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# Formaldehyde, 37%

(May contain up to 10-20% methanol as a stabilizer)



**Idaho State  
University**

Environmental Health,  
Safety, and Sustainability

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## Standard Operating Procedure

Revision Date 2/9/2023

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### Potential Safety Hazards

*Toxicity* – Formaldehyde is acutely toxic (LD50 oral rat = 100 mg/kg) and a known human carcinogen according to the National Toxicology Program report on carcinogens. Exposure can cause severe skin burns, eyes damage, respiratory irritation, and central nervous system damage. Symptoms of overexposure include watery eyes and burning in the eyes, nose, and throat. Other symptoms may include skin irritation and rashes, nausea, coughing and chest tightness, an upset stomach and trouble breathing. Significant exposure via inhalation may be fatal.

*Reactivity* – Formaldehyde is an organic material and incompatible with strong oxidizing agents.

*Flammability* – Formaldehyde is flammable with a flash point of 133 °F.

### Safe Work Practices

#### *Inventory Management*

- Minimize the amount of formaldehyde stored in a laboratory.
- Utilize a less hazardous product than formaldehyde if possible.
- Utilize lower concentrations of formaldehyde if possible.

#### *Engineering Controls*

- Handle formaldehyde in an exhausted enclosure, such as a chemical fume hood or biosafety cabinet whenever possible.

#### *Chemical Hygiene*

- Do not breath formaldehyde mists or vapors.
- Change disposable gloves frequently, even if they do not appear to be contaminated.
- Wash hands each time after removing gloves.
- Prohibit all food and beverages in all chemical laboratories to minimize the risk of ingestion.

#### *Storage*

- Keep formaldehyde away from potential ignition sources.

### *Personal Protective Equipment (PPE)*

- Wear appropriate PPE when working with formaldehyde.
- Appropriate PPE includes the following:
  - eye protection
  - hand protection
  - long pants
  - closed toed shoes
  - lab coat

## **Preparedness for a Formaldehyde Spill**

### *Spill Awareness*

- Recognition of a formaldehyde spill typically involves detection of a strong pungent odor and visual observation of a colorless liquid.

### *Spill Response*

- If greater than 100 mL is spilled...
  - Evacuate the area of the spill.
  - Notify Environmental Health Safety & Sustainability (if normal business hours).
  - Notify Public Safety (if after normal business hours).
- If 100 mL or less is spilled...
  - Maximize ventilation. Activate hoods and open windows if possible.
  - Wear appropriate personal protective equipment.
  - Absorb spilled liquid utilizing absorbent pads and/or absorbent material.
  - Dispose of collected liquid and contaminated material via EHSS.

## **Unneeded Material**

- Manage formaldehyde, formaldehyde solutions, and contaminated items as hazardous waste and dispose via the Environmental Health Safety & Sustainability Department (<https://www.isu.edu/ehs/>).