Laboratory 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. Noncritical findings that continue 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. These findings are required to be corrected onsight but no longer than 24hrs.
non-critical	Non-critical finding: a safety departure that presents a moderate hazard; are generally indicative of inadequate safe work practice(s). These findings should be corrected as soon as possible, but no longer than 30 calendar days.
admin	Administrative safety departure: Indicates the lack of, or deficiency in, written safety policies, rules, supervision, schedules, and / or training with the goal of reducing the duration, frequency, and severity of exposure to hazardous materials or situations. Administrative safety departures can be critical or non-critical in nature. Unless otherwise specified, corrective actions should be completed within 30 calendar days.

Sec.	Area of Interest				
A	**Procedural Safety**	**Y**	**N**	**N/A**	**COS**
3	Are SDSs available? Do lab personnel know SDS location?				
4	Do lab personnel know the location of the work area safety plan (WASP)?				
5	Are there appropriate disinfectant/neutralizer/absorbent materials available for spills? (spill kit)				
6	Have lab personnel taking the proper training? Is the training documentation available in the laboratory?				
7	Are special hazard signs (e.g. Biohazard, LASER, Radiation, etc.) posted when required for the work area?				
8	Is there a WASP for the work area? Is the WASP available in the work area?				
9	Has the WASP been reviewed in the past 2 years and/or has it been revised to cover new hazards/operations introduced to the work area?				
10	Have all lab personnel signed the WASP acknowledgement form?				
11	Are written standard operating procedures available for all operations conducted and equipment used in the work area?				
12	Is a safety captain assigned to the work area?				
13	Do personnel know how and when to submit SCAN and incident reports?				
B	**Personal Protection**	**Y**	**N**	**N/A**	**COS**
1	Is appropriate protective equipment and apparel, such as lab coats, available?				
2	Is protective apparel worn?				
3	Are gloves available for chemical / biological / physical hazards present in the work area?				
4	Are appropriate gloves worn while working with chemical / biological / physical hazards?				
5	Are used disposable gloves immediately discarded after removal?				

6	Is appropriate eye protection available?				
7	Is appropriate eye protection worn?				
8	Are respirators used by EHS-approved individuals only?				
9	Is defective, soiled and/or damaged PPE removed from service?				
10	Is soiled, reusable PPE decontaminated?				
11	Is PPE stored in such a way that the inner surfaces that contact the user are not at risk of becoming contaminated?				
12	Is PPE stored in the work area and not in public areas or offices?				
C	**Housekeeping**	**Y**	**N**	**N/A**	**COS**
1	Are aisles free of slip, trip, and fall hazards?				
2	Are bench tops and work areas free of excess storage and clutter?				
3	Is broken / chipped glass secured for repair or properly disposed of?				
4	Are floors and vertical surfaces regularly decontaminated?				
D	**Work Practices**	**Y**	**N**	**N/A**	**COS**
1	Does hand washing occur after removal of gloves and before leaving the laboratory?				
2	Are food, drink, medicine, cosmetics, or other personal hygiene products not stored or consumed in lab?				
3	Is proper lab attire worn? (no shorts, open-toed shoes or cloth shoes)				
4	Mouth pipetting is prohibited. Are mechanical pipetting devices available in the work area?				
5	Are work surfaces and equipment decontaminated after any spill or splash?				
6	Are appropriate solutions/neutralizers used for decontamination?				
7	Are ignition sources kept from where flammable materials are used or stored?				
8	Are pulleys, belts and other moving parts properly guarded?				
9	Are closed systems under heat or pressure contained behind a blast shield or in a fume hood with the sash closed?				
10	Are cryogenic liquids stored in Dewar flasks or cold traps wrapped with screens, friction tape, or a metal jacket?				
11	Are needles kept from being recapped? If needles are recapped, is an EHS-approved SOP in place and posted?				
12	Are sharps secured?				
13	Are the doors to the work area kept closed? Are doors locked when the work area is vacant?				
14	Are kitchen appliances and normal food/drink containers used for lab work properly labeled?				
15	Are devices containing mercury secured with secondary containment?				
16	Is broken or leaking equipment tagged out and secured for repair?				
17	Are freezers periodically defrosted to prevent ice build-up?				
18	Is an signed EHS decontamination form attached to equipment tagged out for surplus?				
19	Do soldering stations have a 10 foot zone of clearance?				
20	Are soldering stations using solder contain lead exhausted (i.e., local exhaust, inside a fume hood, or a table-top scrubber)?				
21	Do liquid containers (including waste containers) stored on the floor have secondary containment?				
22	Are sharps containers available in the immediate area where sharps are used?				

E	Compressed Gases/DI Bottles	Y	N	N/A	COS
1	Are cylinders upright/secured? Are securing devices in good condition?				
2	When cylinders are stored or not in use, are the caps in place?				
3	Are main valves closed and the pressure regulators released when not in use?				
4	Are flammable gases present only where there is ongoing use?				
5	Are flammable gases separated from oxidizing agents by at least 20ft?				
F	**Facilities**	**Y**	**N**	**N/A**	**COS**
1	If hand sinks are available are towels and soap present?				
2	Are laboratory floors easily cleaned? (Carpets and rugs are inappropriate)				
3	Are bench tops impervious to water and resistant to moderate heat, chemicals, and decontaminating agents?				
4	Is lab furniture capable of supporting anticipated loading and uses?				
5	Are spaces between benches, cabinets, and equipment accessible for cleaning?				
6	Are chairs covered with easily cleaned (non-fabric) material?				
7	Are vacuum lines equipped with traps?				
8	Are walkways unobstructed and at least 36 inches (~90cm) wide?				
9	Is there a clearance of at least 32 inches (~80cm) at all work area exits?				
G	**Special Procedures for Carcinogens, Teratogens, and Highly Toxic or Reactive Chemicals**	**Y**	**N**	**N/A**	**COS**
1	Are designated work areas for these materials present and labeled?				
2	Have adequate written procedures been created for the use of these materials?				
3	Are safety procedures for these materials posted in the immediate work area?				
H	**Emergency Equipment/Fire Safety**	**Y**	**N**	**N/A**	**COS**
1	Are safety showers/eyewashes clearly visible and unobstructed?				
2	Are fire extinguishers clearly visible and unobstructed?				
3	Does lab staff know the location of emergency equipment?				
4	Are exits and means of egress unlocked and unobstructed?				
5	Is an eighteen inch vertical clearance maintained from sprinkler heads?				
6	Are first aid kits maintained with unexpired/unopened items?				
7	Are eyewashes flushed weekly? Is this recorded?				
8	Are eye wash covers in place?				
9	Is there an 18 inches (~46 cm) clearance from the center of the spray from the safety shower?				
I	**Electrical Hazards**	**Y**	**N**	**N/A**	**COS**
1	Are electrical cords and plugs intact- not damaged or frayed and free of tape, splices or repairs?				
2	Is no more than one item plugged into an individual receptacle?				
3	Are extension cords used on a temporary basis only, not as a permanent source of electricity?				
4	Do all electrical outlets within 6 ft of a water source have a Ground Fault Circuit Interrupter (GFCI)?				
5	Are grounded or polarized plugs unaltered?				
6	Are electrical cords not daisy-chained together?				

J	Waste	Y	N	N/A	COS
3	Is clean broken glass/glass waste segregated from regular trash or other wastes?				
4	Are glass waste container not overfilled?				
5	Are only needles and other sharps disposed of in a sharps container?				
6	Are sharps containers not overfilled?				
7	Are glass waste containers appropriate?				
8	Are needles intact and not bent/removed before disposal?				
9	When sharps containers are full, is the lid secured for EHS pick up?				
K	**Hazardous Waste Compliance**	**Y**	**N**	**N/A**	**COS**
1	Do all chemical waste containers have the orange EHS label?				
2	Are orange EHS labels correctly filled out and in good condition?				
3	Are waste containers appropriate and in good condition?				
4	Are waste containers properly capped?				
5	Are funnels only used while filling waste containers?				
6	Is chemical waste kept from being disposed down the sink or in regular waste bins?				
7	Are wastes properly stored/segregated?				
8	Is waste generated in the work area kept in the work area until pick up from EHS?				
9	Is waste generated by work area personnel under the control of that work area personnel that generated the waste?				
10	Is there not excess storage of waste (i.e., less than 40 gallons / ~150L total, excess biowaste)?				
11	Are waste containers compatible with the contents?				
14	Are waste containers filled no more than 3/4 full?				
15	Are vented capped used for waste streams subject to pressurization?				
16	Are waste containers free of contamination (e.g., outside of liquid collection containers in inner portions of solid collection containers)?				
L	**Chemical Fume Hoods**	**Y**	**N**	**N/A**	**COS**
1	Are fume hoods used for volatile, flammable, and gaseous hazards?				
2	Are fume hoods free of excess storage?				
3	Are large pieces of equipment raised to allow air flow?				
4	Are items placed and procedures conducted at least 6 inches inside fume hood?				
5	Is there a visual indicator of fume hood flow?				
6	Is the fume hood sash lowered as much as possible and not raised above the indicated height while working and closed when no one is actively working in the fume hood?				
7	Are operations using heated perchloric acid performed in a perchloric acid fume hood?				
8	Are fume hood baffles unobstructed?				

M	Biosafety Cabinets (BSC) and Laminar flow hoods	Y	N	N/A	COS
2	Are volatile and/or toxic chemicals not use in un-ducted BSCs?				
3	Are BSCs tagged with annual inspection data?				
4	Are laminar flow hoods used properly as sterile working surfaces such that viable organisms and/or hazardous chemicals are not used within the laminar flow hood?				
6	Is storage within the BSC limited to pipets?				
7	Are operations done at least 6 inches inside the BSC?				
8	Are intake grilles unobstructed when the BSC is in use?				
9	Are UV lights not used as the primary means of disinfecting the BSC?				
10	Are UV lights properly maintained?				
11	Are open flames not used in BSCs and laminar flow hoods?				
12	Is the use of ethanol limited within the BSC?				
13	Are disinfectants other than ethanol used to clean the BSC?				
14	Are contaminated items decontaminated or properly contained prior to removal from the BSC?				
N	Chemical Handling and Storage Safety	Y	N	N/A	COS
1	Is there a current chemical inventory?				
2	Has the inventory been entered in EHS Assistant?				
3	Are chemical containers in good condition?				
4	Are original chemical container labels and EHS barcodes present and legible?				
5	Are all chemicals segregated by storage group (as defined in Appendix AA of the Laboratory Safety Manual)? Is secondary containment used when needed?				
6	When present, are acids and bases stored separately properly?				
7	Are secondary containers labeled properly?				
8	When present, are hydrofluoric, nitric, and perchloric acids stored properly with their own secondary container?				
9	Are hydrofluoric acid (HF) safety procedures posted and observed?				
10	Is unexpired calcium gluconate gel available where hydrofluoric acid (HF) is present?				
11	Is picric acid stored hydrated at all times? Is an appropriate usage log maintained?				
12	Are all flammable/combustible chemicals stored in approved flammable chemical storage cabinets?				
13	Are all flammable/combustible chemicals stored in approved flammable chemical storage refrigerators?				
14	Is the total flammable chemical storage limited to 80gallons for research and 20gallons for teaching labs of 200 sq. ft. or greater and half those amounts in smaller labs?				
15	Are chemicals stored away from intense light sources?				
16	Are large chemical containers stored near the floor?				
17	Are bottle carriers and/or transportation carts utilized when moving chemicals from one room to another?				
18	Are organic peroxide-forming compounds labeled with receipt date, open date and/or expiration date?				

19	Are peroxide-forming compounds checked for peroxide formation every 6 months after the open date?				
21	Are drawers/cabinets with visual barriers properly labeled when they contain chemicals or samples?				
22	Are labels properly removed and completely defaced on reused chemical containers?				
23	Are chemicals stored upright?				
24	Are no more than 5 gallons (~20 liters) of flammable liquids used at one time in the work area?				
25	Are secondary containers and/or containment appropriate?				
26	Is equipment using volatile chemicals 1) inside a fume hood, 2) under local exhaust, or 3) are volatile chemical containers sealed/filtered?				
27	Are storage group 9 chemicals that are also flammable stored in a desiccator inside of a flammables cabinet?				
28	Do original chemical labels meet the requirements of the hazardous communication and laboratory standards (29 CFR 1910.1200 and 1910.1450)?				
	Biosafety Level 1 Containment, The work area must meet the criteria of sections A-N and P-R.				
P	**PRACTICES**	**Y**	**N**	**N/A**	**COS**
1	Does the lab have access to a copy of the CDC's most current edition of *Biosafety in Microbiological and Biomedical Laboratories*?				
2	Does the lab have access to a copy of the NIH's most current edition of *Guidelines for Research Involving Recombinant DNA Molecules* if recombinant work is being performed?				
3	Does the laboratory supervisor enforce the institutional policies that control access to the laboratory?				
4	Are SOPs in place for the proper use and disposal of sharps?				
5	If reusable devices are used, are scalpel blades replaced using mechanical means?				
6	Is broken glassware handled by mechanical means and not handled directly?				
7	Are procedures performed in such a way as to minimize the creation of splashes and/or aerosols?				
8	Is a biological-specific spill kit available in the laboratory? Is freshly prepared disinfectant available if work is going on?				
9	Are work surfaces decontaminated with an appropriate disinfectant after completion of work and after any spill or splash of potentially infectious material?				
10	Does hand washing occur after handling potentially infectious material and before leaving the lab?				
11	Do personnel receive annual updates or additional training when procedural or policy changes occur?				
Q	**BIOWASTE**	**Y**	**N**	**N/A**	**COS**
1	Are labeled, non-sharps, biological waste containers available? Is the number of containers adequate?				
2	Other than bench-top collection, is biowaste secured in leak-proof container(s) with lid(s) during accumulation?				
3	Are all cultures, stocks, and other potentially infectious materials decontaminated by a TCEQ-approved method before disposal? Is there a written procedure in place?				
4	Are materials to be decontaminated outside of the immediate work area placed in a labeled, durable, leak-proof container and secured for transport?				
5	Is biowaste properly prepared for autoclaving?				
6	Is chemical and steam treatment of biological waste logged?				

7	Are EHS-provided biobarrels properly prepared for pick up (i.e., no loose waste in the biobarrel, liner tied off, etc.)?				
R	**FACILITIES**	**Y**	**N**	**N/A**	**COS**
1	Is a sink for hand washing present?				
2	Is an effective integrated pest management program in place?				
	Biosafety Level 2 Containment, The work area must meet the criteria of sections A - S.				
O	**SPECIAL PRACTICES AT BSL2**	**Y**	**N**	**N/A**	**COS**
3	Are TTU custodial and maintenance staff not allowed to enter the work area to remove trash, clean or make repairs unless the procedures in the University Laboratory Safety Manual (B9.2.4) are followed?				
4	Is access to the work area limited when experiments are in progress?				
6	Have all personnel potentially exposed to human materials completed Bloodborne Pathogen Training?				
7	Are proficiency levels of lab workers checked? How often?				
8	Is there a medical surveillance program in place? (i.e., Have pertinent vaccines been offered and/or required when applicable? Are there procedures for fever watch?)				
11	Is there a laboratory-specific biosafety manual that includes written laboratory procedures and written emergency plan for the laboratory?				
12	Is lab equipment used in conjunction with potentially infectious materials (e.g., refrigerator, incubator, cold rooms, freezers, storage cabinets, and biosafety cabinets labeled with the universal biohazard symbol?				
16	Is the biological safety cabinet located away from doors, room ventilation and heavily traveled areas and other disruptive equipment so as to maintain undisturbed airflow?				
17	Are emergency phone numbers easily accessible?				
18	Is there routine decontamination of equipment? Is there a log?				
19	Are laboratory benches, floors and equipment decontaminated after a splash or spill of biological material?				
22	Is the laboratory-specific biosafety manual (bio-WASP) available and accessible in the laboratory? This information may be covered in the WASP and not a separate document.				
23	Are personnel trained in the proper containment and decontamination of a spill involving potentially infectious material?				
24	Do the doors to the work area remain closed at all times?				
25	Is access control to the laboratory enforced?				
26	Are all persons that enter the laboratory advised of the potential hazards and do they meet any specific entry/exit requirements?				
27	Are animals and plants not associated with the work being performed present in the laboratory?				
28	Are properly maintained BSCs, other appropriate protective equipment, or other physical containment devices used whenever procedures with a potential for creating infectious aerosols or splashes are conducted and /or high concentrations or large volumes of infectious agents are used?				
29	Are potentially infectious materials placed in a durable leak proof container during collection, handling, processing, storage, or transport within the laboratory?				
30	Does routine decontamination of the laboratory area occur weekly? Less often for low throughput areas.				
31	Is equipment decontaminated before repair, maintenance, or removal from the laboratory?				
32	Are materials to be decontaminated outside of the laboratory placed in a labeled, durable, leak proof container and secured for transport?				

S	BSL2 FACILITIES	Y	N	N/A	COS
1	Are the doors to the work area lockable?				
2	Are vacuum lines protected with liquid disinfectant traps and/or in-line HEPA filters?				
3	Is an eyewash station readily available (i.e., within the laboratory)?				
4	If windows that open to the exterior are present, are they fitted with screens?				

Comments: