

MERCURY IN THE ENVIRONMENT

Some of you may remember playing with mercury when you were a child. Its silvery white shimmer was entrancing, and the ability of its glistening mass to split and come back together again was magical. But scientists are now beginning to realize that there is another side to mercury's wily nature. In fact, it is some of mercury's most elemental qualities that make it a difficult substance to handle. Mercury is a common element that is found naturally in a free state or mixed in ores. It also may be present in rocks or released during volcanic activity. However, most of the mercury that enters the environment comes from human uses.

Because mercury is very dense, expands and contracts evenly with temperature changes, and has high electrical conductivity, it has been used in thousands of industrial, agricultural, medical, and household applications. It is estimated that half of the mercury releases are the result of the purposeful use of mercury. The other half of mercury emissions originate from energy production.

Major uses of mercury include dental amalgams, tilt switches, thermometers, lamps, pigments, batteries, reagents, and barometers. When these products are thrown in the trash or flushed down a drain, the mercury doesn't go away.

Mercury Products: Detergents & Cleaners

The Massachusetts Water Resources Authority (MWRA), in conjunction with a consortium of Medical and Academic Area Institutions in Longwood, Massachusetts, worked with their area hospitals and academic institutions to identify and address the problem of mercury contamination in hospital and medical waste streams. As part of this process, the MWRA group also worked to identify "other sources" of mercury contaminants. These are common products, such as bleach, alcohol, laboratory lids, not otherwise thought to be of significant importance or concern that might contain low levels of mercury.

"Other Sources of Mercury"

(Information from the Massachusetts Water Resources Authority/MASCO)

Product	Mercury Content (ppb)
Ajax Powder	0.17
Comet Cleaner	0.15
Lysol Direct	< 0.011
Soft Scrub	< 0.013
Alconox Soap	0.004
Dove Soap	0.0027
Ivory Dishwashing Liquid	0.061
Joy Dishwashing	< 0.01
Murphy's Oil Soap	< 0.012

Information Source: *Draft Wisconsin Mercury Sourcebook: Wastewater Treatment Plants*