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| **Principal Investigator:** John Smith |
| **Department:** Bioengineering |
| **Safety Manager:** Alice Jones |
| **Bldg.**: Benedum Hall |
| **Room:** 501 |
| **Date:** 4/7/2015 |

| **Item** | **Equipment/Experiment** | **Description** | **General Safe Operating Procedure (SOP)*\**** | **Required Training** |
| --- | --- | --- | --- | --- |
| 1 | Tissue Culture Hood | Fisher Scientific Biosafety Hood, Class II, Type A2 | 1. Close door duting UV irradiation.
2. Wear appropriate gloves, gowns, and masks.
3. Sterilize inside using 70% alcohol.
4. Ensure hood certification is up to date – have cabinet tested and certified by vendor each year.
 | 1. Chemical Hygiene
2. Bloodborne Pathogen
3. Glove
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| 2 | Micro Laser Welder | Orion Welder LXR-100, Class IIIa, 456 nm, 1 kW | 1. Wear appropriate laser safety googles.
2. Wear appropriate gloves.
 | 1. Laser Safety
2. Specific training by faculty/lab manager
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| 3 | Flammable Storage Cabinet | Fisher Scientific Cabinet meets NFPA and OSHA requirements | 1. Wear safety goggles/face shield and apron when transporting and decanting chemicals.
2. Use secondary container when transporting chemicals.
3. Keep door closed when not in use.
4. Do store acids and bases with organic solvents.
5. Ensure appropriate chemical spill kit is available.
6. Ensure safety shower and eyewash station are readily available and in working order – test monthly.
7. Ensure suitable fire extinguisher is readily available and not out of date.
 | 1. Chemical Hygiene
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| 4 | CO Gas Safety Cabinet | Compressed gas storage cabinet with inert purge and CO alarm | 1. Ensure all gas connections are leak tight.
2. Purge lines before cylinder changes.
3. Ensure sensor is not out of date.
 | 1. Chemical Hygiene
2. Compressed Gas
3. Gas cabinet training by vendor
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| 5 | Laser Curing System | Digitex 800s, 532nm, 1W | 1. Wear appropriate laser safety googles.
2. Wear appropriate gloves.
 | 1. Chemical Hygiene
2. Laser Safety
3. Glove Type
4. Specific training by faculty/lab manager
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| 6 | Optical Microscope | Olympus BX43 | 1. Preheat the fluorescent lamp.
2. Handle objective lenses with care.
3. Store lenses in appropriate cases.
 | 1. Specific training by faculty/lab manager
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| 7 | Chemical Fume Hood | Fisher Scientific HX 350, Hood # 351 | 1. HF acid use only.
2. Wear appropriate gloves, face shield, and apron.
3. Ensure safety shower and eyewash station are readily available and in working order – test monthly.
4. Verify calcium gluconate or carbonate gel is available.
5. Do not use organic solvents.
6. Do not store chemicals in fume hood.
7. Lower sash to working height when using
8. Lower sash to stand-by height when not in use.
9. Ensure fume hood is functioning properly – face velocity 85 – 100 ft/sec.
10. Ensure fume hood certification is up to date – have cabinet tested and certified by EH&S each year
 | 1. Chemical Hygiene
2. HF Safety
3. Glove Type
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| 8 | Drill Press | Rockler Machinery Tools, ½ HP, floor standing | 1. Wear safety glasses.
2. Ensure press is bolted to the floor.
3. Handle drill bits with care.
4. Ensure there is no loose clothing.
 | 1. Machining
2. Specific training by faculty/lab manager
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| 9 | Micro-Reactor | User assembled, high pressure 20,000 psi, temperature range 25-300oC | 1. Ensure system is vented properly to fume exhaust.
2. Ensure all fittings are properly seated before pressurizing.
3. Ensure pressure relief valve is installed and properly set at 18, 000 psig.
4. Maximum temperature setting of 150 oC.
5. Ensure over-temperature protection is set at 160 oC and is functioning properly.
6. Bring pressure up slowly to a maximum of 15,000 psig.
7. If system is to left unattended, monitor for at least 30 minutes after settings are reached before leaving
8. Vent system under nitrogen purge and verify the system is at room pressure before opening the reactor.
 | 1. Chemical Hygiene
2. Compressed Gas
3. Specific training by faculty/lab manager
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