# LABORATORY SAFETY INSPECTION CHECKLIST

## Guidelines

The purpose of this checklist is to provide the Principal Investigator or Laboratory Lead a tool to help perform a self-audit of their laboratory. Environmental Safety and Health personnel when performing laboratory inspections will also use this checklist.

## General

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is a telephone available at all times?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are emergency contact numbers current and posted on the laboratory door?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is a first aid kit available and properly stocked?</td>
<td></td>
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</tr>
<tr>
<td>Warning signs are posted on doors.</td>
<td></td>
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</tr>
<tr>
<td>Material Safety Data Sheets (MSDS) are available.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>All personnel know how to obtain MSDSs.</td>
<td></td>
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</tr>
<tr>
<td>All personnel have received Laboratory Specific Training.</td>
<td></td>
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</tr>
<tr>
<td>Lab coats are available.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical protective gloves are available and used.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety glasses/goggles are available and used.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>An eyewash fountain is present.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>An emergency shower is present.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food and beverage are not stored or used in lab.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work surfaces are uncluttered and unused equipment stored.</td>
<td></td>
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</tr>
<tr>
<td>Is the laboratory generally clean and uncluttered?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aisles are uncluttered and without tripping hazards (cords, etc.)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Chemical spill kits are available.</td>
<td></td>
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<tr>
<td>Non-contaminated sharp objects in labeled, puncture-proof containers.</td>
<td></td>
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</tr>
<tr>
<td>Fume hoods inspected annually.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All exit ways are free and unobstructed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire extinguishers are available and unobstructed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire extinguishers have inspection tag and are sealed.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Comments:
**Eating/Drinking**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do users eat or drink in the laboratory?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are foods/drinks stored in refrigerators in the laboratory?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are foods/drinks prepared in the laboratory?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do users chew gum, use smokeless tobacco, or apply cosmetics in the laboratory?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

**Egress and Access Pathways**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are the exit pathways and doors clear and unobstructed? (36 inch width)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are ways to exit access within the laboratory clear and unobstructed? (36 inch width)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are emergency exit procedures posted near the laboratory exits?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

**Emergency Shower and Eye Wash**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is an emergency shower available within 10 seconds travel time?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the path to the emergency shower and the area around the shower clear and unobstructed?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the travel time to the emergency shower (inside or outside of the laboratory) ten seconds or less?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is an emergency eyewash available within 10 seconds travel time?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the path to the emergency eyewash and the area around the eyewash clear and unobstructed?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do the laboratory users routinely flush/test the emergency shower (at least monthly)? Documentation should be on tags or in a log.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do the laboratory users routinely flush/test the emergency eye wash (at least weekly)? Documentation should be on tags or in a log.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

**Biosafety Cabinets**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is a biosafety cabinet present?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has the cabinet been inspected and certified within the last year? (check the sticker on the front near the sash)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**
### Chemical Fume Hoods

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the equipment inside the fume hood elevated or positioned such that it is not blocking the baffles or air flow?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the fume hood not being used for chemical storage?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there adequate working space in front of and around the fume hood?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the sash operational?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the minimum sash height marked and/or has a sash stop?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has the fume hood been checked within the last year for flow and containment? (Check the date on the sticker where the maximum sash height is marked.)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

### Fire Extinguishers

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are fire extinguishers available within the laboratory?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the fire extinguisher located near the exit?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is access to the fire extinguisher clear and unobstructed?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the fire extinguisher type and size appropriate for the laboratory?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Please contact Environmental Health and Safety if in doubt.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do the laboratory users have training in using the fire extinguishers?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the fire extinguishers appropriately located?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**List the fire extinguisher type and size:**

**Comments:**

### Electrical Safety

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are the equipment cords in good condition?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are extension cords not being used on a permanent basis?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the proper extension cords/power strips being used?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the electrical outlets/power strips not overloaded?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is electrical equipment not close to sources of chemical vapors or gases?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there any evidence of &quot;homemade&quot; wiring?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the GFCI outlets located within six feet of water use?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**
<table>
<thead>
<tr>
<th>Chemical Safety, Storage and Handling</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are chemicals stored in acceptable amounts?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are chemicals that are not in use stored in approved cabinets that are self-closing and in good condition?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>All chemical containers are properly labeled.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are liquid chemicals stored above eye level?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Chemicals are stored according to compatibility.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are there retaining lips on the shelves used for storing chemicals?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Flammable gases are not present.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Flammable storage area(s) is labeled.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Flammables are kept away from sources of heat, ignition, flames, etc.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are flammable liquids stored in approved cabinets/containers?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are there any indications that grounding/bonding is necessary for the transfer of flammable liquids?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>If so, is grounding/bonding being used?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are flammable liquids stored in a refrigerator?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>If so, is it an appropriate refrigerator?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Flammable/Combustible liquids do not exceed NFPA storage limits.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Flammable/Combustible liquid total volume is not greater than 10 gal.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Corrosive chemical storage area(s) is labeled.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Corrosive materials are stored low to the ground.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are acids and bases being stored properly (separated and/or in secondary containment)?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are reactive/oxidizers segregated from other chemicals?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Carcinogen storage area(s) is labeled.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Chemicals in the open are kept to a minimum.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Poisonous gases are not present.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Comments:
### Laboratory Safety Inspection Checklist

#### Are the following peroxide forming chemicals stored or used in the laboratory?

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexene</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyclooctene</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decahydronaphthalene</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p-Dioxane</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethyl ether</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Isopropyl ether</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tetrahydrofuran</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tetrahydronaphthalene</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If there is any of the peroxide forming chemicals stored or used in the laboratory, are they tested monthly for peroxide concentration?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are containers dated when purchased/received?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peroxide forming reagents are dated when opened.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peroxide forming reagents are disposed of or tested after expiration date.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are any crystals present in or on the storage containers?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is perchloric acid stored or used in the laboratory?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If so, is it used in an appropriate fume hood?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the fume hood wash down work?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are non-perchloric activities being conducted in the fume hood?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

### Compressed Gases

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are compressed gas cylinders stored upright and properly secured?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are compressed gas cylinders capped when not in use?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are highly toxic gases stored in approved cabinets or within fume hoods (if the cylinder is small enough)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the tubing from the cylinder appear to be adequate and of the proper material?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have the connections been leak tested?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the contents of the cylinders clearly labeled?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are oxygen cylinders stored separately from other cylinders?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the cylinders located near exit doors?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**
### Cryogenic Liquids

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is appropriate personal protective equipment used during the transfer of material?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the space where the material stored appropriately ventilated?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the appropriate containers being used for storage?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is appropriate personal protective equipment used during the transfer of material?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the space where the material is stored appropriately ventilated?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

### Hazardous Waste

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are waste containers clearly labeled with Chemical Name and accumulation start date?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are waste container lids properly closed?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there less than 30 gallons of waste stored?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazardous wastes are not stored beyond 180 days.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the basic hazardous waste management guidelines posed in the laboratory?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

### Pressure/Vacuum Operations

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are the pressure vessels marked with DOT or ASME markings?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the inlets and outlets on the vacuum pump clearly marked?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the vacuum equipment protected by tape or shielding?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the vacuum pump exhausted to a fume hood or other exhaust?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a cold trap on the vacuum pump?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a belt guard on the vacuum pump?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the tubing in good condition and connected properly?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is an autoclave present?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If so, has it been inspected recently?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**
<table>
<thead>
<tr>
<th><strong>Spill Response</strong></th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are response/cleanup materials available for small spills?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Are spill response guidelines or instructions posted?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Labeling</strong></th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are all containers labeled to identify the contents?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Are all containers dated when they are purchased/received?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Material Safety Data Sheets (MSDS)</strong></th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are MSDSs available for the chemicals used in the laboratory?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Are the MSDSs current?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Are the MSDSs located in a centralized location in the laboratory?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Laboratory Safety Plan</strong></th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is a copy of the INL Laboratory Safety Plan available to laboratory users?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>If so, do laboratory users know how to access it?</td>
<td>[ ]</td>
<td>[ ]</td>
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</tr>
<tr>
<td>Does the laboratory have their own Laboratory Safety Plan for their individual lab?</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
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