

## General Laboratory Safety Inspection Checklist\*

<b>1. Laboratory Security</b>	
<b>A100</b>	<b>Security</b>
A101	Unlocked Lab (Item of Concern): Lock laboratory doors when no one is present to secure hazardous materials and equipment. <i>TAMU Laboratory Safety Manual, Chapter 2 Section 1.1(g), Section 1.2(a); BMBL V 2007, Section IV, Page 30 &amp; 33</i>
A102	Unlocked cabinets, etc. (Item of Concern): Cabinets, refrigerators, and freezers that contain hazardous materials and are located in areas outside the laboratory must be locked. <i>TAMU Laboratory Safety Manual, Chapter 2 Section 1.2 &amp; Chapter 3 section 7.1(h)</i>
A103	Inspector not identified (Item of Concern): Visitors to lab should be approached and identified. <i>TAMU Lab Safety Manual Chapter 2 section 1.2(g); BMBL V 2007, Section IV</i>
<b>2. Electrical Safety</b>	
<b>B100</b>	<b>Extension Cords/Power Strips/Plug Adapters.</b>
B101	Permanent Use of Extension Cords (Item of Concern): Extension cords are for temporary use only (no more than 8 hours per day). Replace with fuse-protected power strip or permanent wiring. To have permanent wiring installed, submit request through AggieWorks. <i>IFC 605.5; TAMU Safety Manual-Fire &amp; Life Safety Chapter VIII, Section 11.1</i>
B102	Extension cords above ceiling tiles (Item of Concern): Remove extension cords that are placed above ceiling tiles. <i>IFC 605.5; TAMU Safety Manual-Fire &amp; Life Safety Chapter VIII, Section 11.1.7</i>
B103	Extension cords/power strips connected in series (Item of Concern): Extension cords and power strips should be plugged directly into wall receptacle, not “daisy-chained” or connected in a series. <i>TAMU Safety Manual-Fire &amp; Life Safety Chapter VIII, Section 11.1.3</i>
B104	3-way plugs (Item of Concern): Discontinue use of 3-way plug/multiple adapters. Replace with fuse-protected power strip(s). <i>IFC 605.4</i>
B105	Power strips in fume hood (Item of Concern): Remove electrical strips from fume hood. <i>Prudent Practices 2011, Page 26 Section 2.E.3; NFPA 45</i>
B106	Damaged electrical cord/plug (Item of Concern): Have electrical cord or plug repaired by a certified technician. <i>IFC 605.5.3; TAMU Safety Manual-Fire &amp; Life Safety Chapter VIII, Section 11.1.5</i>
<b>B200</b>	<b>Misc. Electrical.</b>
B201	<b>No GFCI near wet areas (Deficiency):</b> Submit request through AggieWorks to have GFCI (ground fault circuit interrupter) installed on electrical outlets located within 6 feet of wet areas. <i>NFPA 70.210.8(B)(5)</i>
B202	Damaged electrical outlet (Item of Concern): Repair is needed on electrical outlet. Submit request for repair through AggieWorks. <i>IFC 605.5.3; TAMU Safety Manual-Fire &amp; Life Safety chapter VIII, section 11.1.5</i>
B203	Blocked electrical panel (Item of Concern): Remove items that block access to the electrical panel. <i>TAMU Safety Manual - Fire &amp; Life Safety (chapter VIII, section 11.2)</i>

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<b>3. Fire/Life Safety</b>	
<b>C100</b>	<b>Fire Extinguishers.</b>
C101	<b>Blocked fire extinguisher (Deficiency):</b> Remove obstruction blocking fire extinguisher. <a href="#">NFPA 10.6.1.3.1 to 10.6.1.3.3</a>
C102	Discharged fire extinguisher (Item of Concern): Fire extinguisher has been discharged. Complete an "Accident/Investigation Form" for the incident or near-miss, and submit the form to the EHS inspector within 24 hours. (See <a href="https://ehsd.tamu.edu/Pages/OccSafety.aspx">https://ehsd.tamu.edu/Pages/OccSafety.aspx</a> ) <a href="#">NFPA 10.7.2.1.2</a>
C103	Damaged fire extinguisher (Item of Concern): Fire extinguisher is damaged. EHS inspector will notify Fire & Life Safety personnel. <a href="#">NFPA 10.7.2.2.2</a>
<b>C200</b>	<b>Clearance.</b>
C201	<b>Blocked evacuation routes (Deficiency):</b> Keep evacuation/exit routes clear of obstructions. <a href="#">NFPA 101.3.3.161</a>
C202	Blocked sprinkler head (Item of Concern): Remove all items stored within the 18" plane below the level of the sprinkler heads, throughout the room. <a href="#">NFPA 1.10.19.3</a>
C203	Combustibles near ceiling (Item of Concern): Remove all combustible items stored within 24" of the ceiling. <a href="#">NFPA 1.10.19.3</a>
<b>C300</b>	<b>Bunsen Burners.</b>
C301	<b>Damaged Bunsen burner tubing (Deficiency):</b> Replace brittle or cracked Bunsen burner tubing. <a href="#">ASTM D 2513 Standard</a>
C302	<b>Bunsen burner in BSC (Deficiency):</b> Do not use a Bunsen burner in a biological safety cabinet. Personal protection is reduced when the air curtain is disrupted by flame, and unburned gas can collect in filters, increasing explosion potential. (EHS will notify the Office of Research Compliance & Biosafety of this violation.) <a href="#">BMBL 5th edition 2007, Appendix A+B18</a>
<b>C400</b>	<b>Misc. Fire/Life Safety.</b>
C401	Lab doors open (Item of Concern): Lab doors must be kept closed to maintain fire barriers and proper ventilation in lab areas. <a href="#">NFPA 45.8.3.3 &amp; 45.7.4</a>
C402	Missing/damaged ceiling tiles (Item of Concern): Submit request through AggieWorks to replace missing/damaged ceiling tiles. <a href="#">NFPA 101.8.4.2(1)(2)</a>
<b>4. Safe Lab Practices</b>	
<b>D100</b>	<b>Food/Beverages.</b>
D101	<b>Food/drink in lab (Deficiency):</b> Food and beverages may not be consumed, stored, or prepared in lab areas. Post a 'NO FOOD and DRINKS ALLOWED' sign on the door to the lab or inside the lab. <a href="#">29 CFR 1910.1030(d)(2)(ix); Prudent Practices 2011, Page 109 Section 6.C.2.3</a>
D102	<b>Food/drink in lab refrigerator/freezer (Deficiency):</b> Food/beverages and chemicals may not be stored in the same refrigerator or freezer. Rather, store food and drink in an area outside of the lab. <a href="#">Prudent Practices 2011, Page 97 - 98, Page 109 Section 6.C.2.3 ; TAMU Laboratory Safety Manual, Chapter 2 Section 1.1</a>

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D103	<b>Food utensils washed in lab sink (Deficiency):</b> Plates, cups, and silverware for food or beverage use may not be washed in the same sink as lab utensils and should not be in lab areas at all. <a href="#">TAMU Laboratory Safety Manual, Chapter 2 section 1.1</a>
<b>D200</b>	<b>Hand-washing Facilities.</b>
D201	Sink/water needed (Item of Concern): Provide running water for hand washing. <a href="#">29 CFR 1910.1030(d)(2)(iv)</a>
D202	Soap needed (Item of Concern): Provide soap for hand washing. <a href="#">29 CFR 1910.1030(d)(2)(iv)</a>
D203	Paper towels needed (Item of Concern): Provide paper towels for drying hands after washing. <a href="#">29 CFR 1910.1030(d)(2)(iv)</a>
<b>D300</b>	<b>Sharps Handling, Storage, and Disposal.</b>
D301	<b>Recapped needles (Deficiency):</b> Do not manually recap needles. Use self-sheathing syringes or dispose of used syringes in a sharps waste container without recapping. <a href="#">29 CFR 1910.1030(d)(2)(vii)(viii)</a>
D302	<b>Unsecured sharps (Deficiency):</b> Secure razors, knives, needles, microtome blades, and other sharps to be reused in rigid protective cases. <a href="#">29 CFR 1910.1030(d)(2)(vii)(viii)</a>
<b>D400</b>	<b>Housekeeping/Misc.</b>
D401	<b>Spilled chemicals (Deficiency):</b> Clean up spilled chemicals on bench top, in fume hood, or on floor. <a href="#">TAMU Laboratory Safety Manual, Chapter 3 Section 6</a>
D402	Clutter in lab (Item of Concern): Dispose of clutter, including unnecessary boxes, old equipment, and trash. <a href="#">29 CFR 1910.22(a)(1)</a>
D403	Dirty fume hood (Item of Concern): Clean dirty fume hood. <a href="#">Prudent Practices 2011, Page 223 Section 9.C.2.5</a>
D404	Dirty work surface (Item of Concern): Clean dirty or untidy workspace or lab bench. <a href="#">TAMU Laboratory Safety Manual, Chapter 2 Section 1.4</a>
<b>5. Physical Hazards</b>	
<b>E100</b>	<b>Cryogenic Cylinders and Dewars.</b>
E101	<b>Damaged cryogenic cylinder (Deficiency):</b> Ribbing, excessive ice buildup on tank, cracked gaskets, excessive rust, etc. are indications that the cryogenic cylinder is in poor condition. Contact service provider to have cylinder serviced. <a href="#">29 CFR 1910.101; TAMU Laboratory Safety Manual, Chapter 2 Section 2.7</a>
E102	<b>Pressure relief valve compromised (Deficiency):</b> Do not plug or otherwise compromise the pressure relief valve on a cryogenic cylinder. This is an important safety feature of the cylinder. <a href="#">NFPA 55.8.2.5</a>
E103	<b>Blow-out disc compromised (Deficiency):</b> Do not plug or otherwise compromise the blow-out disc on a cryogenic cylinder. This is an important safety feature of the cylinder. <a href="#">NFPA 55.8.2.5</a>
E104	Cryogenic cylinder due for maintenance (Item of Concern): TAMU-owned cryogenic cylinder is due/past due for maintenance. Obtain maintenance from service provider and affix appropriate label of current maintenance/service. <a href="#">29 CFR 1910.101</a>

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<b>E200</b>	<b>Compressed Gas Cylinders.</b>
E201	Improperly secured gas cylinder (Item of Concern): Properly secure compressed gas cylinder(s) with a device designed for such use. Ropes and bungee cords are not permitted for securing cylinders. <i>NFPA 45.11.1.5.1; NFPA 45 Annex F.17</i>
E202	Gas cylinders secured in group (Item of Concern): Secure compressed gas cylinder(s) individually, not in groups. <i>Prudent Practices 2011, Page 168 Section 7.D.3</i>
E203	Gas cylinder missing safety cap (Item of Concern): Apply safety cap to cylinders when not in use. <i>NFPA 45 Annex F.14</i>
<b>E300</b>	<b>Vacuum Pumps.</b>
E301	Vacuum pump missing guard (Item of Concern): Replace the belt and pulley guard that is missing from the vacuum pump. <i>Prudent Practices 2011, Page 153 Section 7.C.2</i>
E302	Vacuum pump leaking oil (Item of Concern): Repair or replace the vacuum pump, which is leaking oil. <i>Prudent Practices 2011, Page 153 Section 7.C.2</i>
E303	Vacuum pump venting exhaust (Item of Concern): Repair or replace the vacuum pump, which is venting exhaust into the lab. <i>Prudent Practices 2011, Page 153 Section 7.C.2</i>
E304	Vacuum pump needs secondary containment (Item of Concern): Place vacuum pumps containing oil in secondary container made of non-combustible materials in order to contain any leaks that may occur.
<b>E400</b>	<b>Glass Equipment or Containers.</b>
E401	Unshielded glass under pressure (Item of Concern): Shield and/or wrap tape around glass that is under vacuum pressure (Rotovap, glass Dewars, etc.). <i>Prudent Practices 2011, Page 171 Section 7.E.1.2; TAMU Laboratory Safety Manual, Chapter 2 Section 2.5</i>
E402	Glass items on floor (Item of Concern): Do not store glass items directly on the floor. Place in cabinets or in secondary containment. <i>Prudent Practices 2011, Page 77 Section 4.E.10</i>
<b>E500</b>	<b>Misc. Hazards.</b>
E501	<b>Unguarded moving parts (Deficiency):</b> Guard all the exposed and moving parts of equipment, including pinch points and belts. <i>Prudent Practices 2011, Page 163 Section 7.C.8.4.2; TAMU Laboratory Safety Manual, Chapter 2 Section 2.3</i>
E502	Tripping hazard (Item of Concern): Relocate, tape down, or otherwise secure electrical cords, computer cables and/or hoses that present tripping hazards. <i>Prudent Practices 2011, Page 77 Section 4.E.10</i>
<b>6. Chemical Fume Hood</b>	
<b>F100</b>	<b>Obstructed Fume Hood.</b>
F101	<b>Airflow obstructed in fume hood (Deficiency):</b> To avoid obstructing airflow in the fume hood, place items at least 6 inches back from the face of the hood and 6 inches away from the baffles in the rear of the hood. <i>Prudent Practices 2011, Page 223 Section 9.C.2.5, Page 159 Section 7.C.5.7, Page 110 Section 6.C.2.4.1</i>

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F102	<b>Equipment blocks airflow in fume hood (Deficiency):</b> Use jacks to elevate equipment 2-4" off the floor of the fume hood to improve airflow in the hood. <i>Prudent Practices 2011, Page 223 Section 9.C.2.5, Page 110 Section 6.C.2.4.1</i>
F103	Clutter in fume hood (Item of Concern): Remove clutter from fume hood. <i>Prudent Practices 2011, Page 223 Section 9.C.2.5, Page 110 Section 6.C.2.4.1</i>
F104	Chemicals stored in fume hood (Item of Concern): Remove chemicals stored in fume hood. Return them to chemical storage cabinets. <i>NFPA 45.9.2.3.7; Prudent Practices 2011, Page 223 Section 9.C.2.5</i>
F105	Loose paper in fume hood (Item of Concern): Remove loose paper (paper towels, Kim wipes, notebook paper) from fume hood. Paper can become lodged in the ductwork, and removing it requires significant monetary costs and labor. <i>Prudent Practices 2011, Page 223 Section 9.C.2.5, Page 110 Section 6.C.2.4.1</i>
<b>F200</b>	<b><i>Improper Use of Fume Hood.</i></b>
F201	<b>Personnel using out-of-service fume hood (Deficiency):</b> Do not use any fume hood that has been tagged out of service. Submit work order through AggieWorks for repair. EHS must certify the repaired hood before it can be used. <i>NFPA 45.8.13.2; TAMU Laboratory Safety Manual, Chapter 5 Section 2</i>
F202	Fume hood sash left up (Item of Concern): Pull fume hood sash down completely when the hood is unattended. Pull down to lowest working level when working in the hood. <i>NFPA 45.8.8.3</i>
F203	<b>Personnel using perchloric acid (70% or greater, or heated) in a regular chemical fume hood (Deficiency):</b> Use of perchloric acid (70% or greater, or heated) in a regular chemical fume hood can lead to formation of explosive peroxides in the duct work. The department is now responsible for having the fume hood professionally cleaned before any maintenance or repair work. Contact EHS for referrals. Notify EHS at EHS-Dumehood@tamu.edu when the fume hood has been cleaned. <i>NFPA 45.8.11.10</i>
<b>F300</b>	<b><i>Misc. Fume Hood.</i></b>
F301	Items on fume hood knobs (Item of Concern): Remove items that are hanging on fume hood control knobs.
<b>7. Personal Protective Equipment/Eyewash/Showers</b>	
<b>G100</b>	<b><i>Emergency Shower.</i></b>
G101	<b>Blocked emergency shower (Deficiency):</b> Remove obstruction(s) blocking emergency shower to ensure clear access to this safety equipment. <i>ANSI Z358.1-2009 Section 4.5.2</i>
<b>G200</b>	<b><i>Eyewash.</i></b>
G201	<b>No eyewash (Deficiency):</b> Provide a continuous-flow (plumbed), hands-free, ANSI Z358.1 approved eyewash station. There is not one available in this lab. <i>ANSI Z358.1-2009 Section 5</i>
G202	Inadequate eyewash (squeeze-bottle) (Item of Concern): Provide a continuous-flow (plumbed), hands-free, ANSI Z358.1 approved eyewash station. A squeeze-bottle eyewash is not adequate. <i>ANSI Z358.1-2009</i>

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G203	Inadequate eyewash (single-head drench hose) (Item of Concern): Provide a continuous-flow (plumbed), hands-free, ANSI Z358.1 approved eyewash station. A single-head drench hose is not adequate. <a href="#">ANSI Z358.1-2009</a>
G204	Eyewash unit not flushed (Item of Concern): Lab personnel must flush eyewash units once weekly for 3-5 minutes. Keep a log to record weekly activation of eyewash units (EHS will provide an Eyewash Activation Log upon request). <a href="#">ANSI Z358.1-2009</a>
G205	Non-functional eyewash (Item of Concern): Eyewash unit is in need of repair. Submit request through AggieWorks to have eyewash unit repaired. <a href="#">ANSI Z358.1-2009 Page 12 Section 5.5</a>
<b>G300</b>	<b>Personal Protective Equipment (PPE).</b>
G301	<b>Inadequate PPE (general) (Deficiency):</b> Ensure lab personnel wear appropriate PPE (eye protection, lab coats, gloves, etc.) and clothing (no shorts, bare midriffs, unsecured long hair, dangling jewelry or open-toed shoes) when working in the lab. Post PPE requirements on the door to the lab based on hazards present within the lab. <a href="#">29 CFR 1910.132; TAMU Laboratory Safety Manual, Chapter 5 Section 3, Prudent Practices 2011, Page 175</a>
G302	<b>Safety eyewear inadequate or not worn (Deficiency):</b> Use appropriate safety eyewear for the work being performed, such as safety glasses for impact hazards or chemical splash goggles for handling chemicals. Post PPE requirements for appropriate eyewear on the door to the lab. <a href="#">29 CFR 1910.133; TAMU Laboratory Safety Manual, Chapter 5 Section 3; Prudent Practices 2011, Page 175 Section 7.F.1.3</a>
G303	<b>Lab coats not worn (Deficiency):</b> Ensure lab personnel wear lab coats or other protective clothing when working in areas with chemical or biological hazards. Post PPE requirements on the door to the lab. <a href="#">Prudent Practices 2011, Page 175 Section 7.F.1.1; 29 CFR 1910.132; TAMU Laboratory Safety Manual, Chapter 5 Section 3</a>
G304	<b>Improper foot-wear (Deficiency):</b> Ensure lab personnel wear closed-toe shoes in the lab. Crocs, sandals, flip flops, and other shoes that do not cover the feet are not appropriate. Post appropriate foot wear requirements on the door to the lab. <a href="#">Prudent Practices 2011, Page 175 Section 7.F.1.2 &amp; 176; 29 CFR 1910.136; TAMU Laboratory Safety Manual, Chapter 5 Section 3</a>
<b>8. Chemical Safety</b>	
<b>H100</b>	<b>General Chemical Storage.</b>
H101	Hazardous liquids above eyelevel (Item of Concern): Do not store hazardous liquid chemicals above the eye level of the shortest person working in the lab. <a href="#">Prudent Practices 2011, Page 95 Section 5.E.1, Page 114 Section 6.C.5</a>
H102	Chemicals on workbench (Item of Concern): To avoid cluttering workspaces, do not store multiple chemicals on workbenches. Return chemicals to storage cabinets when they are not actively being used. <a href="#">Prudent Practices 2011, Page 95 Section 5.E.1</a>
H103	Chemicals on edge of bench top (Item of Concern): Do not place chemical bottles on the edge of the bench top, where they can easily be knocked to the floor. <a href="#">Prudent Practices 2011 page 95</a>
H104	Heavy chemicals on upper shelves (Item of Concern): Store heavy chemical containers on the lowest shelves. <a href="#">Prudent Practices 2011, Page 95 Section 5.E.1</a>



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H105	Chemicals on floor (Item of Concern): Do not store chemicals directly on the floor. Rather, store them in approved cabinets or in secondary containers large enough to hold the entire contents of the bottle in case of a spill. <i>Prudent Practices 2011, Page 95 Section 5.E.1, Page 113 Section 6.C.3</i>
<b>H200</b>	<b><i>Flammable Chemical Storage.</i></b>
H201	<b>Excessive flammables outside of flammable cabinet (Deficiency):</b> Store flammable chemicals in excess of 10 gallons in a flammable storage cabinet. <i>NFPA 45.10; NFPA 30.9.5</i>
H202	<b>Flammables stored near ignition source (Deficiency):</b> Store flammable chemicals away from ignition and heat sources and out of direct sunlight. <i>NFPA 45.12.2.3.3</i>
H203	<b>Flammables in household-style refrigerator/freezer (Deficiency):</b> Flammable chemicals needing refrigeration must be kept in a Lab-safe refrigerator/freezer (that is, safe for flammable storage). Flammable chemicals may not be kept in a household style or commercial refrigerator/freezer or in a walk-in cooler. <i>NFPA 45.12.2.2.1</i>
H205	Improper storage of flammables (Item of Concern): Store flammable chemicals in flammable storage cabinet. <i>NFPA 30.9.5</i>
<b>H300</b>	<b><i>Chemical Dating &amp; Retention.</i></b>
H301	Old non-time sensitive chemicals (Item of Concern): Noted non-time sensitive chemicals older than 5 years in the lab. Periodically review chemical inventory. Dispose of old chemicals that are no longer used. Label non-time-sensitive chemicals that are still in use with current 'in use' date.
H302	<b>Chloroform out of date (Deficiency):</b> Chloroform should be used within 1 year of purchase or 6 months after opening, because it can form phosgene gas upon decomposition. Dispose of any chloroform once these time limits have passed. This is also true for chloroform that has had stabilizers added. <i>NFPA 45.9.2.3.4</i>
H303	<b>Peroxide forming chemicals out of date (Deficiency):</b> Explosive peroxide forming chemicals and oxidants such as ethyl ether, tetrahydrofuran (THF), perchloric acid, cyclohexene, butadiene, isopropyl ether and dioxanes must be used within 1 year of purchase or 6 months after opening and must be disposed of before the expiration date. Tag these chemicals for disposal immediately if past these time constraints. <i>NFPA 45.9.2.3</i>
H304	Undated chemicals (Item of Concern): Date chemicals when received and again when opened. If date of acquisition or opening is unknown, back-date to the oldest known date for a reference point, e.g. "REC'D PRE-2010" or "OPENED PRE-2010" <i>NFPA 45.9.2.3.4; NIOSH Publication 2007-107</i>
<b>H400</b>	<b><i>Faulty Containers &amp; Unstable Chemicals.</i></b>
H401	<b>Unstable chemicals (Deficiency):</b> Do not attempt to open or move peroxide-forming and oxidizing chemicals (such as ethyl ether, THF, perchloric acid, cyclohexene, butadiene, isopropyl ether and dioxanes) with crust on lid, stratification of liquid, discoloration, or crystallization. (EHS will follow-up with PI).
H402	Damaged chemical container (Item of Concern): Repackage or dispose of chemicals in deteriorated containers. <i>Prudent Practices 2011, Page 113 Section 6.C.3</i>
H403	Missing or damaged chemical cap (Item of Concern): Replace cracked or missing cap on chemical container. <i>Prudent Practices 2011, Page 113 Section 6.C.3</i>
<b>H500</b>	<b><i>Chemical Segregation.</i></b>

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H501	<b>Unsegregated chemicals (Deficiency):</b> Segregate chemicals by hazard class (flammable, corrosive, oxidizer, reactive, toxic). Recommend using a color-coded labeling system on chemical containers to quickly identify the hazard class. For more information, see the EHS Laboratory Safety webpage ( <a href="https://ehsd.tamu.edu/Pages/LabSafety.aspx">https://ehsd.tamu.edu/Pages/LabSafety.aspx</a> ). <i>NFPA 45.9.2.3.2</i>
<b>H600</b>	<b><i>Perchloric Acid Use and Storage.</i></b>
H601	<b>Improper Perchloric acid storage (Deficiency):</b> Perchloric acid must be stored away from organic materials (including other chemicals, wooden shelves, and paper lining) and other acids. Storage in secondary containment is strongly recommended. Review MSDS for more information. <i>NFPA 45.9.2.3; TAMU Laboratory Safety Manual, Chapter 3 Section 9.1</i>
H602	<b>Using/heating Perchloric acid outside of Perchloric acid fume hood (Deficiency):</b> A Perchloric acid fume hood is required when using 70% or greater concentration of perchloric acid or when heating any concentration of perchloric acid. <i>NFPA 45.8.11; TAMU Laboratory Safety Manual, Chapter 5 Section 2.1</i>
H603	<b>Personnel using improperly functioning Perchloric acid hood (Deficiency):</b> A Perchloric acid fume hood must be in proper working condition, with a functioning wash down system, when using 70% or greater mixtures of perchloric acid or when heating any concentration of perchloric acid. Submit a work request through AggieWorks to have the Perchloric acid fume hood repaired. EHS must verify that the wash down system is working properly before the hood may be used. <i>NFPA 45.8.11</i>
<b>H700</b>	<b><i>Flammable Storage Cabinets.</i></b>
H701	<b>Flammable cabinet does not vent to outside (Deficiency):</b> If vented, flammable storage cabinet must vent directly outside the building. <i>NFPA 30.9.5.4.2</i>
H702	<b>Improper duct material on vented flammable cabinet (Deficiency):</b> Flammable storage cabinet exhaust duct shall be constructed of non-combustible material and should be of the same material as the flammable storage cabinet. <i>NFPA 91.4.2.1</i>
H703	Flammable cabinet vents from the top (Item of Concern): If vented, flammables cabinets should vent from the bottom of the cabinet, with make-up air supplied at the top of the cabinet. <i>NFPA 30 Appendix A.9.5.4</i>
<b>9. Waste Disposal</b>	
<b>I100</b>	<b><i>Waste Disposal.</i></b>
I101	<b>Improper sharps waste container (Deficiency):</b> Use an approved sharps container with a non-removable lid for disposal of metals sharps. If sharps are biohazardous, autoclave before disposal. If sharps are not biohazardous, remove the biohazard label from the container and label the container "NON-BIOHAZARDOUS SHARPS." When full, place the container in a black trash bag before disposing in the dumpster.
I102	Uncapped waste (Item of Concern): Cap/replace the lid on the waste containers except when they are actively being used. Recommend using screw-on funnel with cap for waste containers that are accessed frequently. <i>40CFR 265(i)</i>
<b>I200</b>	<b><i>Improper Accumulation of Waste.</i></b>
I201	<b>Old samples present (Deficiency):</b> Dispose of old samples that are no longer needed.



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I202	<b>Full waste containers (Deficiency):</b> Dispose of filled chemical waste containers. <i>TAMU Laboratory Safety Manual, Chapter 4 Section 1</i>
I203	<b>Used lecture bottles (Deficiency):</b> Dispose of used lecture bottles. <i>Prudent Practices 2011, Page 100 Section 5.E.6</i>
<b>I300</b>	<b>Glass Disposal.</b>
I301	<b>Improper glass disposal (Deficiency):</b> Dispose of broken glass in a covered sturdy box marked "BROKEN GLASS." <i>30 TAC § 330.1219 (b)(4); Prudent practices 2011, Page 113 Section 6.C.3</i>
I302	<b>Over-filled glass waste (Deficiency):</b> Do not overfill glass waste container. Glass should not protrude over lip of disposal container. <i>TAMU Laboratory Safety Manual, Chapter 4 Section 3</i>
I303	Unlabeled glass waste (Item of Concern): Glass disposal box should be marked "BROKEN GLASS." <i>Prudent practices 2011, Page 114 Section 6.C.3</i>
<b>I400</b>	<b>Improperly Labeled Chemical Waste.</b>
I401	Improperly labeled chemical waste (Item of Concern): Label chemical waste container with the words "HAZARDOUS WASTE" or tie a Hazardous Waste Disposal tag on the container with string. <i>30 TAC § 330.1207; TAMU Laboratory Safety Manual, Chapter 4 Section 1</i>
I402	Hazardous waste not identified (Item of Concern): List the chemical contents on the waste disposal container or on the Hazardous Waste Disposal tag tied to the container. <i>30 TAC § 330.1207; NFPA 45.9.3; TAMU Laboratory Safety Manual, Chapter 4 Section 1</i>
I403	Dated hazardous waste disposal tags (Item of Concern): DO NOT date Hazardous Waste Disposal tag. EHS will date the tag at time of pick-up. <i>TAMU Laboratory Safety Manual, Chapter 4 Section 1.1</i>
<b>10. Warning Signs/Labels</b>	
<b>L100</b>	<b>Chemical Container Labels.</b>
L101	<b>Damaged/missing chemical label (Deficiency):</b> Replace missing or deteriorating labels on primary (original) chemical containers. <i>25 TAC §295.6</i>
L102	Improperly labeled secondary container (Item of Concern): Ensure that all containers (squeeze bottles, flasks, dilutions, etc.) are labeled with the complete name of the contents, even those that contain water or are a part of equipment or experiments. The label should also include words, pictures, and/or symbols to notify users of the hazards of the chemicals. Replace fading/deteriorated labels. <i>TAMU Laboratory Safety Manual, Chapter 3 Section 2; 29 CFR 1910.1200(f)(9)</i>
L103	Improperly defaced bottles (Item of Concern): Deface labels on all empty bottles prior to reuse, and label the bottles with the identity of the new contents to prevent confusion. <i>TAMU Laboratory Safety Manual, Chapter 4 Section 1; 25 TAC §295.6</i>
<b>L200</b>	<b>Equipment Signage.</b>
L201	Unlabeled microwave (Item of Concern): Label microwave "Lab Use Only." <i>TAMU Laboratory Safety Manual, Chapter 2 section 1.1</i>
L202	Unlabeled freezer (Item of Concern): Label freezer "Not Safe for Flammable Storage." <i>Prudent Practices 2011, Page 98 Section 5.E.4; TAMU Laboratory Safety Manual, Chapter 2 section 1.1</i>

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L203	Unlabeled refrigerator (Item of Concern): Label refrigerator "Not Safe for Flammable Storage." <i>Prudent Practices 2011, Page 98 Section 5.E.4; TAMU Laboratory Safety Manual, Chapter 2 section 1.1</i>
L204	Unlabeled ice maker (Item of Concern): Label ice maker "Not for Human Consumption." <i>TAMU Laboratory Safety Manual, Chapter 2 section 1.1</i>
L205	Unlabeled hot surface (Item of Concern): Place warning sign on equipment with hot surfaces. <i>TAMU Laboratory Safety Manual, Chapter 2 Section 2.6</i>
<b>L300</b>	<b>Door Signs.</b>
L301	Lack of warning signs (Item of Concern): Post specific warning signs for the hazards present (Chemicals, Biohazards, Radioactive Materials, LASER, etc.) on the lab door. (EHS inspector will notify the appropriate group with oversight.) <i>TAMU Laboratory Safety Manual, Chapter 3 Section 3, Chapter 5 Section 1.1; 29 CFR 1910.145, 21 CFR 1040.10(g)</i>
L302	Improper warning signs (Item of Concern): Remove from the lab door any warning signs that are not appropriate for the hazards in the lab. (EHS will notify the appropriate group with oversight.) <i>TAMU Laboratory Safety Manual, Chapter 3 Section 3, Chapter 5 Section 1.1</i>
L303	No ECI outside lab door (Item of Concern): Post emergency contacts and off-hour phone numbers on all outer lab doors. <i>TAMU Lab Safety Manual, Chapter 5 Section 1.1</i>
L304	Out of date ECI (Item of Concern): Update Emergency Contact Information on lab door. <i>TAMU Laboratory Safety Manual, Chapter 1 Section 3.2</i>
<b>11. Laser Safety</b>	
<b>M100</b>	<b>Laser Safety.</b>
M101	Class IIIb and Class IV Lasers not registered with EHS (Item of Concern): EHS inspector will notify the Laser Safety Group. <i>25 TAC §289.301</i>
M102	No Laser eyewear available (Item of Concern): EHS inspector will notify the Laser Safety Group. <i>25 TAC §289.301</i>
M103	Lab personnel have not had Laser training (Item of Concern): EHS inspector will notify the Laser Safety Group. <i>TAMU Rule 24.01.01.M5 section 1(1.3)(1.4)</i>
<b>12. No Unsafe Conditions Found</b>	
NOV0	No Violations Found.
<b>13. Other Violations</b>	
OV00	Other: See Comments.
<b>14. Administrative</b>	
<b>P100</b>	<b>Training.</b>

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P101	<b>Lab personnel lack general HazCom training (Deficiency):</b> Laboratory employees must be provided general Hazard Communication and/or Introduction to Laboratory Safety Training prior to beginning work in a TAMU laboratory. This training must be documented and kept on file. <i>THCA Section 502.009; TAMU Hazard Communication Program, Page 5, Chemical Safety Information And Training - HSC 502.009 and 502.017(b) and Page 6; 25 TAC §295.7(b)</i>
P102	<b>Lab personnel lack work area specific training (Deficiency):</b> Laboratory employees must be provided Work Area Specific Training prior to beginning work in a TAMU laboratory and whenever new hazards, new equipment, and/or new processes are introduced. This training must be documented and kept on file. <i>THCA Section 502.009; TAMU Hazard Communication Program, Page 5, Chemical Safety Information And Training - HSC 502.009 and 502.017(b) and Page 6; 25 TAC §295.7(b)</i>
P103	<b>Lab personnel lack hazard specific training (Deficiency):</b> Laboratory employees must be provided Work Area Hazard Specific Training for extremely toxic chemicals (such as Hydrogen Fluoride, Phosgene), explosives, pyrophorics, etc., prior to beginning work in a TAMU laboratory and whenever new hazards, new equipment, and/or new processes are introduced. This training must be documented and kept on file.
<b>P200</b>	<b>Documentation.</b>
P201	<b>No MSDS available (Deficiency):</b> A current manufacturer-specific safety data sheet (MSDS or SDS) must be maintained and made available to lab employees for each chemical used or stored in the lab. <i>THCA Section 502.006; TAMU Hazard Communication Program, Page 6 - Material Safety Data Sheets - HSC 502.006; 25 TAC §295.5</i>
P202	<b>Lab not decommissioned by EHS (Deficiency):</b> Laboratories must be decommissioned by Environmental Health & Safety whenever a lab will be permanently closed or will be vacated by the current faculty member/principal investigator (PI). The decommissioning process, including a close-out inspection, must be completed prior to the new PI moving into the lab. <i>TAMU Rules: (SAP) 24.01.01.M4.04</i>
P203	<b>Lab not registered with EHS (Item of Concern):</b> The PI has not registered this lab with EHS. Complete the "PI Laboratory Registration Form" (found on <a href="https://ehsd.tamu.edu/Pages/LabSafety.aspx">https://ehsd.tamu.edu/Pages/LabSafety.aspx</a> ) and submit to EHS within 5 business days.

**\*The Laboratory Safety Group uses the above checklist when conducting general laboratory safety inspections. While the checklist is through, Laboratory Safety Group is not limited to inspecting only those items included in it. Any unsafe condition noted in a laboratory environment can and will be reported.**

**KEY:**

**Deficiency:** Significant hazard and/or in violation of safety codes

**Item of Concern:** Items in conflict with TAMU safety manual and/or good lab practices

**Information:** Can make the work area safer for laboratory personnel and emergency responders

## General Laboratory Safety Inspection Checklist\*

### **ANSI**

American National Standard Institute

<http://www.ansi.org>

### **BMBL**

Biosafety in Microbiological and Biomedical Laboratories (BMBL) 5<sup>th</sup> edition

United States Department of Health and Human Services

Center for Disease Control and Prevention and National Institutes of Health January 2007

<http://www.cdc.gov/od/ohs/biosafety/bmb15/bmb15toc.htm>

### **CFR**

Code of Federal Regulations

<http://www.gpoaccess.gov/CFR/INDEX.HTML>

### **NFPA**

National Fire Protection Association

<http://www.nfpa.org>

### **Prudent Practices**

Prudent Practices in the Laboratory, Handling and Disposal of Chemicals

National Academy of Sciences

National Research Council

Updated (2011) Edition

### **TAMU Rules**

Texas A&M University Systems Rules

(Includes SAPs – Standard Administrative Procedures)

<http://rules.tamu.edu>

### **TAMU Laboratory Safety Manual**

Texas A&M Laboratory Safety Manual

<http://ehsd.tamu.edu/LaboratorySafety.aspx>

### **TAMU Safety Manual**

Texas A&M Safety Manual

<http://ehsd.tamu.edu/documents/TAMUSafetyManual/0-TOC.htm>

### **TAC**

Texas Administrative Code

[http://info.sos.state.tx.us/pls/pub/readtac\\$ext.ViewTAC?tac\\_view=2&ti=25](http://info.sos.state.tx.us/pls/pub/readtac$ext.ViewTAC?tac_view=2&ti=25)

### **ASTM**

American Society for Testing and Materials