**Purpose:**

In order to comply with regulatory requirements, including the [MIOSHA General Industry Hazardous Communication Standard](http://www.michigan.gov/documents/CIS_WSH_part_42__47164_7.pdf) and [MIOSHA Hazardous Work In Laboratories](http://www.michigan.gov/documents/CIS_WSH_part431_35623_7.pdf), an annual inventory identifying hazardous materials on campus is required. The purpose is to ensure that the hazards of chemicals on campus are evaluated, and that information concerning their hazards is available to employees, students and visitors.

**Compliance:**

Northern Michigan University has committed to inventorying hazardous materials on site annually as described below (see items required to be inventoried). By providing the NMU Safety Department a chemical inventory list annually, the safety data sheets for all chemicals on campus are provide on the Safe Colleges SDS Repository. Included below is a list of items that may be required to be inventoried as well as items not required to be inventoried.

**Procedure – Report Chemical Inventory to NMU Safety Department:**

To view and print the current inventory for each department, follow these instructions:

1. Go to the [NMU Safe Colleges SDS Repository](https://nmu-mi.newlook.safecollegessds.com/).
2. Select LOCATION
3. Print Inventory List
   * Right click on the page
   * Select Print
4. Cross out any chemicals you no longer have on this list. The Safety Department will Archive those no longer used.
5. For additional products, use the Hazardous Materials Additions worksheet.
6. This list must be provided to the Safety Department in a manner that is easy to decipher.
7. If your department has no changes to the inventory, please check the box on the bottom of the Hazardous Material Additions form.
8. Sign the Hazardous Material Inventory Additions Worksheet and forward it to the Safety Department, Kim Hegmegee.
9. The information submitted by your department will be updated on the Safe Colleges SDS Repository via the Safety Department.

**Consumer products are not inventoried if used for personal use, but if purchased in bulk to be used as part of your daily job need to be inventoried. For example, if you use Windex once a week to clean a window in your office (or as you would at home) it does not need to be put on the inventory. But if you used Windex daily to clean as part of your job, this would need to be put on the inventory.**

**Items required to be inventoried**

Any, but not limited to, chemical containers that have a manufacture label which denote [physical hazards or health hazards](https://www.osha.gov/dsg/hazcom/ghd053107.html#data-analysis), or whose SDS denotes hazards, are included in the NMU chemical inventory. In general, laboratory chemicals and reagents are inventoried even if the hazard is considered low.  If you are unsure if something should be put on the inventory, put it on the inventory.

Examples include:

* Abrasive Blasting Agents
* Activated Charcoal
* Alumina
* Biological Toxins - <http://www.selectagents.gov/SelectAgentsandToxinsList.html>
* Cements Powder Form (Establish as Static Inventory)
* Chemicals Contained in Process, Storage, and Supply Tanks (see section below)
* Chemical Kits – Can be inventoried under the kit name
* Chemicals or Toxins that are derived from plants or animals
* Commercial Cleaners, Degreasers, Lubricants as Stock (Establish as Static Inventory)
* Corrosive cleaning agents (e.g. strong base/acid solutions, RNASE away,etc.)
* DEA scheduled materials - <http://www.deadiversion.usdoj.gov/schedules/index.html>
* Degreasers
* Desiccants
* DHS Chemicals of Interest - <https://www.dhs.gov/appendix-a-chemicals-interest-list>
* Dyes and Stains
* Epoxy Resin/Hardener
* Flammable Solvents
* Gas Cylinders – Lecture cylinders, small compressed gas cylinders, small propane cylinders
* Janitorial Stock Supplies
* Laboratory Chemicals and Reagents (including Amino Acids, Sodium Chloride, Sucrose, Glycerin, Glycerol, Powdered Metals)
* Laser Dyes and Solvents
* Layout Fluids
* Lecture Bottle Compressed Gas Cylinders
* Metal Plating Solutions
* Molecular Sieves
* Oils, Lubricants and Greases including Vacuum Pump Fluid, Bleach Mineral Spirits (used for maintenance, repair or cleaning)
* Organic solvents, including liquid scintillation counting cocktail
* Paints and Lacquers
* Pesticides
* Photographic Chemicals
* Pool Chemicals
* Propane Tanks (e.g. for forklifts, BBQs, heaters, etc.)
* Research drugs and therapeutics
* Shock sensitive and potentially explosive mixtures produced by the lab must be inventoried
* Small Compressed Gas Cylinders
* Small Propane Cylinders
* Solvents
* Spray Paint and Flammable Aerosols
* Water Treatment Chemicals

**Items that may be required to be inventoried – depends on quantity and usage**

Chemicals that can be exempted from the NMU chemical inventory are usually found in consumer quantities and used in a consumer fashion. The list below lists items that may be exempted from the NMU inventory if the chemicals are normally available as a consumer product and are of a quantity that a consumer would use. The list below provides some examples of consumer products that can be excluded. Next to each product is a quantity that in most cases will be considered a consumer quantity.

Examples include:

* 5-Minute Epoxies, super glue and other Tube Glues (consumer quantity 1-2 per room/area)
* 5 in 1 Oil (consumer quantity 1-2 per room/area)
* PVC Pipe Primers and Cements (consumer quantity 1-2 per room/area)
* Rubber Cement (consumer quantity 1-2 per room/area)
* "ZEP"- and other cleaning type products (consumer quantity 1-2 per room/area)
* Soldering Pastes and Fluxes (consumer quantity 1-2 per room/area)
* Hand Sanitizer (consumer quantity 1-2 per room/area)
* WD-40 (consumer quantity 1-2 per room/area)

**Items not required to be inventoried**

These chemicals are normally available as a consumer product and are of a quantity that a consumer would use. Even though some items may not be entered into the inventory, the user is still responsible to obtain a current SDS for the product. The list below provides some examples of common materials that do not need to be inventoried.

Examples include:

* Alkali Vapor Sources (Very small quantities)
* Activated Charcoal in small pre-packaged laboratory scale cartridges
* Batteries
* Biological Material
  + Plant or animal tissue
  + Reproducing biological organisms, bacteria, viruses, fungi, or yeast
  + Enzymes, antibodies, proteins, peptides, nucleic acids o Conjugated antibodies and
* Blood or Blood Products
* Bloodborne Pathogen Kit
* Buffer Solutions for Growth Media
* Buffer Solutions for pH Probes
* Calcium Chloride Ice/Snow Melt Products Working Quantities (Storage areas require static posting)
* Cements Premixed Deliveries
* Chemical Waste
* Chemical containers with incomplete or illegible information
* Chemical Spill Kits (includes wipes for chemical cleanup)
* Consumer products when ordered/present in consumer quantities and used as appropriate
* Custom DNA Sequencing
* Dilutions
* Empty Chemical Containers
* Enzymes
* Fire Extinguishers
* First Aid Kit (may include calcium gluconate as a first aid for hydrofluoric acid burns)
* Food or Food Additives (unless it will be used for R&D or operational purposes)
* Gelatin
* Growth Media
* Hand Sanitizer
* Hormones
* Lead bricks, sheets, piping
* Lotion
* Office Supplies (appropriate quantities for office administrative purposes)
* Cooking oil
* Non-chemical diagnostic materials that contain a film on any surface (e.g. 96-well plate)
* Non-Hazardous Metals such as Foils, Bars, and Rods
* Perlite for gardening/greenhouse type work
* Personal Items for Personal Use
* Pharmaceuticals, Medication, including veterinary medicine when it is in solid, final form for direct administration to the patient
* Photographic Film
* Plasmids (when not combined with other hazardous chemicals)
* Polymer Spheres (non-hazardous/low hazard or as non-hazardous suspensions)
* Precious Metals (Platinum, silver, gold)
* Potting Soil and Mulch
* Radiological Sources, Chemicals, and Waste
* Sand/Polishing Paper, Buffing Compounds
* Secondary chemical container that is produced in the lab from a primary chemical container(s) that is already inventoried (e.g.)
  + 1N NaOH that is made from a commercially available 10N NaOH solution or solid NaOH.
  + Squirt bottles and spray bottle
  + Conical and “Falcon” tubes with chemicals or samples in them
* Solder
* Special Nuclear Materials
* Structural Material and Articles (example of Articles: beryllium tool, single crystal substrates, ammunition)
* Synthetic Thermoplastic Polymer
* Test strips (pH, Peroxide, Water Hardness, Iron, Phosphate, etc.)
* Thermal Compounds available as a consumer product (e.g. for computers, silver based)
* Tissue culture media or other growth media
* Water, Demineralized Water
* Welding Rod
* White Out
* Working Solutions

Note: Each designated person(s) will be responsible for the proper hazard determination for all mixtures that are commonly made and used in the research labs and shops. For hazard classification guidance concerning mixtures and solutions, the Hazard Communication Standard (29 CFR 1910.1200) states that a mixture (or solution) will be considered as having the same health hazards as the components that comprise ≥1% of the mixture (≥0.1% for known carcinogens in the mixture). If the designated person(s) is not comfortable with making hazard determinations or is unsure about the hazard classification of a particular solution, they should consult with the Safety Department. In order to fully comply with OSHA Hazcom, please review[Labeling Chemicals or Reagents in Secondary Containers Protocol](https://www.osha.gov/Publications/laboratory/OSHAquickfacts-lab-safety-labeling-chemical-transfer.pdf) (Quick Facts Link).

**Regulations:**

[OSHA 29 CFT 1910.1200 Guidance for Hazard Determination](https://www.osha.gov/dsg/hazcom/ghd053107.html#data-analysis)

[OSHA 29 CFR 1910.1200 "Hazard Communication Regulation"](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10099)

[OSHA 29 CFR 1910.1450 "Occupational Exposure to Hazardous Chemicals in the Laboratory"](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10106)

[Michigan Facilities' Guide to SARA Title III, Emergency Planning and Release Reporting - 14th Edition - January 2016](http://www.michigan.gov/deq/0,4561,7-135-3307_29815_4137-91088--,00.html)

**Definitions:**

***Chemical*** - any element, chemical compound or mixture of elements and/or compounds.

***Chemical name*** - the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name which will clearly identify the chemical for the purpose of conducting a hazard evaluation.

***Consumer Quantity*** - a quantity typically found in the home. This is generally considered to be 1 to 2 containers, but, may be more.

***Hazardous chemical*** - any chemical that is a physical hazard or a health hazard.

***Health hazard*** - a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes.

***Consumer Product*** - any consumer product or hazardous substance, as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.) respectively, where the employer can show that it is used in the workplace for the purpose intended by the chemical manufacturer or importer of the product, and the use results in a duration and frequency of exposure which is not greater than the range of exposures that could reasonably be experienced by consumers when used for the purpose intended.

***Physical hazard*** - a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

***Safety data sheet (SDS)*** - written or printed material concerning a hazardous chemical

Please contact the following for questions:

Kim Hegmegee ([khegmege@nmu.edu](mailto:khegmege@nmu.edu)); 227-1415