

# Instruments, Products, and Laboratory Chemicals Used in Hospitals That May Contain Mercury

This list should not be assumed to be complete. You may want to check one of the following resources for updates and additions:

[www.masco.org](http://www.masco.org)  
[www.nih.gov/od/ors/ds/nomercury/](http://www.nih.gov/od/ors/ds/nomercury/)  
[www.sustainablehospitals.org](http://www.sustainablehospitals.org)

## Thermometers

- Body temperature thermometers
- Clerget sugar test thermometers
- Heating and cooling system thermometers
- Incubator/water bath thermometers
- Minimum/maximum thermometers
- National Institute of Standards and Technology calibration thermometers
- Tapered bulb (armored) thermometers

## Sphygmomanometers

### Gastrointestinal tubes

- Cantor tubes
- Esophageal dilators (bougie tubes)
- Feeding tubes
- Miller Abbott tubes

## Dental amalgam

### Pharmaceutical supplies

- Contact lens solutions and other ophthalmic products containing thimerosal or phenylmercuric nitrate
- Diuretics with mersalyl and mercury salts
- Early pregnancy test kits with mercury-containing preservative
- Merbromin/water solution
- Nasal spray with thimerosal, phenylmercuric acetate or phenylmercuric nitrate
- Vaccines with thimerosal (primarily in hemophilus, hepatitis, rabies, tetanus, influenza, diphtheria and pertussis vaccines)
- Cleaners and degreasers with mercury-contaminated caustic soda or chlorine

## Batteries (medical use)

- Alarms
- Blood analyzers
- Defibrillators
- Hearing aids
- Meters
- Monitors
- Pacemakers
- Pumps
- Scales
- Telemetry transmitters
- Ultrasound
- Ventilators

## Batteries (non-medical uses)

### Lamps

- Fluorescent
- Germicidal
- High-intensity discharge (high pressure sodium, mercury vapor, metal halide)
- Ultraviolet

### Electrical equipment

- Tilt switches
- Air flow/fan limit control
- Building security systems
- Chest freezer lids
- Fire alarm box switches
- Lap-top computer screen shut-off
- Pressure control (mounted on bourdon tube or diaphragm)
- Silent light switches (single-pole and three-way)
- Temperature control (mounted on bimetal coil or attached to bulb device)
- Washing machine (power shut off)

### Float control

- Septic tanks
- Sump pumps

### Thermostats (non-digital)

### Thermostat probes in electrical equipment

Reed relays (low voltage, high precision analytical equipment)

Plunger or displacement relays (high current/high voltage applications)

Thermostat probes in gas appliances (flame sensors, gas safety valves)

Pressure gauges

- Barometers
- Manometers
- Vacuum gauges

Other devices, such as personal computers, that utilize a printed wireboard

- Blood gas analyzer reference electrode (Radiometer brand)
- Cathode-ray oscilloscope
- DC watt hour meters (Duncan)
- Electron microscope (mercury may be used as a damper)
- Flow meters
- Generators
- Hitachi Chem Analyzer reagent
- Lead analyzer electrode (ESA model 3010B)
- Sequential Multi-Channel Autoanalyzer (SMCA) AU 2000
- Vibration meters

## Laboratory Chemicals That May Contain Mercury (Compiled in 1997)

This list is intended to demonstrate the wide variety of laboratory chemicals that may contain mercury. It was derived from examining the Massachusetts Water Resources Authority Mercury Source Identification Program Database.

Some of the chemicals may contain added mercury and others may contain mercury as a contaminant in a feed-stock. If the mercury is a contaminant, its presence or absence may vary from lot to lot. In the case of kits, it is necessary to consider separately each of the reagents that make up the kit.

This list should not be assumed to be complete. Request that vendors disclose mercury concentration on a Certificate of Analysis for all chemicals ordered.

- 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
- Immusal
- Liquid substrate con
- 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



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This publication is part of *Going Green: A Resource Kit for Pollution Prevention in Health Care*. For additional copies of this or other publications included in the kit, or to find out how to get a complete kit, visit Health Care Without Harm on the Web at [www.noharm.org](http://www.noharm.org).



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