chemical-resistant gloves
- Goggles
- Optional: Shoe covers (for incidental contact only)

Spill Supplies for Clean Up:

- Spill pads
- Formalin absorbent / neutralizer and scoop
- Hazardous waste bag and label
- EH&S Chemical Collection Request Form

PROCEDURE

1. Secure the Spill Control Zone:

Leave the immediate spill control zone. Do not step in the spilled material when leaving. As needed, put up warning signs, caution tape, or exit room and close door(s) to prevent entry. Restrict access or entry to the spill area to staff who are trained to clean the spill.

2. Notify Department Personnel:

Notify area supervisor and co-workers in immediate area who may be affected by the spill.

3. Assist Injured or Contaminated Persons (if necessary):

Remove injured person from exposure if safe to do so. If splashed with a hazardous material, flush skin or eyes with water for 15 minutes. Send exposed person to Employee Health Center (M-F 8am-4:30pm) or the Emergency Department (After Hours) for medical evaluation / treatment.

4. Avoid Excessive Exposure:

- ✓ If exposed to excessive vapor levels, STOP , Leave Area, Notify Supervisor and go to Employee Health Center (M-F 8am-4:30pm) or the Emergency Department (After Hours) for medical evaluation / treatment. If you feel you cannot SAFELY respond to it, call 222 from a campus phone (911 from offsite) and report a chemical spill

5. Identify the Spilled Materials:

If not immediately know, either: (1) check the label on a different container of the same material; or (2) refer to MSDS.

If there is uncertainty about what has been spilled, STOP and call 222 (911 for off site phones) in safe area and report a chemical spill (implement CODE ORANGE).

!Cleaning large spills must be done by trained persons wearing appropriate PPE including respiratory protection!

If the chemical can be identified and safely cleaned up, continue on to step 6.

6. If the spill can be SAFELY cleaned - Control the Haz Mat Release:

Stop a release: Put tipped bottle in upright position or turn off open valve to reservoir.

Place pads or absorbent at perimeter of hazardous material spill to prevent further spread, and put over spilled materials to minimize evaporation. ***DO NOT throw towels over the spill.***

7. Gather Spill Control Supplies:

Retrieve spill control supplies from the nearest spill kit or supply location before starting cleanup activities: Pads and / or absorbent and scoop, and hazardous waste collection bag.

8. Put on Personal Protective Equipment (PPE):

Put on PPE over lab coat or scrubs: Disposable apron/gown, goggles, and chemically resistant-gloves.

Avoid breathing vapors from spilled material. Keep the liquid off of skin, clothing and shoes during cleanup.

Do not touch or walk through spilled liquid. Optional: Put on foot covers to protect against incident contact with chemicals.

9. **Clean Up the Area:**

Circle the spill. Use neutralizer / absorbent in bottle or absorbent pads to surround spill and limit spread of spilled materials to the smallest area possible. Do not walk in the spill.

Cover the spill. **Work from the perimeter of the spill towards the center and cover the spill with neutralizer / absorbent or pads. Do Not Add Water.** Wipe up or absorb the spill.

If broken glass is present, carefully pick up and place in sharps container.

When pads / absorbent no longer absorb materials, pick up pads and/or scoop up absorbent and put in hazardous waste bag.

Repeat clean up with pads and/or absorbent until hazardous material is removed.

10. **Final Cleanup of Spill Zone:**

- Thoroughly wash yourself -- hands, face and any potentially exposed areas
- Wash reusable equipment (goggles, scoop, etc.) or dispose of as hazardous waste
- Request Environmental Services to clean surfaces and floor where spill occurred

Collect Waste:

Label hazardous waste bag. Accurately fill out the hazardous waste label.

- ✓ Collect used pads, absorbent, disposable apron, gloves, foot covers, and other disposable protective equipment, etc., seal and label as formaldehyde/formalin - contaminated hazardous waste for waste pick up
- ✓ For waste pick up, complete and submit EH&S Chemical Collection Request form

Finish Spill Response:

- Supervisor reports the incident by submitting a PSN report
- Make sure supplies in the spill kit are replaced

Dispose of Hazardous Waste:

For waste pick up: Fill out the EH&S *Chemical Collection Request* form and submit to EH&S. Contact EH&S to schedule a waste pick up.

Possible Health Effects During Spill Clean Up:

- If inhaled: May irritate nose and throat, May result in coughing and wheezing.
- Symptoms may include difficulty breathing, tightness in chest, burning eyes/nose/throat, skin rashes, nausea, allergic reactions
- If contact with skin: May cause skin irritation. Repeated exposure may cause cracking and drying, and may lead to dermatitis.
- If contact with eyes: Vapor may cause eye irritation or burning sensation. Splash may cause eye irritation or tissue damage.
- Sensitizer: Formaldehyde is classified as a chemical sensitizer.
- Carcinogen: Formaldehyde is classified as a cancer-causing agent.

Spill Prevention Suggestions:

- Container selection: Purchase chemicals in non-breakable bottle or container.
- Handling: Pick up and handle container with two hands.
- Use: If a chemical is dispensed by spigot from a stock container, place a spill pad under the point of dispensing to absorb drips and spills from the spigot. Replace pad when drips or spills occur.
- Inspect: If the chemical is dispensed by spigot from a stock container enclosed by a cardboard box, inspect the cardboard after use. Liquid drips or spills may absorb into the cardboard and slowly evaporate resulting in airborne exposures.

REFERENCE

- University of Washington Environmental Health and Services Department (EH&S)
- Emergency Formalin Spill Procedures Power Point
- UWMC and HMC Anatomic Pathology Formaldehyde Management Plan(s)

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