

Mercury Free Campus



Mercury has been used in the measurement of atmospheric pressures and temperatures since the mid 1600's. Laboratories are often dependent upon the ability to measure temperatures and pressures. Unfortunately, this measurement is not without hazard. Broken mercury-filled thermometers and other equipment pose a much greater hazard than merely the possibility of being cut by broken glass. Mercury, in its liquid form is incredibly mobile and will skate across horizontal surfaces, easily becoming lodged in minute cracks and crevices along the way. Mercury gives off a colorless, odorless vapor that is highly toxic. The Threshold Limit Value (TLV) for mercury is 0.05 mg/m³ of air. The nervous system is very sensitive to all forms of mercury, but is especially sensitive to mercury vapors because of its ability to reach the brain more easily. Short-term exposure to high concentrations of mercury may cause nausea, abdominal pain, vomiting, diarrhea, and headache. Long-term exposure to small amounts may cause severe nervous disturbance (hand tremors, insomnia, memory loss, irritability, and depression), loosening of the teeth, excessive salivation, and kidney damage. Harmful effects can also be passed from the mother to a developing fetus.

In addition to the toxic hazards of mercury there are also high costs for disposal and spill cleanup. One lab at the University of California at Berkeley had to pay \$25,000 for clean-up of mercury contamination from a spill. When mercury is spilled inside heat-producing devices, such as incubators and ovens, the devices are extremely difficult to decontaminate, and the hazard is magnified because heat accelerates vaporization of any remaining mercury.

UNCG EHS sponsored a safety project back in 2000 to rid the campus of as much mercury containing equipment as possible. One of the main parts of this project was to replace mercury thermometers with non-mercury thermometers. During this project, EHS replaced 752 thermometers and monometers on campus. The total cost of this project was over \$16,000.

When purchasing thermometers or other similar equipment, please purchase NON-Mercury alternatives of the product. Call us, and we'll be happy to assist you in finding what you need. If you find any mercury devices in your department, please call us and we'll gladly recycle it for you.