

# FACT SHEET

## Formaldehyde/ Paraformaldehyde

Formaldehyde is an organic chemical compound that is commonly used in laboratories to preserve and fix tissue samples. Formalin is a term used to describe a 37-40% mixture of formaldehyde in water or methanol while Paraformaldehyde is a crystallized polymer of 97% formaldehyde. This sheet describes the hazards associated with formaldehyde and how to determine if a hazardous exposure is present.

### Common causes of formaldehyde exposure

Formaldehyde can be inhaled as a gas or vapor as well as absorbed through direct skin contact as a liquid. Exposure in labs to formaldehyde typically occurs when handling and/or dissecting specimens that have been preserved in formaldehyde.

### How can exposure to formaldehyde affect my health?

Acute exposure of formaldehyde is highly irritating to the eyes, nose, throat, and can cause coughing and wheezing. Continued exposure to formaldehyde is a sensitizing agent that can cause an immune system response such as severe allergic reactions of the skin, eyes, and respiratory tract. Ingestion of formaldehyde can be fatal. Formaldehyde has also been classified as a known human carcinogen and suspected reproductive hazard.

### What to do when exposed

- If formaldehyde comes in contact with your skin or eyes, flush the area with water for at least 15 minutes.
- If the exposure is life threatening, go to the nearest emergency room. Otherwise, proceed to the Red Med Clinic or Occupational Medicine Clinic.
- Report the incident to OEHS (801-581-6590).
- Fill out the "E-1 First Report of Injury Form" from the OEHS or Human Resources website.

### How can I reduce exposure?

- Enclose any operation or perform experiments in a fume hood where feasible.
- Use of personal protective equipment (PPE) such as safety glasses or goggles, gloves, and lab coats is required.
- Use pre-weighed packets of prepared formalin solutions to minimize exposure.
- Eliminate the use of materials that contain formaldehyde.
- Respirators are only allowed when engineering methods are not feasible or fail to keep exposures below the PEL.

### OSHA formaldehyde standard

The permissible exposure limit (PEL) for formaldehyde is 0.75 ppm, with an action level of 0.5 ppm measured for an eight-hour work day. The short-term exposure limit (STEL) for formaldehyde is 2 ppm which is the maximum exposure allowed during a 15 minute period. If you work with formaldehyde, exposure levels need to be measured. This is done by contacting OEHS and scheduling an appointment for assessment.

### What to do in case of a spill

- Stop work and grab your labs spill kit. If your lab does not have a spill kit contact OEHS.
- Don the provided PPE, including: Gloves, Disposable Sleeves, Apron, and Goggles.
- Lay absorbent pads on the spill to soak up the formaldehyde solution.
- Dispose of saturated pads into the provided bag. If dry absorbents are used, scoop the absorbed formaldehyde solution with a dustpan into the provided bag.
- Wipe the surface with a damp paper towel and dispose into the provided bag.
- Place the bags in the bucket, remove the apron, sleeves, and gloves and place in the bucket. Seal with the lid and label the material.
- Put in a request for OEHS to pick up the formaldehyde waste through the Laboratory Management System (LMS).

### How do I dispose of formaldehyde?

Do not pour formaldehyde waste into sinks or drains. Formaldehyde waste must be placed in a sealed labeled container. A waste pick up request should be submitted to OEHS through the Laboratory Management System (LMS). Print out and attached the receipt of waste request to the container.



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