**Standard Operating Procedure for Laboratories**

**PARAOXON – ETHYL**

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| --- | --- |
| Department: | Click here to enter text. |
| Principal Investigator(s): | Click here to enter text. |
| Lab Manager/Coordinator: | Click here to enter text. |
| Location of Experiment:  (Building/Room Number) | Click here to enter text. |
| Lab Phone: | Click here to enter text. |
| Office Phone: | Click here to enter text. |
| Emergency Contact: (Name/Phone) | Click here to enter text. |

**Reviewed and Approved by**:

|  |  |  |
| --- | --- | --- |
| PI: (Typed Name) | Click here to enter text. | |
| PI: (Signature and Date) |  | Click here to enter a date. |
| Lab Manager: (if PI unavailable) |  | Click here to enter a date. |

**Hazardous Material Use and Management**

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| Hazardous Material(s) Used: (wt./volume) | Paraoxon -ethyl |
| Hazardous Material Storage Location: | Store in a tightly closed containers in a cool, well-ventilated area.  Store away from Endrin to avoid violent reaction. Store away from strong bases (sodium hydroxide, potassium hydroxide) and strong oxidizing agents (perchlorates, peroxides, permanganates, chlorates, nitrates, chlorine, bromine and fluorine)  Designated Storage Area: |
| Experimental Procedure and Techniques to be Used: |  |
| Hazard Identification: (i.e., physical/health hazards) | **CAS # 311-45-5**  **GHS Classification: Acutely toxic if inhaled, Acutely toxic oral, Acutely toxic on skin contact, Toxic to aquatic life.**   * Exposure to paraoxone can cause rapid, severe organophosphate poisoning. Breathing paraoxone can irritate nose, throat and lungs, can cause dizziness, lightheadedness and passing out. It can also affect concentration and muscle coordination. * Heating paraoxone may lead to runaway reaction and explosion. * Paraoxone will react violently with endrin. * Incompatible with strong bases like sodium hydroxide and potassium hydroxide. Incompatible with strong oxidizing agents such as perchlorates, peroxides, permanganates, chlorates, nitrates, bromine and fluorine.   Review MSDS/SDS prior to working with chemical. |
| Engineering Controls: (chemical fume hood, biosafety cabinet, glove box) | Use only in chemical fume hood with adequate exhaust ventilation with fume hood sash as low as possible.  Eyewash and safety showers must be readily available  Wash hands before breaks and immediately after handling the paraoxone. |
| Protective Equipment: | Wear butyl rubber or nitrile gloves, double gloves recommended.  Wear tightly fitted safety glasses or goggles.  Wear disposable Tyvek-type lab coat. In addition to lab coat, Tyvek- type sleeves are also recommended.  Always check with glove manufacturer for more info. |
| Waste Collection/Disposal Method: | Collect liquid waste separate from any other waste in properly labeled hazardous waste container with tightly closed lid.  All solid waste (any contaminated PPE, gloves, towels etc.) must be collected in either a Ziploc bags or a 5-gallon screw top pails depending on the waste generation rate. Any vials (like HPLC) used for paraoxone will have to collected in a separate 5-gallon screw top pail.  Affix and complete hazardous waste label. Contact REHS for waste pick up. |
| Spill Management: | For small spills, first remove all sources of ignition. Use inert absorbent material to soak up the spill. First, wash all contaminated surfaces with toluene than wash it with soap and water. Collect all contaminated closing and absorbent material in a vapor- tight plastic bag for disposal. Do not reenter the area until REHS verified that the area is clean.  If a spill happened outside fume hood, on floor, on bench or outside the lab contact REHS for clean up or call 911. |
| First Aid: | Eyes: Flush eyes with warm water for 15 min. Seek immediate medical attention.  Skin: Flush affected skin with plenty of water and mild soap. Seek immediate medical attention.  Inhalation: Remove to fresh air. If breathing is difficult give oxygen. Seek immediate medical attention.  Ingestion: Rinse mouth with water. Call poison center. Seek immediate medical attention. |

**Training**

* Prior to conducting any work with paraoxone, designated personnel must be provided training specific to the hazard involved in working with the substance.
* The PI must provide his/her lab personnel with a copy of the SOP and a copy of the SDS provided with the manufacturer.
* The PI must ensure that his/her lab personnel have attended and are up to date on the appropriate laboratory safety training within the last year.

I have read and understood the content of this SOP and the SDS:

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| --- | --- | --- |
| Lab Personnel  (Running the Experiment) | Date of Hands-on Training from Department | Signature of Lab Personnel |
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| Click here to enter text. | Click here to enter text. |  |

**PARAOXONE**

**Acutely Toxic by inhalation, skin contact, ingestion.**

**Toxic to aquatic life.**

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**FIRST AID**

**Eyes**: Flush eyes with warm water for 15 min. Seek immediate medical attention.

**Skin**: Flush affected skin with plenty of water and mild soap. Seek immediate medical attention.

**Inhalation**: Remove to fresh air. If breathing is difficult give oxygen. Seek immediate medical attention.

**Ingestion**: Rinse mouth with water. Call poison center. Seek immediate medical attention.

**DIAL 911 Call REHS for more information 848-445-2550**