Chemical Safety Survey

Room:	
PI:	
Date:	

This is the checklist that EHS uses for their annual survey. The purpose of this survey is to identify unsafe conditions and/or behaviors in laboratories where chemical, biological, and/or physical hazards are present. Laboratory personnel are encouraged to utilize this survey to evaluate their work area(s) on a regular basis. Safe science is smart science.

CRITICAL	Critical Finding: A safety departure that can result in personnel injury or exposure and/or environmental contamination. Non-critical findings that continue to be unaddressed or are found to be excessive within a work area and thus present more than a moderate hazard will be elevated to a critical finding. Critical findings must be corrected by lab personnel within 24 hours following the inspection that identified the finding(s).
NON-CRITICAL	Non-Critical Finding: A safety departure that presents a moderate hazard and are generally indicative of inadequate safe work practice(s). These findings should be corrected as soon as possible, but no longer than 30 days.
ADMIN	Administrative Safety Departure: A safety departure that indicates the lack of, or deficiency in, written safety policies, procedures, rules, supervision, schedules, and/or training with the goal of reducing the duration, frequency, and severity of exposure to hazardous materials or situations. Administrative findings can be critical or non-critical in nature. Unless otherwise specified, corrective actions should be completed within 30 days.

Type	Area of Interest				
	Chemical Fume Hoods	**Y**	**N**	**N/A**	**Corrected**
	Are fume hoods used for volatile, flammable, and gaseous hazards?				
	Are fume hoods free of excess storage?				
	Are large pieces of equipment raised to allow air flow?				
	Are items placed and procedures conducted at least 6 inches inside fume hood?				
	Is there a visual indicator of fume hood flow?				
	Is the sash lowered as much as possible and closed when personnel are not actively working at the fume hood?				
	Are operations using heated perchloric acid performed in a perchloric acid fume hood?				
	Are fume hood baffles unobstructed?				
	Chemical Handling and Storage Safety	**Y**	**N**	**N/A**	**Corrected**
	Are yellow barcodes removed from containers before disposal/repurposing and returned to EHS?				
	Has the inventory been entered in RRAMP (Safety Stratus)?				
	Are chemical containers in good condition?				
	Are original chemical container labels and EHS barcodes present and legible?				
	Are all chemicals segregated by storage group (as defined in Appendix M of the Laboratory Safety Manual)? Is secondary containment used when needed?				
	Are secondary containers labeled properly?				
	Are all flammable chemicals stored in approved flammable chemical				

	storage cabinets? Are all flammable chemicals stored in approved flammable chemical storage refrigerators?				
	Is the total flammable chemical storage limited to 80 gallons (~300 L) for research and 20 gallons (~75 L) for teaching labs of 200 sq. ft. or greater and half those amounts in smaller labs?				
	Are chemicals stored away from intense light sources?				
	Are large chemical containers stored near the floor?				
	Are peroxide-forming compounds labeled with receipt date, open date and/or expiration date?				
	Are peroxide-forming compounds checked for peroxide formation every 6 months after the open date?				
	Are drawers/cabinets with visual barriers properly labeled when they contain chemicals, samples, or specimens?				
	Are labels completely removed, covered, or defaced on reused chemical containers?				
	Are chemicals stored upright?				
	Are no more than 5 gallons (~20 L) of flammable liquids used at one time in the work area?				
	Are secondary containers appropriate?				
	Is secondary containment appropriate?				
	Is equipment using volatile chemicals inside a fume hood or under local exhaust? If not, are volatile chemical containers sealed/filtered?				
	Do original chemical labels meet the requirements of the hazardous communication and laboratory standards (29 CFR 1910.1200 and 1910.1450)?				
	Compressed Gases/DI Bottles	**Y**	**N**	**N/A**	**Corrected**
	When cylinders are stored or not in use, are the caps in place?				
	Are main valves closed and the pressure regulators released when not in use?				
	Are flammable gases present only where there is ongoing use?				
	Are flammable gases separated from oxidizing agents by at least 20 ft?				
	Are cylinders upright/secured? Are securing devices in good condition?				
	Is compressed gas piping, hose, & fitting in good condition?				
	Are gas cylinders stored away from high heat, flames, etc.? CFR 1910.253(b)(2)(i)				
	Emergency Equipment/Fire Safety	**Y**	**N**	**N/A**	**Corrected**
	Are eyewashes flushed monthly and logged?				

	Are first aid kits maintained with unexpired/unopened items?				
	Are eyewash covers in place?				
	Is there an 18-inch (~46 cm) clearance from the center of the spray from the safety shower?				
	Are safety showers/eyewashes clearly visible and unobstructed?				
	Are fire extinguishers clearly visible and unobstructed?				
	Does lab staff know the location of emergency equipment?				
	Is an 18-inch vertical clearance maintained from sprinkler heads?				
	Are exits and means of egress unlocked and unobstructed?				
	Infrastructure	**Y**	**N**	**N/A**	**Corrected**
	Are walkways unobstructed and at least 36 inches (~90 cm) wide?				
	Are circuit breaker panels & emergency shutoffs unobstructed and labeled?				
	Is there a clearance of at least 32 inches (~80 cm) at all work area exits?				
	Are outlet, switch, & junction box covers in place & in good repair?				
	Are floors even with no holes, cracks, or tripping hazards? 1910.22(a)(1)				
	Do all electrical outlets within 6 ft of a water source have a Ground Fault Circuit Interrupter (GCFI)?				
	Are laboratory floors easily cleaned? (Carpet is inappropriate)				
	Are bench tops impervious to water and resistant to moderate heat, chemicals, and decontaminating agents?				
	Is lab furniture capable of supporting anticipated loading and uses?				
	Are building vacuum lines equipped with traps?				
	Laboratory Hygiene	**Y**	**N**	**N/A**	**Corrected**
	Are work surfaces and equipment decontaminated after any spill or splash?				
	Are floors and vertical surfaces regularly decontaminated?				
	Are food, drink, medicine, cosmetics, or other personal hygiene products not stored or consumed in lab?				
	Are spaces between benches, cabinets, and equipment accessible for cleaning?				
	Is a signed EHS decontamination form attached to equipment tagged out for surplus?				
	Are aisles free of slip, trip, and fall hazards?				
	Are there appropriate disinfectant/neutralizer/absorbent materials available for spills? (spill kit)				
	Mouth pipetting is prohibited. Are mechanical pipetting devices available in the work area?				

	Are sinks, paper towels, and soap present?				
	Are chairs covered with easily cleaned (non-fabric) material?				
	Does hand washing occur after removal of gloves and before leaving the laboratory?				
	Are appropriate solutions/neutralizers used for decontamination?				
	Are common household items used for lab work properly labeled?				
	Is broken or leaking equipment tagged out and secured for repair?				
	Are bench tops and work areas free of excess storage and clutter?				
	OCC – Personal Protective Equipment (PPE)	**Y**	**N**	**N/A**	**Corrected**
	Are used disposable gloves immediately discarded after removal?				
	Is PPE stored in such a way that the inner surfaces that contact the user are not at risk of becoming contaminated?				
	Is protective apparel worn according to the hazards present?				
	Is PPE in good working condition?				
	Is PPE stored in the work area and not in public areas or offices?				
	Is proper lab attire worn?				
	Is appropriate PPE available (e.g., lab coats, scrubs, eyewear, gloves)?				
	Have respirator users been approved by EHS in the past 12 months?				
	OCC – Plug-in Electrical Hazards	**Y**	**N**	**N/A**	**Corrected**
	Are extension cords used on a temporary basis; are cords and power strips not permanently attached to building components?				
	Are extension cords and power strips not daisy-chained together? Maximum extension cord length should not exceed 100 feet.				
	Are extension cords in good condition and rated for type of use?				
	Does plug-in equipment operate properly?				
	Are electrical sockets not overloaded?				
	Procedural Safety	**Y**	**N**	**N/A**	**Corrected**
	Do lab personnel know the location of the work area safety plan (WASP)?				
	Have all lab personnel signed the WASP acknowledgement form?				
	Are written standard operating procedures available for all operations conducted and equipment used in the work area?				
	Has the assessment been completed in RRAMP (Safety Stratus) in the last 12 months?				
	Satellite Accumulation Area	**Y**	**N**	**N/A**	**Corrected**
	Are waste containers filled no more than 3/4 full?				
	Do all chemical waste containers have the EHS waste label?				
	Are EHS waste labels correctly filled out and in good condition?				
	Are waste containers properly capped?				

	Are wastes properly stored/segregated?				
	Are vented caps used for waste streams subject to pressurization?				
	Are waste containers free of contamination (e.g., outside of liquid collection containers in inner portions of solid collection containers)?				
	Are waste containers compatible with their contents?				
	Are waste containers appropriate and in good condition?				
	Is chemical waste kept from being disposed down the sink or in regular waste bins?				
	Is the waste area physically marked off and separated from its surrounding area?				
	Is waste generated in the work area kept in the work area until pick up from EHS?				
	Is waste generated by work area personnel under the control of that work area personnel that generated the waste?				
	Are waste determinations complete and available?				
	Does the SAA have less than 40 gallons (~150 L) and or less than 1 quart (~1 L) of acutely hazardous waste and the date range for storage in the satellite accumulation area not been exceeded?				
	Have barcodes been removed from original containers prior to re-use as a waste or other container?				
	Are evacuation procedures and emergency phone numbers posted?				
	Are the weekly SAA Waste Inspections up to date?				
	Is the SAA free of spills?				
	Special Procedures for Carcinogens, Teratogens, and Highly Toxic or Reactive Chemicals	**Y**	**N**	**N/A**	**Corrected**
	Is unexpired calcium gluconate gel available where hydrofluoric acid (HF) is present?				
	Is picric acid stored hydrated at all times? Is an appropriate usage log maintained?				
	Are designated work areas for these materials present and labeled?				
	Have adequate written procedures been created for the use of these materials?				
	Are safety procedures for these materials posted in the immediate work area (e.g., Hydrofluoric acid (HF))?				
	Are storage group 9 chemicals stored according to their SDS?				
	When present, are hydrofluoric, nitric, and perchloric acids stored properly with their own secondary container?				
	Waste	**Y**	**N**	**N/A**	**Corrected**
	Is glass waste decontaminated before disposal in the glass waste				

	container?				
	Is glass waste segregated from regular trash or other wastes?				
	Are glass waste containers not overfilled?				
	Are only sharps disposed of in a sharps container?				
	Are sharps containers not overfilled?				
	Are glass waste containers appropriate?				
	When sharps containers are full, is the lid secured for EHS pick up?				
	Are needles intact and not bent/removed before disposal?				
	Work Practices	**Y**	**N**	**N/A**	**Corrected**
	Is broken / chipped glass secured for repair or properly disposed of in a glass waste container?				
	Are sharps secured?				
	Are closed systems under heat or pressure contained behind a blast shield or in a fume hood with the sash closed?				
	Are the doors to the work area kept closed? Are doors locked when the work area is vacant?				
	Are devices containing mercury secured with secondary containment?				
	Do soldering stations have a 10-foot zone of clearance?				
	Do liquid containers (including waste containers) stored on the floor have secondary containment?				
	Are needles kept from being recapped? If needles are recapped, is an EHS-approved SOP in place and posted?				
	Are ignition sources kept from where flammable materials are used or stored?				
	Are pulleys, belts and other moving parts properly guarded?				
	Are freezers periodically defrosted to prevent ice build-up?				
	Are soldering stations using solder containing lead exhausted/contained (i.e., local exhaust, inside a fume hood, or a table-top scrubber)?				
	Are sharps containers available in the immediate area where sharps are used?				
	Are cryogenic liquids stored in Dewar flasks or cold traps wrapped with screens, friction tape, or a metal jacket?				