THE UNIVERSITY OF CHICAGO | Office of Research Safety

Chemical Inventory

Why do we need a chemical inventory?

By federal and state law, the University of Chicago is required to track and report certain substances that are hazardous or above specified volumes.
At the scale of the laboratory, an updated chemical inventory facilitates daily research activities by saving researcher time (availability and location of chemicals is centralized), saving money (no duplicate of purchase), and reducing waste (limit accumulation of unused chemicals).

Chemical name	CAS Number	Containers	Amount	Unit	State	PI Name	Building	Room	Sub location	Date received	Purchaser	Supplier	Hazards
Ethylene	74-85-1	1	1	mL	Gas	Dana Smith	GCIS	W-212	Gas Cabinet	6/15/2015	Amanda	Fisher	Flammable
Formalin	50-00-0	2	500	mL	Liquid	Dana Smith	GCIS	E-515	Cabinet 2	8/31/2015	Lloyd	Sigma	Carcinogen, Corrosive
Sodium Azide	26628-22-8	1	25	g	Solid	Dana Smith	GCIS	E-512	Shelf B	4/15/2014	Andy	Fisher	Toxic, Explosive

What information has to be included in our chemical inventory? (Mandatory fields)

Chemical Name: Do not use abbreviations, nor chemical formula
CAS Number: It is the unique and specific identifier designated for only one substance. While a chemical can have many names, it only has one CAS number.
Containers: Number of containers of the same size
Amount: Size of the container
Unit: Unit of measure (L, mg, Gallon, m^3, etc.)
State: Physical state (solid, liquid, or gas)
PI Name: First and last name
Building: Name or abbreviation of building
Room: The room the chemical is stored

Do we need to inventory all of our chemicals?

ORS recommends that **ALL** chemicals are inventoried, but at minimum, any **hazardous commercial substance** must be included in the inventory. Consult the manufacturer's Safety Data Sheet to determine if a chemical is hazardous .

Some substances that are not required to be inventoried include:

- Non-hazardous chemicals (sodium chloride, natural amino acids, water, etc.)
- Biological material such as:
  - Plant or animal tissue, blood or blood products;
  - Replicating biological agents: bacteria, viruses, fungi or yeast
  - Enzymes, antibodies, proteins, peptides, nucleic acids
- Tissue culture media or other growth media
- Buffer solutions for pH probes
- Non-chemical diagnostic materials

Suggested Additional fields

Sub location: shelf, cabinet or other location the chemical is stored for faster localization while working.
Date received/date opened: keep track on how old a chemical is, useful for sensitive compounds degrading with time, and peroxide forming chemicals presenting hazards over time.
Purchaser: Person who can be asked advice on handling the chemical
Supplier: Faster identification of the chemical
Hazards: Pyrophoric, air sensitive, toxic, flammable, etc.
Expiration date: useful to know when to discard a chemical
Others: PO number, price, etc.

What system should we use?

The Chemical Inventory can be uploaded on EHS Assistant, accessible to any laboratory at The University of Chicago, free of charge. For information, email chemsafety@uchicago.edu.
Another option liked by laboratory users is Quartzy, a web-based free system.
An simple excel spreadsheet updated by the Group is also acceptable, as long as an updated inventory can be provided to ORS at any time upon request.

Do not forget to remove chemicals from the inventory that have been disposed or emptied!

Information provided by the Office of Research Safety. For questions about Quartzy, please email Leslie Williams at leslie.williams@quartzy.com
For all other questions, please email chemsafety@uchicago.edu