
MERCURY REDUCTION PLAN

SA.CHP.SPR.008.r02

Theory

Mercury is toxic in small quantities and is poisonous if inhaled or ingested in the form of methyl mercury, the primary form found in fish.

- A typical fever thermometer contains 0.5 gram of mercury
- A mercury thermostat contains about 3.5 grams of mercury

It only takes about 3 grams of mercury to contaminate a 60-acre lake. Because of the highly toxic nature of mercury, it is extremely important that we minimize/limit its use in the laboratory.

Introduction

In keeping with the Environmental Protection Agency (EPA) and American Hospital Association (AHA) goal of eliminating mercury from hospitals, it is the policy of Beaumont Laboratory to eliminate, or reduce as much as possible, the use of mercury in this department. Once mercury appears in the environment, it is extremely difficult to remove, and poses a serious health risk. Therefore, it is the intent of this policy to remove sources of mercury from the laboratory in order to reduce / eliminate the potential for contamination of the environment.

Sources of Mercury

Sources of mercury include:

- Mercury thermometers
- Mercury (fluorescent microscope) bulbs
- Mercury-based pressure-measuring devices, such as barometers
- Manometers
- Sphygmomanometers
- Chemicals
- Mercury switches
- Batteries (Button, etc.)

Action Plan

Whenever possible, mercury thermometers should be replaced with non-mercury thermometers. This should be done whenever a new thermometer is ordered, but existing mercury thermometers need not be discarded unnecessarily to achieve this. Non-mercury-based pressure measuring devices should be used, if possible. Analytical methods, which require mercury-based reagents should be reviewed and, when possible, substituted with non-mercury requiring methods. When this is not possible, the procedure must be carried out so as to prevent disposal of mercury into the water system or the surrounding environment.

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Reagents must be collected and disposed of properly to prevent any possibility of mercury contamination.

Spills

Clean mercury spills with the appropriate Mercury Spill Kit. Follow the directives given in the Clinical Pathology Chemical Hygiene Plan. Contact **Housekeeping at x 81580** to clean up the mercury spill as soon as possible.

Disposal

Collect broken thermometers in a puncture-resistant, sealable container and dispose of by contacting the hospital **Safety Dept. at x17085**. Old mercury should be collected similarly and disposed of through the Safety Dept. as well. Mercury-based chemicals must also be disposed of through the hospital Safety Dept. The Safety Dept. will contact a commercial disposal company for the safe disposal of these mercury-containing products.

Spill Reporting

Report all mercury spills to the section supervisor, the dept. Safety Officer and the hospital Safety Dept.

References

Sax, N.I. and Lewis, R.J., Hazardous Chemicals Desk Reference, Van Nostrand Reinhold Co, N.Y., Current Edition.

Authorized Reviewers

Safety Officer

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