amalgam (ah-mal'gam) an alloy of two or more metals, one of which is mercury. **dental**, an amalgam of silver, tin, and mercury ($Ag_3Sn + Hg$) with low concentrations of copper and sometimes zinc; used for filling cavities in teeth.

mercury (mer'ku-re) a metallic element, liquid at ordinary temperatures; quicksilver. Its symbol is Hg; atomic number, 80; atomic weight, 200.59; specific gravity, 13.546. It is insoluble in ordinary solvents.*

*Dorland's Illustrated Medical Dictionary

Best Management Practices for Scrap Dental Amalgam

In June 2001, the Florida Department of Environmental Protection (DEP) and Department of Health (DOH), in cooperation with the Florida Dental Association (FDA), together completed the development of guidelines for the recycling of scrap amalgam in dental offices. These voluntary guidelines were developed to help dental offices handle and recycle the mercury in amalgams used for dental restorations in compliance with applicable environmental, biomedical, occupational health and transportation regulations. The DEP has determined that, as of August 2001, compliance with these voluntary management practices will also constitute compliance with DEP, DOH, FL DOT and US OSHA regulations that apply to scrap dental amalgam. If you choose not to manage scrap dental amalgam in accordance with these voluntary management practices, it is your responsibility to assure that your facility operates in compliance with all regulations.

For detailed hazardous and biomedical waste disposal requirements, refer to appropriate DEP, DOH and Occupational Safety and Health Administration (OSHA) publications. Refer to Department of Transportation (USDOT) regulations for detailed shipping requirements.

According to DEP studies, sources of mercury in dental offices include scrap amalgam, fluorescent lamps, and mercury thermostats. Monitoring/analytical lamps, water-bath thermometers and sphygmomanometers also may contain mercury. Because most dental offices don't produce more than 220 pounds of scrap amalgam, x-ray fixer solution and lead foil from x-ray film (combined) per month, they are regulated as conditionally exempt small quantity generators (CESQG) by DEP.

It is important to develop scrap amalgam guidelines to ensure that mercury is not released into the environment. So, its reclamation is extremely important for environmental and health-safety reasons. By keeping scrap amalgam separate from other waste, it can be reclaimed and recycled. Recycling is done by qualified reclamation companies through a distillation process. The mercury is then reused in new products, including dental amalgam.

For detailed supporting regulatory documentation and more information about the best management practices for scrap dental amalgam, call DEP at (850) 488-0300 or visit the DEP Web site (www.dep.state.fl.us).

FLORIDA DEPARTMENT OF HEALTH

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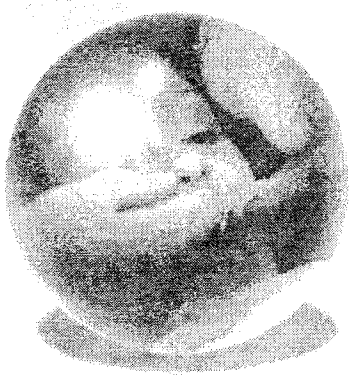
STATE OF FLORIDA

Best Management Practices for Scrap Dental Amalgam

Guidelines for Dental Offices



DEPARTMENT OF ENVIRONMENTAL PROTECTION FLORIDA

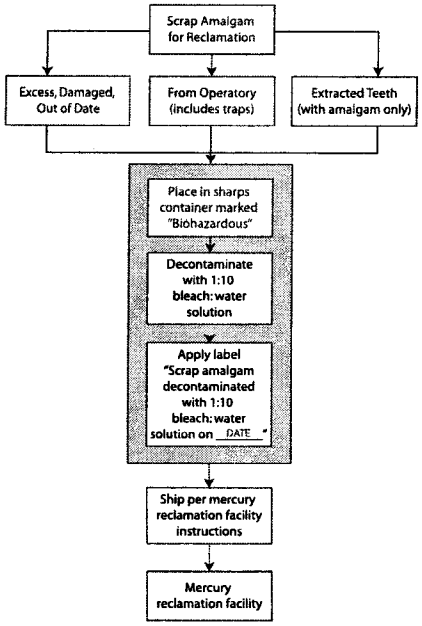
FLORIDA DEPARTMENT OF HEALTH

October 2001

EXHIBIT 5
DATE 2-2-07
HB 261

Best Management Practices for Scrap Dental Amalgam

Scrap Dental Amalgam Management Procedures



Contact information

Florida Department of Environmental Protection
(850) 488-0300
www.dep.state.fl.us/waste/categories/mercury

Florida Department of Health
(850) 245-4277 ▸ www.doh.state.fl.us

Florida Dental Association
(800) 877-9922 / (850) 681-3629
www.floridadental.org

Occupational Safety and Health Administration
Region 4 Office – Atlanta
(404) 562-2300 ▸ www.osha.gov

U. S. Department of Transportation
(800) 467-4922 ▸ www.hazmat.dot.gov

Sources of Scrap Dental Amalgam from Operations

There are three sources of scrap amalgam from dental operations:

- **Excess** amalgam which is mixed, but not used; **damaged** capsules.
- Amalgam **from the operatory**. This can be unused mixed amalgam or amalgam retrieved from operatory **drain traps**. Amalgam from operatory drain traps can be handled as scrap amalgam as long as the traps contain little or no tissue.
- Amalgam contained in **extracted teeth**. Extracted teeth that have no amalgam would be regulated as medical waste and cannot be placed in the same container as extracted teeth with amalgam.

Handling of Scrap Amalgam

1. Marked Container: Place scrap amalgam from all three sources into a "sharps type" container (as defined by OSHA) that is initially marked "Biohazardous." To differentiate from biomedical waste which is placed in a red bag or container, the scrap amalgam container should be a different color (silver). A "sharps type" container may be supplied by the recycler or reclamation facility.
2. Decontaminate: When the container is full or ready for shipment, add enough 1:10 bleach:water solution to cover the scrap amalgam in the container. This ensures that the scrap amalgam has been decontaminated per OSHA. To ensure that the decontamination solution strength does not dissipate over time, do not add the solution until the container is full or ready for shipment.
3. Label: Cover the "Biohazardous" marking on the container with a label reading "Scrap amalgam decontaminated with 1:10 bleach: water solution on *(month/day/year)*." This ensures that the full residence time of the scrap amalgam (including extracted teeth with amalgam) is documented on the container label.

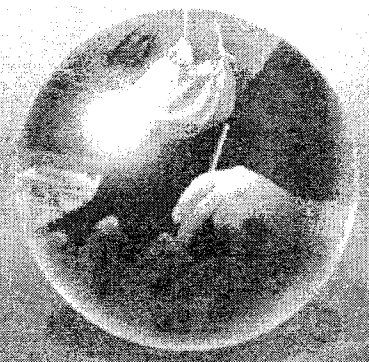
Shipping Scrap Amalgam

Follow these requirements when shipping scrap amalgam to a mercury reclamation facility:

1. Dental offices that ship **less than two pounds** of scrap amalgam (one pound of mercury) per container are not required to meet any DOT regulations.
2. **Written records**, including the name and address of the dental office shipping the scrap amalgam, the amount shipped, the date of the shipment and the name and address of the reclamation facility receiving the shipment, must be retained for three years.
3. If the shipping container contains **two pounds or more** of scrap amalgam (one pound of mercury), it is regulated as a DOT Class 9 hazardous substance. In this case, a mercury reclamation facility should provide the needed documentation to meet all necessary DOT shipping requirements.

Reclamation Facilities

The Florida Department of Environmental Protection maintains a list of in-state and out-of-state mercury reclamation facilities that currently receive scrap amalgam and that have been investigated by the DEP to verify proper management of scrap amalgam, including proper management of the mercury. Call the DEP at (850) 488-0300 or visit the DEP Web site for the list.



The Dos and Don'ts of Scrap Amalgam Management

- Do keep amalgam usage for each restoration to the smallest amount necessary for the procedure.
- Do use precapsulated dental amalgam only.
- Do use disposable amalgam traps if practical.
- Do sterilize reusable amalgam traps if disposable are not appropriate for your practice facility.
- Do install at least two filters on the vacuum pumps.
- Do change the vacuum pump filters at least **once** a month.
- Do keep written records of your generation and disposal of scrap amalgam.
- Do recycle all elemental mercury and amalgam.
- Do store amalgam in a container with an air tight fitting lid.
- Do label scrap amalgam containers with your name, address and phone number and the date.
- Do disassemble and clean the amalgamator on a regular basis.
- Do properly seal all amalgam capsules before amalgamation.
- Do reassemble capsules immediately after dispensing the amalgam.
- Do determine if your dental office is a conditionally exempt small-quantity generator.
- Do select a recycler that meets all federal and state regulations for the reclamation of amalgam waste.
- Do place mercury spill kits in convenient locations for easy access in your dental office.
- Do hold training sessions and develop written procedures to ensure that all dental-office personnel know the proper techniques for handling and using mercury; how to immediately cleanup a mercury spill; and how to manage scrap amalgam.
- Don't rinse amalgam traps over drains or sinks.
- Don't discard amalgam, extracted teeth containing amalgam or amalgam traps into the garbage, red bags or sharps containers.
- Don't handle mercury or mix amalgam in a carpeted area.
- Don't use a regular vacuum cleaner to clean up a mercury spill.