
 <b>UTM</b> UNIVERSITI TEKNOLOGI MALAYSIA	<b>UNIVERSITY LABORATORY          MANAGEMENT UNIT          (UPMU)</b>	SOP No.	CMC/SOP/1
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<b>GUIDELINES FOR SAFE TRANSPORTING OF CHEMICALS ON CAMPUS</b>			
<b>CHEMICAL MANAGEMENT CENTRE</b>			

Students and researchers should be aware that many materials used in the laboratory are dangerous and risky. Transporting chemicals is one of the riskiest procedures that takes place in the laboratory and around campus as it may lead to accidental release and exposure of chemicals. However, by taking the right pre-cautions and procedures while handling and transporting chemicals, you can minimize the danger to yourself, others and the environment.

The Chemical Management Centre (CMC) has established the following guidelines as the minimum acceptable practices for transporting hazardous chemicals on campus. The following guidelines shall be followed when moving chemicals on campus:

1. Chemical user must read the Safety Data Sheet (SDS) before handling any chemicals. Determine the proper shipping name/basic description on transportation of chemicals as provided in the SDS. Individuals transporting chemicals must be familiar with the hazards presented, and know what to do in the event of incidents such as instant release or spillage.
2. Wear appropriate Personal Protective Equipment (PPE) while transporting the chemicals. Lab coat, safety glasses, chemical resistant gloves are some of the PPE that should be worn if hazardous chemicals might splash on skin or eyes if spilled during transport.
3. Label all chemical containers as to their contents.
4. Hazardous chemicals must be attended at all times while being transported.
5. Use secondary container that are capable of containing all materials in the event of breakage or spillage.
6. Do not place incompatible chemicals together in the same container during movement. For example chromic acid (oxidizing acid) and ethyl acetate (flammable liquid) should not be transferred on the same cart. This will prevent unwanted chemical reactions in the events of leaks or spillage.
7. Transport only the minimum amount of material in the lowest concentration commensurate with the demonstration or educational activities.
8. Plan route and destinations to minimize travel time and distance while transporting hazardous materials.
9. Avoid transporting chemicals in a passenger vehicle. Never leave chemicals unattended or stored in a vehicle.

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10. Hazardous chemicals must not be left or stored in corridors, departmental offices, or other non-laboratory locations.
11. Immediately update chemical inventories to reflect the relocation of chemicals.

<b>References</b>	<ol style="list-style-type: none"> <li>1. UN Recommendations on the Transport of Dangerous Goods - Model Regulations.            URL: <a href="http://www.unece.org/?id=3598">http://www.unece.org/?id=3598</a></li> <li>2. Guidelines on Storage of Hazardous Chemicals: A Guide For Safe Warehousing of Packaged Hazardous Chemicals. 2005. Department of Occupation Safety and Health Malaysia.            URL: <a href="http://www.dosh.gov.my/index.php/en/legislation/guidelines/chemical">http://www.dosh.gov.my/index.php/en/legislation/guidelines/chemical</a></li> <li>3. Safely Transporting Chemicals on Campus. 2008. Columbia University.            URL: <a href="http://ehs.columbia.edu/chemtrans.html">http://ehs.columbia.edu/chemtrans.html</a></li> <li>4. Transporting Chemicals Safely on Campus. 2002. Environmental Health and Safety University of California Berkeley.            URL: <a href="http://ehs.berkeley.edu/sites/default/files/lines-of-services/workplace-safety/17transportchem.pdf">http://ehs.berkeley.edu/sites/default/files/lines-of-services/workplace-safety/17transportchem.pdf</a></li> <li>5. Guidelines for Moving Chemicals on Campus. Wright State University. URL: <a href="http://www.wright.edu/sites/www.wright.edu/files/page/attachements/MovingChemicalGuidelines.pdf">http://www.wright.edu/sites/www.wright.edu/files/page/attachements/MovingChemicalGuidelines.pdf</a></li> </ol>
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