

## MTU Department of Chemical Engineering 2008 Laboratory Safety Inspection Checklist

Room Number: \_\_\_\_\_

Laboratory Supervisor: \_\_\_\_\_

Inspector: \_\_\_\_\_

Date: \_\_\_\_\_

Y = Yes    N = No    N/A = Not Applicable

### A. Emergency

- |   | Y                        | N                        | N/A                      |           |
|---|--------------------------|--------------------------|--------------------------|-----------|
| 1. Completed emergency information labels posted outside room | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
| 2. Exits not blocked  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Mandatory |
| 3. Window on laboratory door not covered                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
| 4. Emergency Exit route posted on inside of door              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
|   |                          |                          |                          |           |
| 5. Fire Extinguisher:   |                          |                          |                          |           |
| Available within laboratory                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
| Clearly visible   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
| Not blocked   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Mandatory |
| Annual inspection is up-to-date                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
| Correct for flammables present                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
|   |                          |                          |                          |           |
| 6. Safety shower:   |                          |                          |                          |           |
| Available within laboratory                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
| Clearly visible   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
| Not blocked   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Mandatory |
| Annual inspection is up-to-date                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
|   |                          |                          |                          |           |
| 7. Eye wash:  |                          |                          |                          |           |
| Available within laboratory                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
| Clearly visible   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
| Not blocked   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Mandatory |
| Annual inspection is up-to-date                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
|   |                          |                          |                          |           |
| 8. Spill kits:  |                          |                          |                          |           |
| Available within laboratory if chemicals present              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
| Clearly visible   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
| Not blocked   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Mandatory |
| Appropriate for chemicals present (includes mercury)          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |

### B. Housekeeping

- |  |                          |                          |                          |           |
|--|--------------------------|--------------------------|--------------------------|-----------|
| 1. Counters and floor clear of clutter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Mandatory |
| 2. No food or evidence for food        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |

### C. Compressed Gas

- |   |                          |                          |                          |  |
|---|--------------------------|--------------------------|--------------------------|--|
| 1. Manual shutoff valves provided at all points of supply and use | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |
| 2. Corrosive gases stored no more than 6-months                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |
| 3. All cylinders secured in place                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |
| 4. Pressure gauges in place                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |

### D. Mechanical Guarding

- |   |                          |                          |                          |  |
|---|--------------------------|--------------------------|--------------------------|--|
| 1. Machine guarding in place  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |
| 2. Sharps disposal container available if hypodermic needles present in lab | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |

### E. Electrical

- |   |                          |                          |                          |           |
|---|--------------------------|--------------------------|--------------------------|-----------|
| 1. Electrical cords - not pinched, broken, cracked, or covered up | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Mandatory |
| 2. Circuits feeding potentially wet areas protected by GFCI       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
| 3. No exposed and energized electrical parts                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
| 4. Electrical panels are not blocked                              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |
| 5. Electrical panels labeled, even when not in service            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |           |

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**Lab No.** \_\_\_\_\_

**F. Ventilation**

- 1. Laboratory hood sash is in working order - not stuck, broken, or removed
- 2. Equipment or materials do not obstruct air flow
- 3. Hood interior is clean, uncluttered, and not used as storage
- 4. Air flow rate is posted or flow gauge is present (between 80 - 120 fpm)
- 5. Air flow indicator on hood shows positive indication of hood function

<b>Y</b>	<b>N</b>	<b>N/A</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**G. Personal Protective Equipment**

- 1. Appropriate safety eye wear is worn
- 2. Appropriate shoes worn
- 3. Necessary PPE available

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mandatory
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mandatory
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mandatory

**H. Chemical Storage**

- 1. Chemicals in open kept to a minimum
- 2. Flammable/combustible liquids stored in safety cans or flam. stg. cabinets
- 3. Flammable storage cabinets grounded
- 4. Incompatible chemicals, i.e. acids and bases, stored separately
- 5. Chemical containers are properly labeled
- 6. Chemical storage cabinets labeled

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mandatory
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mandatory
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mandatory
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mandatory
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**I. Chemical Waste Management**

- 1. Chemical wastes stored in proper containers and location
- 2. All chemical wastes in labeled containers
- 3. All chemical wastes in compatible groups
- 4. Chemical waste disposal done regularly

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**J. Hazard Communication**

- 1. MSDS sheets available for all non-R&D chemicals in lab
- 2. Safety Manual accessible
- 3. Emergency response phone numbers permanently marked on the phone
- 4. Chemical inventory is up-to-date and available
- 5. Standard operating procedures (SOP) are available

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mandatory
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mandatory
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mandatory

**K. Glassware**

- 1. Properly stored
- 2. Chipped, broken, or scratched glassware is disposed of
- 3. Broken glass container provided

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**L. Drying Ovens**

- 1. JSA's for use are on file and followed.
- 2. A logbook is used to document use.
- 3. Direct-heated ovens are not used to dry flammables.
- 4. Mercury thermometers are not used in ovens.
- 5. Ovens used to dry materials that off-gas toxic or noxious vapors are located in a hood.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**M. Compared to last inspection**

- Improved                       About the same                       Conditions are worse

All items with a NO response are NOT in compliance.

Mandatory items must be in compliance for every inspection – failure to comply might result in immediate laboratory closure.

All other items must be corrected before the next inspection. These items will become mandatory for the next inspection.

Provide specifics on all items marked “no” above either in the space below or on an attached separate piece of paper. Also list special hazards or conditions not covered on this form.

<b>Mandatory Items:</b>	<b>In compliance</b> <input type="checkbox"/>	<b>Not in Compliance</b> <input type="checkbox"/>
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Signatures of Inspectors: \_\_\_\_\_ Date: \_\_\_\_\_

Signature of Lab Supervisor(s): \_\_\_\_\_ Date: \_\_\_\_\_

Signature of Department Chair: \_\_\_\_\_ Date: \_\_\_\_\_

Feb, 2008