

Stanford University

Mercury Thermometer Replacement Program

Questions & Answers

Out with the old, In with the new and environmentally friendly!

Soon we will be asking the entire campus to switch to non-mercury thermometers (except where absolutely needed). To prepare you, we have put together a list of some common questions and answers you may have about mercury thermometer replacements. If you have additional questions that are not answered here please contact Heather Perry at (650) 723-1308 or hperry@stanford.edu.

What is the benefit to switching to a non-mercury thermometer??

Mercury vapors from broken thermometers present a hazard for faculty, staff, and students in laboratory areas. Mercury also presents a hazard to the local environment, if broken thermometers in sinks eventually end at the sanitary sewer plant. Mercury toxicity threatens the health of wildlife in San Francisco Bay and accumulates in the food web. Broken mercury thermometers create hazardous waste that is costly to clean up and costly to dispose of.

Do non-mercury thermometers work as well as mercury thermometers??

Although certain applications may continue to require slightly higher accuracy and precision of a fine mercury thermometer, most lab needs can be satisfied with non-mercury thermometers. All of the thermometers listed on our Mercury Thermometer Replacement Spreadsheet meet accuracy standards from the National Institute of Standard and Technology or the National Committee for Clinical Laboratory Standards. If your application cannot use a non-mercury thermometer then we will ask that the thermometer be Teflon coated to prevent spills when broken.

Who should replace their mercury thermometer??

We recommend anyone who can find a replacement on the Mercury Replacement Spreadsheet should replace his or her mercury thermometers. Non-mercury thermometers can be used in most applications including, incubators, water baths, or other applications where mercury thermometers have been traditionally used.

Are there any drawbacks to a non-mercury thermometer??

In general, non-mercury thermometers have a lower usable temperature range. Guaranteed accuracy is +/- one scale division below 105° C (221° F), +/- 1.5 scale divisions above 105° C (221° F), and +/- two scale divisions above 200° C (392° F). These ranges are comparable to most mercury thermometers of the same type and range.

Non-mercury thermometers have to be stored upright or the liquid inside will separate. There are instructions available for recombining a separated thermometer.

How can I replace my thermometers??

Stanford has started a new program where we will provide a 1 for 1 thermometer replacement for you at no cost at this time. This means you can turn in all of your mercury thermometers and we will replace them with similar non-mercury thermometers. See the mercury replacement web page for mercury alternatives. Contact Heather Perry (723-1308) if you would like to change out your mercury thermometers.

OR

You can order a non-mercury thermometer on your own through three vendors:

VWR - Your local campus store can order or call: 415-330-4270 x1175

Fisher Scientific - Your local campus store can order or call: (800) 926-6060

Brooklyn Thermometer Company Inc.: (800) 241-6316

Choose the non-mercury thermometer that is right for you by checking the Thermometer Replacement Spreadsheet.

Most popular thermometer models

-20 to 150° C partial immersion

-10 to 260° C partial immersion

-20 to 150° C total immersion

-10 to 225° C total immersion

After you have your new thermometer in hand please dispose of your mercury thermometers through the EHS Chemical Waste Program. Please package/store your mercury thermometers properly to prevent breaks and spills.

For more information for Stanford University Students, Faculty and Staff, please call:

Environmental Health and Safety (650) 723-1308