**Chemical Name:** Acetaldehyde \((\text{CH}_3 \text{ CHO})\)  
**CAS #:** 75-07-0

**Use/Description:** Laboratory reagent

**PEL/TLV:**
- *TWA:* 25 ppm
- *STEL:* 150 ppm

**Hazard Summary:**
- EXTREMELY FLAMMABLE! Air sensitive. Oxidizes readily in air to form unstable peroxides that may explode spontaneously. Causes severe eye irritation and excessive tear production. Causes skin irritation and sensitization. May be harmful if swallowed or inhaled and cause damage to lungs, liver, and kidneys. Possible carcinogen.

This substance is included on COSE’s Particularly Hazardous Substance List. It must be handled in full accordance with this protocol.

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<th>Location Used:</th>
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<tr>
<th>PRIMARY HAZARD CONCERN</th>
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<tr>
<td>Possible Carcinogen</td>
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<td>Highly Flammable</td>
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<td>High Chronic Toxicity</td>
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<td>Toxic by Skin Absorption</td>
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<td>Extremely Reactive to AIR</td>
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<td>Reproductive Hazard</td>
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**Personal Protective Equipment**
- Change gloves frequently.
- Double-glove latex or nitrile
- Closed toe shoes should be worn when handling acetaldehyde.

**List PPE Details Below:**

- **Gloves:** Rubber, neoprene over disposable gloves. For incidental contact only: two layers of disposable latex or nitrile gloves
- **Lab Coat**
- **Chemical splash goggles**
- **Closed-toe shoe**

All work with acetaldehyde must be conducted in a fume hood to prevent exposure by inhalation. Standard PPE does not provide protection from hazardous gases or vapors.

**Engineering & Ventilation Controls**
- Chemical Fume Hood Required
- □ Glove Box
- □ Work on absorbent paper or secondary containment tray
- □ Other: Limit quantities necessary to smallest amount necessary to complete experiment

**Transportation**
- Use secondary containment such as carriers
- Use least trafficked areas

**Storage**
- Unstable in air
- Forms explosive peroxides on prolonged storage and exposure to air
- Polymerizes violently in the presence of acids or metals.
- Store in flammables storage cabinet (Flammable Liquid Class 1A)
- Store in separate secondary containment—incompatible with alcohols
- Do not store with strong bases, oxidizing or reducing agents, acids, halogens (see MSDS for full list of incompatible materials)
- Label containers with chemical name, hazard warnings, and a “Flammable” sticker
- Keep away from ignition sources, air, and heat

**Accidental Skin/Eye Contact**
- Symptoms: irritation, redness, pain
- Change gloves immediately once contact is noted
- Flush eyes for 15 min. with emergency eyewash if splash occurs
- Utilize emergency drench shower for exposures to body
- Wash hands/skin with soap and water after flushing
- Report incident right away and get medical attention if necessary

**Inhalation/Ingestion Exposure**
- Symptoms: nose and throat irritation, flushing of the face and chest tightness
- Treat as for cyanide poisoning (however, amyl nitrite not effective for this)
- Remove to fresh air
- Do not induce vomiting
- Get medical attention immediately and contact campus 911
### Chemical Name: **Acetaldehyde**

#### Spill/Accident Procedures

- Wear gloves (at least 2 pairs)
- Turn off equipment if necessary (and safe)
- Minimize spread of contamination
- If unsure try to isolate and get help
- Waste bag must be sealed and labeled

#### Small Spills:
- Sprinkle inert solid or gel absorbent over spilled area. For very small spills, paper towels may be sufficient. If available, absorb spilled material with “universal” sorbent pads or other suitable material. (i.e., vermiculite, “universal” gel sorbent, Spillfyter SuperSorbent—avoid raising dust)

#### Large Spill:
- 1. remove all persons from the area
- 2. place absorbent material at the edges of spill and work inward
- 3. close doors to affected area
- 4. call stockroom or 911 (for campus police and hazmat response)

#### Waste Disposal
- Acetaldehyde-containing waste should be placed in a tightly sealed, labeled container and taken to the stockroom for temporary storage. A completed waste tag with date and signature must be attached.

#### Designated Area
- Designate an area/fume hood for the use of “particularly” hazardous materials.
- Where will this material be stored? __Fume hood __Cabinet
- Only trained and authorized personnel are permitted access to the designated area while it contains the hazardous material.
- Describe how you will prevent unauthorized access to the material.

What other special precautions will you implement?

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I have reviewed the SOP and the associated MSDS for this material with the people who report to me and/or share the restricted work area.

Signature of P.I. or Designated Lab Manager

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