

APPLICATION

NYU Langone Health

PURPOSE

To protect personnel and the environment from unnecessary exposure to mercury

To provide a reasonable timeline for removing mercury from NYULH

To ensure the proper management of mercury-containing products, equipment, and substances

POLICY AND GENERAL INFORMATION

1.0 Application

NYU Langone Health (NYULH) refers to the NYU Langone Health System, NYU Langone Hospitals, NYU Grossman School of Medicine, NYU Long Island School of Medicine, the Family Health Centers at NYU Langone, and all entities controlled by any of them.

This policy applies to:

- All NYULH owned and leased facilities
- All fully-owned Faculty Group Practices
- All employees, students, licensed independent practitioners (LIPs), volunteers, and vendors of NYULH

The primary departments and divisions impacted by this program are:

- Clinical and research laboratories
- Clinical Engineering
- Pharmacy
- Physician group practices
- RED+F and its contractors
- Supply Chain Management

2.0 Policy

NYULH shall eliminate the use of mercury-containing products, equipment, and substances where safe, effective alternatives exist.

Where there is no acceptable substitute, NYULH will inventory and properly manage products, equipment, and substances containing mercury, with the goal of phasing out all remaining mercury-containing materials as new alternatives are identified.

3.0 Definitions

Elimination of mercury means as close to complete elimination as can be achieved with available alternatives.

4.0 Common sources of mercury

- batteries
- cantor or Miller-Abbott tubes
- laboratory products (for examples, see Appendix A)
- laboratory stains and fixatives
- computer monitors
- electron microscopes
- esophageal bougies and dilators
- fluorescent lamps
- pharmaceuticals
- sphygmomanometers (blood pressure devices)
- switches and relays
- thermometers
- thermostats

5.0 Responsibilities

5.1 The **Sustainability Manager** is responsible for:

- developing and implementing the Mercury Elimination Program (the Program)
- training personnel on the requirements of the Program

- coordinating the inventory of mercury-containing products and equipment
- reviewing the Program annually and updating as needed
- assisting and advising personnel in implementing the Program through appropriate mercury elimination strategies
- compiling and reviewing the mercury inventory to inform goal setting, phase-out plans, and additional support needed for implementation of the Program, and reporting as part of yearly Practice Greenhealth Environmental Excellence award application and the Healthier Hospital Initiative reporting requirements

5.2 **Facilities** (Facilities Management, Facilities Operations, Engineering), **Real Estate**, and **RED+F Design and Construction** are responsible for:

- ensuring that their staff and vendors adhere to the requirements of the Program
- disseminating design and purchasing guidelines to their staff and ensuring that procurement is conducted in accordance with the Program
- ensuring that a copy of this policy is included and/or referenced in all contracts that apply
- ensuring that specifications for purchase are in accordance with Clinical Engineering recommendations and requirements

Facilities and **Real Estate** are also responsible for:

- providing the Sustainability Manager with an inventory of facilities-related mercury-containing products and equipment, including product codes, SKUs, and product information.

RED+F Design is also responsible for:

- incorporating the elimination of mercury in its Design Guidelines, and including information on alternatives where available (e.g., see Appendix B).

5.3 **Department chairs, heads, and administrators** are responsible for:

- ensuring their staff operate in accordance with the Program
- disseminating design and purchasing guidelines to their staff, and ensuring that procurement is conducted in accordance with the Program

- ensuring specifications for purchase of clinical instrumentation are in accordance with Clinical Engineering recommendations and requirements
 - ensuring their departments maintain product codes, SKUs, and information for items containing or suspected of containing mercury
 - notifying EH&S immediately in the event of a mercury spill
 - investigating and evaluating available mercury-free alternatives as needed
 - ensuring staff receive training on the Program as needed
- 5.4 **Dental practices** are responsible for using amalgam separators for collecting and recycling of elemental mercury as per the NY Dental Mercury & Amalgam Recycling Law of 2002.
- 5.5 **Supply Chain Management** is responsible for:
- working with departments and consultants in conjunction with the Group Purchasing Organization (GPO) and suppliers to advise, negotiate, and purchase materials that meet the standards of the Program wherever possible
 - responding to requests for purchasing information based on product information (manufacturer ID). Note: it is not Supply Chain Management’s responsibility to keep track of product codes, SKUs or information for items containing or suspected of containing mercury
 - ensuring the department operates in accordance with the Program when pursuing contracts, supplier agreements, and purchasing
- 5.6 **Clinical Engineering** is responsible for making recommendations on clinical devices in accordance with the Program and providing recommendations on alternatives as they enter the market.
- 5.7 **Environmental Health and Safety** and **NYU Langone Hospital - Long Island (NYULH-LI) Housekeeping** are responsible for:
- providing or coordinating mercury spill response and clean-up when departments are not equipped to do so independently
 - arranging for proper disposal of mercury-containing products, equipment and chemicals as needed

6.0 Design and purchasing guidelines

- 6.1 Clinical Engineering has eliminated clinical equipment that contains mercury in facilities it services.
- 6.2 All staff members who develop specifications for purchasing shall adhere to the Program and seek out mercury-free alternatives, particularly for pharmaceutical and laboratory products. Resources for finding new mercury-free alternatives include:
- Appendix B
 - Clinical Engineering
 - Health Care Without Harm and the World Health Organization (<http://www.mercuryfreehealthcare.org/>)
 - NYULH contractors, architects, and consultants
 - NYULH Group Purchasing Organization
 - Practice Greenhealth
 - Supply Chain Management
 - U.S. Green Building Council

7.0 Exemptions

- UV, florescent and LED light bulbs, ballasts and mercury-containing batteries.
- Mercury-containing pharmacy products if no safe, effective alternative exists.
- Mercury-containing chemicals in laboratories when suitable alternative chemicals are not available. Laboratories shall avoid using mercury-containing staining solutions, reagents and fixatives.

8.0 Management of mercury-containing products, equipment, and substances

- 8.1 Where no acceptable substitute is available, or the alternative is not adequate for intended use, personnel shall manage mercury-containing products, equipment, and substances in accordance with the documents referenced at the end of this policy.
- 8.2 **Labeling:** Mercury-containing products, equipment or chemicals shall be physically labeled as mercury-containing. Light bulbs/lamps, ballasts, and

batteries do not need to be labeled. Labels can be obtained from the Sustainability Manager, GBH SC2-122.

- 8.3 **Spill response:** In the event of a mercury spill, staff shall isolate the spill and coordinate prompt clean-up.
- If the spill is from a thermometer, a mercury spill clean-up kit is available, and staff are trained to use the kit, they may use the kit to clean the spill. If not, they should consult with EH&S or NYULH-LI Housekeeping.
 - If the spill is from a blood pressure machine, or there are any safety concerns regarding a spill of any amount, staff should contact EH&S or NYULH-LI Housekeeping immediately.

9.0 Training

- 9.1 The Sustainability Manager shall provide personnel with training on the program.
- 9.2 Departments are responsible for ensuring their staff receive information and training on the Program and on any mercury stored or used within the department.

10.0 Annual reporting

- 10.1 The Sustainability Manager shall compile the following information annually from departments using mercury-containing products, equipment and chemicals. Information on exempt items as specified in Section 7.0 does not need to be collected.
- inventory with exact location specified of stationary/fixed mercury-containing products and equipment, including clinical devices and building materials
 - records of any mercury-containing products and equipment that have been removed permanently in the prior 12 months
 - purchasing records of known mercury-containing materials or equipment for annual procurement estimates and identification of product categories for which alternatives still need to be identified
 - modified or newly implemented plans for elimination and timelines for elimination of existing mercury-containing materials that have acceptable alternatives

10.2 The Sustainability Manager shall report necessary components of the above information to Practice Greenhealth, the Healthier Hospital Initiative, and any additional sustainability initiatives as relevant.

Related Safety Policies

- 107: Disposal of Computers and Electronic Equipment
- 108: Chemical Waste Minimization and Disposal Program
- 108a: Hazardous Waste from Contractors (Construction & Building Maintenance)
- 108c: Universal Waste Management Program
- 121: Hazard Communication Program
- 134: Chemical Hygiene Program.

Appendix A	Mercury-containing Items Used in Labs
Appendix B	Mercury-free Products Approved for Purchase
Issue date	3/2021
Replaces	2/2020
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Summary of Revisions

Revisions date	Section	Changes
March 2021	Throughout	Changes NYU Winthrop to NYU Langone Hospital-Long Island
January 2020	Throughout	Reorganizes information for greater consistency with other Safety Policies. Reorders sections. Eliminated information that is included in other Safety Policies. References those policies. Minimizes redundancy. Edits for clarity
	Purpose	Updates statement to be more concise
	1.0	Incorporates Winthrop and NYU Long Island School of Medicine
	2.0	Changes name from “Introduction” to “Policy”. Clarifies policy.
	(3.0)	Eliminates “Background” (information deemed unnecessary)
	3.0	New. Information previously in “Introduction”
	4.0	New. Information previously in “Background”
	Reviewed by	Adds review by Adds review by NYU Langone Hospital - Long Island NYULH-B Facilities, Clinical Engineering, Pathology, Real Estate, RED+F Design,
February 2017	Application	Changes NYULMC and FHC to NYU Langone
	3.0	Defines NYU Langone
December 2016	7.6	Clarifies spill response
	Review by:	Adds reviewers for Lutheran, and HJD, Lutheran, and LFHC Environment of Care Committees
	Summary of Revisions	Adds Summary of Revisions

Mercury-containing Items used in Labs

This list is not complete. For additional information, request that vendors disclose mercury concentration on a Certificate of Analysis.

- Acetic acid
- Ammonium reagent/Stone analysis kit
- Antibody test kits
- Antigens
- Antiserums
- Buffers
- Calibration kits
- Calibrators
- Chloride
- Diluents
- Enzyme Immunoassay test kits
- Enzyme tracers
- Ethanol
- Extraction enzymes
- Fixatives
- Hematology reagents
- Hormones
- Immunoelectrophoresis reagents
- Immunofixationphoresis reagents
- Immu-sal
- Liquid substrate concentrate
- Negative control kits
- Phenobarbital reagent
- Phenytoin reagent
- Positive control kits
- Potassium hydroxide
- Pregnancy test kits
- Rabbit serum
- Shigella bacteria
- Sodium hypochlorite
- Stains
- Standards
- Sulfuric acid
- Thimerosal
- Tracer kits
- Urine analysis reagents
- Wash solutions

Mercury-free Products Approved for Purchase

Material or Instrument	Accepted Mercury-free Product/Brands/Alternatives
Thermometers	Enviro-Safe digital thermometers
Sphygmomanometers	Welsh Allyn 767 Wall and Mobile Aneroids
Gastrointestinal Equipment	Tungsten-filled bougies TTS balloons Wire-guided polyvinyl dilators (Savary)
Float Controls	Mercury-free alternatives as designated in Engineering Design Guidelines
Thermostats	Electronic thermostats as designated in Engineering Design Guidelines
Pressure Gauges	Electronic alternatives as designated in Engineering Design Guidelines
B5 fixative	Zinc alternatives where appropriate
Zenker's Solution	Zinc alternatives where appropriate