Chemical Safety: What You Don’t Know Can Hurt You!

Laboratory Safety Colloquium
Sponsored by
Environmental Health & Safety
The Office of Research & Graduate Studies
This group of chemicals manifests its toxicity by way of starving your cells of oxygen through the inhibition of the respiratory enzyme cytochrome oxidase.
This group of chemicals manifests its toxicity by way of starving your cells of oxygen through the inhibition of the respiratory enzyme cytochrome oxidase.

1. Carbon dioxide
2. Cyanide
3. Nitrogen
4. Hydrogen

Answer: Cyanide
If you had been diagnosed with Pink Disease, to what chemical had you most likely been exposed?
If you had been diagnosed with **Pink Disease**, to what chemical had you most likely been exposed?

1. Mercury
2. Lead
3. Chromium
4. Copper

**Answer:** Mercury
Early symptoms of exposure to this chemical include skin peeling from the hands followed by weak legs and numb hands and feet, impairment of the vibration sensation in the toes, and loss of ankle reflexes.
Early symptoms of exposure to this chemical include skin peeling from the hands followed by weak legs and numb hands and feet, impairment of the vibration sensation in the toes, and loss of ankle reflexes.

1. Xylene
2. Acrylamide
3. Acetone
4. Nitric Acid

Answer: Acrylamide
Which of the following chemicals is the most toxic (based upon LD 50)?
Which of the following chemicals is the most toxic (based upon LD 50)?

1. acetone 5800 mg/kg
2. n-butyl acetate 10000 mg/kg
3. cyclohexane 12,705 mg/kg
4. ethyl acetate 5620 mg/kg
5. Tetrahydrofuran 850 mg/kg
6. 1,1,1 trichloroethane 9600 mg/kg

Answer: Tetrahydrofuran 850 mg/kg
Steps to develop
YOUR
Virtual Manual
EHS Virtual Manual
Welcome to the University of Nebraska-Lincoln, Environmental Health and Safety Department Virtual Manual. The Virtual Manual was created to help supervisors and employees consolidate EHS requirements that apply to individual work areas at UNL.

Bookmark this page now and always enter the Virtual Manual through this page. Call EHS at (402) 472-4925 if you need assistance with the Virtual Manual.

In order to bring you current and expanded information, the EHS Virtual Manual will always be a work in progress. Updates after November 1, 2001, will be noted on the associated Virtual Manual page.

We welcome your comments and suggestions so that we can make the Virtual Manual best fit your needs. Please forward your suggestions regarding information to add to the Virtual Manual to EHS by email at ehs@unl.edu or by telephone at (402) 472-4925.

Introduction
Assessment
Access Profile
Click on the Submit button at the bottom of the table to complete your assessment. If you need to return to the assessment instructions, click the back button on your browser toolbar. (You should then be able to click the forward button on your browser to return to your assessment.)

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part I. General Safety Information</strong></td>
<td>General Safety for Everyone</td>
</tr>
<tr>
<td>This information is applicable to all work areas, including offices.</td>
<td></td>
</tr>
<tr>
<td>This box is automatically selected for you.</td>
<td></td>
</tr>
<tr>
<td><strong>Part II. Specific Hazards</strong></td>
<td></td>
</tr>
<tr>
<td>Several of the following hazards may apply to your work area. Be sure to</td>
<td></td>
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<tr>
<td>review the entire list.</td>
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</tr>
<tr>
<td>If your work involves chemicals used in research applications, check this</td>
<td></td>
</tr>
<tr>
<td>box.</td>
<td>Chemicals in Research</td>
</tr>
<tr>
<td>If your work involves chemicals found in shops and maintenance areas,</td>
<td></td>
</tr>
<tr>
<td>check this box.</td>
<td>Chemicals in Shops</td>
</tr>
<tr>
<td>If your work involves cleaning chemicals, check this box.</td>
<td></td>
</tr>
<tr>
<td>If your work involves handling or applying pesticides, check this box.</td>
<td>Pesticides</td>
</tr>
<tr>
<td>If you are involved with managing or removing asbestos, check this box.</td>
<td>Asbestos</td>
</tr>
<tr>
<td>If you work with removing or managing lead-based paint, check this box.</td>
<td>Lead</td>
</tr>
<tr>
<td>If you do research involving recombinant DNA or infectious microorganisms</td>
<td>Biological Hazards</td>
</tr>
</tbody>
</table>
Chemicals in Research

(Page updated 4/26/07 )

Chemicals can pose many hazards, including illnesses, fires, burns and explosions. All employees have the right to information about hazardous chemicals they may be exposed to in the course of their employment. The University has a duty to prevent or reduce potential exposures to hazardous chemicals to the extent possible.

This page is applicable to all operations at UNL where hazardous chemicals are used or stored. Office workers and other employees at UNL who encounter hazardous chemicals only in non-routine, isolated, instances are not subject to these requirements. This page applies to all aspects of chemical storage, use and disposal, except pesticides (these are covered on a separate page of the Virtual Manual).

Requirements for laboratory and non-laboratory work areas are very similar. The term work area is used on this page to refer to both laboratory and non-laboratory work areas. Any requirements that do not apply to both areas are noted as such.

The requirements of several documents are listed on this page, including the Chemical Hygiene Plan (under revision), Hazard Communication Program, Chemical Container Labeling Guidelines, and Guidelines for the Safe Use of Hazardous Materials and the Disposal of Hazardous Waste. EHS is in the
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