**Example Hazardous Chemical SOP Approval**

*Principal Investigator*: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Building: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Room(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Department: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

**1. Introduction & Process Description**

This SOP covers the use of benzene and methylene chloride as used in the [insert your experiment process]. Create attachment for the specific experimental steps, attach completed lab specific SOP template, or outline them here.

**2. Specific Chemical(s) of Concern and Hazard Assessment(s)**

*Chemical / Formula* / *CAS#*:

 Benzene C6H6 71-43-2

 Dichloromethane / Methylene Chloride CH2Cl2 75-09-2

*Hazard Concerns / Assessments*:

Benzene - Carcinogen, Toxic, Flammable, Irritant

- Skin contact, skin absorption, ingestion, and inhalation

Dichloromethane - Probable Carcinogen, Toxic, Possible Reproductive

 and Fetal Damage, Irritant

 - Skin contact, skin absorption, ingestion, and inhalation

C6H6 must be kept tightly closed and kept away from heat, sparks and open flames.

CH2C12 is stable at room temperature and must be stored away from strong oxidizing agents, strong bases, and chemically active metals.

It is estimated the experiment will use approximately 500mL of each chemical per run and the lab will have on hand no more than 8L of each chemical total at any time [or as appropriate for your lab].

**3. Hazard Controls**

 **A. Administrative**

*Purchases*: Must be approved by laboratory supervisor, (insert PI name).

*Storage*: All containers of C6H6 and CH2C12 will be stored (insert location).

*Emergency Contact*: Post list of names and numbers of those who are to be contacted in case of an emergency. Ensure listed people have appropriate knowledge and training.

 **B. Engineering**

*Storage:* All containers of C6H6 and CH2C12 will be stored (insert proper storage requirements).

*Work Area*: Only use material in areas equipped with eye wash and emergency shower access.

*Ventilation*: Use chemicals only with adequate ventilation.

*Safety Equipment*: An EHS approved / properly working fume hood. (and other specifications per PI.)

 **C. Personal Protective Equipment:**

*Required PPE***:** Must wear, at the minimum, double layer of 8 mil nitrile gloves (changed frequently and wash hands thoroughly when finished), lab coat, safety glasses (chemical splash goggles preferred), closed toe shoes and long pants.

**4. Information and Training**

Only active lab personnel who are successfully trained may use these chemicals.

*Completed training must include review of*: applicable KU Laboratory Safety Manual sections, and other applicable EHS online training modules. (eg: Training section on EHS web page, etc.)

*Safety Training Document Maintained by / location*: < Insert person / location >

*Complete training specified by Principal Investigator*: < Insert specific requirements >

**5. Medical Factors & Surveillance**

*Emergency procedures in case of exposure*:for both C6H6 and CH2C12.

All potential laboratory exposures will be handled according to KU LSM Part I & II Section 5 and as applicable according to the OSHA Standards (1910.1028 & 1910.1052).

*Contact with eyes* – Flush eyes with water for at least 15 minutes and get medical aid.

*Contact with skin* – Flush skin with soap and plenty of water, remove contaminated clothing and get medical aid if necessary.

*Ingestion* – Get medical aid immediately, do not induce vomiting.

*Inhalation* – Move to fresh air, give artificial respiration if person not breathing, if breathing difficult give oxygen and get medical aid.

**6. Waste Disposal**

**Chemical waste – to EHS**

Chemical waste must be disposed of in accordance with the KU LSM Part II Section 6.1-6.4 and KU EHS Hazardous Materials Waste Management Manual. Waste must be stored in EHS approved container. Waste container must be labeled “Hazardous Waste” and a strict list of contents / dates added must be kept. When container is full complete an Official EHS Hazardous Materials Label and immediately contact EHS for a pick-up (www.ehs.ku.edu).

A**nimal Carcass & Bedding Waste – Incineration by ACU**

Bedding waste and animal carcasses will be labeled and bagged separately from our normal lab animal waste and sent to KU Animal Care Unit.

**Chemical spills – cleanup waste to EHS**

In case of small spill use proper PPE as indicated above. Remove all sources of ignition and provide ventilation. For powder spills, sweep powder without raising dust and contact EHS for disposal. Air the affected area and wash spill site thoroughly. For solution spills, use supplied spill kit materials to absorb spill and place contaminated materials into trash bag(s) and place back into bucket. Secure bucket lid and contact EHS (www.ehs.ku.edu) for waste pick-up. For large spills vacate room, close door and call EHS 785-864-4089.

**7. Record Keeping**

All potential laboratory exposures will be handled according to the KU LSM Part I & II Section 7 and as applicable according to the OSHA Standards (1910.1028 & 1910.1052).

**8. Attachment of SDS(s) and other necessary sheets**

 SDS attached.

**APPROVALS**

Written by: \_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_

Approved by PI: \_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_

Approved by: \_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_

 Mike Russell

 KU-EHS Dept.

EHS Permit/Approval#: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_