Safety Inspection Checklist

Month_____20____ **Date Revised Sept. 22, 2011** **Revision Number: 12**

Inspection Date								
Unit Operations Area	Y/N | Initials	Y/N | Initials	Y/N | Initials	Y/N | Initials	Y/N | Initials	Y/N | Initials	Y/N | Initials	Y/N | Initials
Safety Equipment								
HF-54 and HF-2 is on, switch by door to B003								
Evacuation routes posted								
All exits and fire doors clearly marked and unobstructed								
Check inventory of spill kit supplies								
Telephones accessible and labeled with emergency numbers								
Eyewash and Safety Showers								
Clearly marked and unobstructed								
Eyewash inspection up to date with tag								
Safety shower inspection up to date with tag								
Water continued to flow when handle was released								
Eyewash flushed out unitl water is clear								
Safety shower flushed out until water is clear								
First Aid								
Adequate supplies stocked								
Clearly marked and unobstructed								
Fire Extinguishers								
Clearly marked and unobstructed								
Inspection up to date with tag								
Correct extinguisher for hazards present								
Personal Protective Equipment								
Non-porous, ankle-high safety boots worn								
Long pants worn								
No loose clothing, hair, or jewelry								
Appropriate eye wear and properly marked								
Safety goggles worn when handling hazardous chemicals								
Hard hat worn in designated areas								
Earplugs available								
Appropriate gloves worn and available								
Dust masks available								
Electrical								
Extension cords away from traffic and water								
3-pronged plugs on cords with ground								
Cords without frays or splices								
Make sure the overhead crane is locked and tagged.								
Chemicals								
Stored in the proper cabinet								
Clearly and properly labeled								
Storage cabinets labeled clearly								
Transported properly								
Housekeeping								
Counters and floors clean and uncluttered								
Ladders in good condition and chained when not in use								
Cylinders labeled, upright, and secure								
Waste containers provided and labeled								
Make sure drain plugs are present								
Drain is accessible								

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Inspection Date								
Individual Experiments	Y/N | Initials	Y/N | Initials	Y/N | Initials	Y/N | Initials	Y/N | Initials	Y/N | Initials	Y/N | Initials	Y/N | Initials
Air Cycloning								
Make sure all guards are in place before starting any equipment								
Check that euipment is properly bonded and grounded								
Do not use with combustible dusts								
Batch filtration								
Agitator locked out when adding slurry to the tank								
Use insulated gloves when placing/removing samples from electric drying oven								
Bioprocess Experiments								
All handling of microorganism in hood (besides transfer)								
Proper sanitation								
Proper disposal of waste materials and biohazard bags								
Proper handling of sodium hydroxide								
Cylinders labeled, upright, and secure								
Comminution								
Dust collection is running and working properly								
Make sure all guards are in place before starting any equipment								
Safety glasses, safety shoes, dust masks, and hearing protection are worn								
Proper lifting techniques are used								
Lock-Tag-Try any equipment before cleaning it or working on it								
Continuous Stirred Tank Reactors								
Cart wheels are kept blocked								
Agitator immersed in solution when starting and stopping								
Valves closed when starting reaction								
Cooling Tower								
Use ladders safely while taking air flow measurements								
Fixed Bed Reactor								
Guards are in place								
Impeller is submersed before it is turned on								
Product discharge line is extended into sink								
Max. temp is 65C								
Flow Measurement								
Clean up spills as they happen								
Keep water away from electricity								
Fluidization								
Dusk mask worn when screening sand								
Ear plugs worn when using Ro-Tap								
Slowly open valve on air supply								
Shell and Tube Heat Exchanger								
Insulated gloves worn when operating steam valves								
Be sure condensate hoses extend into the drain								
Open steam valves slowly								
Clean up water spills immediately								
Liquid-Liquid Extraction								
Protective gloves, apron, and goggles worn to handle glacial acetic acid								
Isopar samples are poured into sample collection container after use								
Sampling valves closed after samples taken								

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Inspection Date								
	Y/N | Initials	Y/N | Initials	Y/N | Initials	Y/N | Initials	Y/N | Initials	Y/N | Initials	Y/N | Initials	Y/N | Initials
Membrane Separation								
Hazards of enriched N2 and O2 are understood	|	|	|	|	|	|	|	|
Air outlet valve is left open while running membrane unit	|	|	|	|	|	|	|	|
Non-Newtonian Flow								
Capillary viscometer pressure no greater than 20 psig	|	|	|	|	|	|	|	|
Tanks not overfilled	|	|	|	|	|	|	|	|
PDMS Bench-Scale Reactor								
Goggles, rubber apron, and rubber gloves used to handle KOH	|	|	|	|	|	|	|	|
Tubing and cords are in good condition and connections are tight	|	|	|	|	|	|	|	|
System inerted with nitrogen at all times	|	|	|	|	|	|	|	|
Experiment run in the hood	|	|	|	|	|	|	|	|
Main gas cylinder valve fully open	|	|	|	|	|	|	|	|
Glassware and thermometer transferred in proper container	|	|	|	|	|	|	|	|
PDMS Jacketed Reactor								
Goggles, rubber apron, and rubber gloves used to handle KOH	|	|	|	|	|	|	|	|
Appropriate container used to weigh and transfer EB, 245 fluid, and low boilers	|	|	|	|	|	|	|	|
Pipes and hoses are in good condition and connections are tight	|	|	|	|	|	|	|	|
System inerted with nitrogen at all times	|	|	|	|	|	|	|	|
Glassware and thermometer transferred in proper container	|	|	|	|	|	|	|	|
Face shield, apron, and gloves worn when adding chemicals to reactor	|	|	|	|	|	|	|	|
Polymer Extrusion								
Insulated gloves worn when needed	|	|	|	|	|	|	|	|
Heat Shield is on Extruder	|	|	|	|	|	|	|	|
Long sleeves are worn								
Floor is free of water, pellets, & debris	|	|	|	|	|	|	|	|
Proper tools used for scraping polymer	|	|	|	|	|	|	|	|
Pumping Part A								
Pump guards are in place and properly secured	|	|	|	|	|	|	|	|
Tanks are not overfilled								
Water spills cleaned up immediately	|	|	|	|	|	|	|	|
Pumping Part B								
Pump guards are in place and properly secured	|	|	|	|	|	|	|	|
Tanks are not overfilled								
Water spills cleaned up immediately								
Power supply and pump start-up/shut-down is executed properly	|	|	|	|	|	|	|	|
RSST								
Specific chemical hazards are known	|	|	|	|	|	|	|	|
Hood fan is operating and blast gate is open								
Insulated gloves used to handle internal vessel	|	|	|	|	|	|	|	|
Operating pressure kept below 325 psig	|	|	|	|	|	|	|	|
Face shield worn when handling hazardous chemicals								
Rupture disk discharge should be toward back of hood	|	|	|	|	|	|	|	|
Solvent Recovery								
Gloves to be worn during sampling	|	|	|	|	|	|	|	|
System inerted with nitrogen at all times	|	|	|	|	|	|	|	|
Take precautions during sampling (i.e. dripping after sampling)	|	|	|	|	|	|	|	|
All manual valves are in correct position	|	|	|	|	|	|	|	|
Vacuum Drying								
Insulated gloves used to operate steam valves	|	|	|	|	|	|	|	|
Dusk mask worn when screening sand	|	|	|	|	|	|	|	|
Ear plugs worn when using Ro-Tap	|	|	|	|	|	|	|	|