## INTRODUCTION

This SOP applies to the various chemicals that are Flammable. Flammables fall under the following categories:

- Flammable gas – a gas that, at STP, forms a flammable mixture with air at a concentration of 13% by volume or less OR that, at ambient temperature and pressure, forms a range of flammable mixtures with air wider than 12% by volume, regardless of the lower limit.
- Flammable liquid – a liquid having a flash point below 100°F.
- Flammable solid – a solid, other than a blasting agent or explosive, that (1) has an ignition temperature below 212°F, or (2) is capable of causing a fire through friction, absorption of moisture, or spontaneous chemical change, or (3) burns so vigorously and persistently as to create a serious hazard.
- Combustible liquid – a liquid having a flash point at or above 100°F (definition listed for storage considerations).

## GENERAL LAB RULES

1. No eating, drinking, smoking, handling contact lenses, or applying cosmetics in the laboratory.
2. Persons shall wear buttoned lab coat, long pants, safety glasses or goggles and appropriate gloves when working with hazardous chemicals.
3. Mouth pipetting is prohibited; mechanical pipetting devices are to be used at all times.
4. All procedures are performed carefully to minimize the creation of splashes or aerosols.
5. Wash hands
   - after handling chemicals materials,
   - after removing gloves, and
   - before leaving the laboratory.

Additional Lab Specific Rules Here
FLAMMABLES

Effective Date: 8/23/2013  Revised Date: 8/23/2013

POTENTIAL HAZARDS

Fire is the main hazard with Flammables.
Never use flammable materials near sources of heat, flame, sparks or static discharge (direct sunlight, furnaces, pilot lights etc.)
Do not use in unventilated areas. Use in fume hood.
Vapors are heavier than air. These can pool in low-lying areas and travel significant distances to an ignition source.

HEALTH HAZARDS

- Chronic exposure by inhalation or skin contact may result in liver or kidney damage, CNS disorders, blood disorders and GI tract disorders.
- Symptoms of acute exposure can lead to:
  - Dermatitis
  - Dizziness
  - Incoherency
  - Nausea
  - Vomiting
  - Abdominal pain
- May irritate eyes, nose and respiratory tract
- Can be absorbed through the skin and may cause dermatitis

PERSONAL PROTECTIVE EQUIPMENT

EYE PROTECTION

- Safety glasses, goggles or face shields shall be worn.
- Ordinary (street) prescription glasses do not provide adequate protection. Adequate safety glasses must meet the requirements of the Practice for Occupational Education Eye and Face Protection (ANSI Z87.1-1989) and must be equipped with side shields.

HAND PROTECTION

- Use disposable nitrile gloves when working with chemicals. Check chemical compatibility chart for breakthrough time when using
- Laboratory personnel should thoroughly wash hands with soap and water before and immediately upon removal of gloves.

LAB COATS, ETC.
FLAMMABLES

Effective Date: 8/23/2013
Revised Date: 8/23/2013

• Button lab coats, closed toed shoes, long pants and long sleeved clothing shall be worn when handling FLAMMABLES. Flame resistant lab coat should be worn. Protective clothing shall be worn to prevent any possibility of skin contact with FLAMMABLES.

WORK PRACTICES

• Work in a chemical fume hood if air concentrations above 10% of the lower flammable limit may be reached, if the chemical is irritating to the eyes and respiratory system, and/or is toxic by inhalation. Contact Facilities and Campus Services (x4255) immediately if fume hood is malfunctioning.
• Know the location of the nearest fire extinguisher before beginning work.
• Avoid using ignition sources (Bunsen burners, hot plates, electrical equipment with frayed or cracked wiring, etc.) and/or creating static electricity in areas where highly flammable chemicals are used.
• Ensure proper grounding. Be sure to ground metal containers when transferring flammable liquids.
• Keep containers of flammable chemicals closed at all times when not in use to prevent accumulation of flammable vapor concentrations.

SPECIAL HANDLING PROCEDURES AND STORAGE REQUIREMENTS

• Do not store with incompatible material.
• Incompatible with acids and oxidizers.
• FLAMMABLES are to be stored in a designated flammable cabinet when not in use.

Additional Lab Specific Special Handling/Storage Procedures

WASTE DISPOSAL

• Chemicals shall not be drain disposed unless prior approval is given by EH&S.
• Excess FLAMMABLES and all waste material containing FLAMMABLES must be placed in a container labeled with the following “HAZARDOUS WASTE FLAMMABLES”, AND INCLUDE THE FULL CHEMICAL NAME.
• Contact EHS at x3427 for hazardous waste removal.
标准操作程序 (SOP)

易燃物

有效日期：8/23/2013
修订日期：8/23/2013

紧急程序

紧急电话：
火警和医疗紧急情况：x5911（拨打911）
环境健康与安全：x3427
希尔克斯特紧急护理（员工）：336-760-8999
学生健康（仅限学生）：x5218
中毒控制：800-222-1222

急救
1. 如果化学物质暴露，移除污染的衣物并用紧急洗眼站或安全淋浴处冲洗暴露的区域15到20分钟。
2. 如果吸入：如果吸入，将人移到新鲜空气处。如果呼吸困难，施行人工呼吸。
3. 拨打x5911并描述伤害情况。
4. 将所有意外暴露报告给EHS和人力资源（员工）或学生健康（学生）。
5. 如果有过度暴露或意外，完成在线事故报告。

溢出和事故程序

如果溢出的化学物质被确认为致癌物、生殖毒素或高度有毒化学物质，立即疏散区域，无论溢出量如何。

对于所有其他溢出，请使用以下图表进行报告和响应：

<table>
<thead>
<tr>
<th>溢出量</th>
<th>适当溢出反应</th>
</tr>
</thead>
<tbody>
<tr>
<td>少于500毫升</td>
<td>联系环境健康与安全（x3427）并使用工具清理溢出</td>
</tr>
<tr>
<td>大于500毫升</td>
<td>不要尝试清理溢出。立即报告给WFU警卫（x5911）和EHS（x3427）。</td>
</tr>
</tbody>
</table>