

Spotlight On Safety

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Safe Use of Formaldehyde

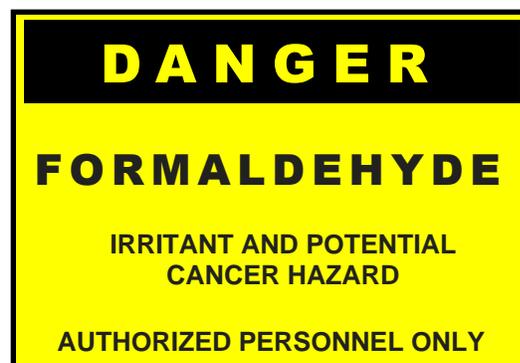
Formaldehyde is a colorless, flammable gas with a strong pungent odor. The aqueous solution formalin is 37-40% formaldehyde. Common uses of formalin and formaldehyde include tissue fixing/preservation, disinfection, and fumigation. Paraformaldehyde is a solid that cannot fix tissues and must be dissolved in hot water to become formaldehyde. Exposure to formaldehyde vapors can irritate the eyes, nose, and upper respiratory tract. In certain individuals, repeated skin exposure to the liquid can cause sensitization that may result in allergic dermatitis.

Minimizing Exposure to Formalin for Health Protection

- All work with formalin must be done in a chemical fume hood
- Disposable nitrile gloves, goggles, face shield, and a chemical resistant apron must be worn when formaldehyde is being poured or when there is a potential for splashing.

Special Safety Precautions

- If formalin contacts the body/eyes, flush the affected area with water for at least 15 minutes and report the incident to your supervisor immediately. Refer to the Emergency Flip Chart posted in the laboratory.
- Contact lenses must not be worn in areas where formalin is used because trapped vapors can cause irritation to eyes. If contact lenses are required for medical reasons, contact EH&S at 951-827-5528.
- All solutions of formalin and tissues preserved in formalin must be stored in tightly sealed containers to prevent leaks, spills, and airborne exposure.
- Don't pour formalin waste into sinks, place in tightly sealed, labeled waste containers. Generate a waste tag using the UC Safety WASTE and arrange for pick-up.
- Small spills (<100ml) of diluted formalin solutions must be cleaned up immediately. Cover the spill with paper towels or other absorbent material. Do not mop a spill. Using a dustpan, scoop the absorbed formalin into a plastic bag (wear gloves/eye protection), double bag, seal, label the waste, and generate a waste tag using [UC WASTE](#).
- If the spill is large, evacuate area immediately; close all doors to contain vapors, and call EH&S during normal business hours, or 9-1-1 after hours from a campus phone or UCPD 951- 827-5222 from a mobile. Be prepared to give the location of spill, approximate amount involved, name and phone number. Have someone wait for emergency response personnel outside building and direct them to the spill area
- Formaldehyde is anticipated to be a human carcinogen.



Visit www.ehs.ucr.edu for additional information or call EH&S at 951-827-5528 if you have any questions.