



Fact Sheet, July, 2009

## Dental, Medical and Veterinary Offices: Managing Your Hazardous Waste

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### ***Regulatory Assistance Officer's Note***

The Regulatory Assistance Officers of the Department of Toxic Substances Control (DTSC) prepared this fact sheet to provide general information about the hazardous waste requirements for dental, medical and veterinary facilities. Clicking on highlighted text will take you to sites containing the described references, laws and regulations. If you generate hazardous waste, you should consult with your Certified Unified Program Agency (CUPA) for more detailed compliance requirements. Finally, DTSC strongly encourages all businesses generating hazardous waste to consider waste minimization, source reduction and pollution prevention.

### ***Does DTSC regulate the disposal of sharps and expired pharmaceuticals?***

Sharps are not regulated by DTSC. Sharps are regulated by the Medical Waste Management Act, not the Hazardous Waste Management Act. The California Department of Public Health (CDPH) Environmental Management Branch regulates the collection, storage, transportation and disposal of sharps and medical wastes from businesses. Sharps generated by residents are not classified as either medical waste or hazardous waste. Sharps are not to be disposed of in the solid waste but must be sent to an appropriate disposal location.

Expired pharmaceuticals may be regulated by DTSC if the active ingredient in the pharmaceutical in question is regulated by RCRA or if the compound contains some other ingredient that meets the definition of hazardous waste. (e.g. contains enough alcohol to be flammable). Otherwise most other pharmaceuticals from medical and veterinary offices are regulated as medical waste by CDPH. Pharmaceuticals generated by households are not classified as either medical waste or hazardous waste and may be disposed of in the solid waste stream or sanitary sewer. However, it is preferable for residents to dispose of pharmaceuticals at a pharmaceutical take back program operated by the local environmental agency.

For further information about medical waste management, contact the [CDPH Medical Waste Management Program](#) at (916) 449-5671, or email to [MedWasteInfo@cdph.ca.gov](mailto:MedWasteInfo@cdph.ca.gov).





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## ***What can I do with waste glutaraldehyde and OPA?***

Glutaraldehyde and ortho-phthaldehyde (OPA) are the active ingredients in several brands of sterilizing solutions. [Health and Safety Code section 25123.5\(c\)](#) allows medical facilities to use glycine to neutralize waste glutaraldehyde and OPA disinfectant solutions onsite, without a permit or other authorization prior to disposal to the sanitary sewer.

If you prefer to dispose of your wastes rather than treat and dispose onsite, you will still need to characterize the waste as hazardous or non-hazardous. If characterized as hazardous the waste must be managed according to the Hazardous Waste Management Act. See the DTSC fact sheet "[Accumulating Hazardous Wastes at Generator Sites](#)" (Jan. 02) and Generator Fact Sheet [http://www.dtsc.ca.gov/HazardousWaste/upload/HWM\\_FS\\_Generator\\_Requirements.pdf](http://www.dtsc.ca.gov/HazardousWaste/upload/HWM_FS_Generator_Requirements.pdf) for more information regarding hazardous waste management requirements for generators.

The manufacturer of OPA has informed DTSC that the solution at use-dilution fails the California aquatic bioassay toxicity characteristic and thus is hazardous waste when discarded without treatment.

Generators of waste glutaraldehyde who wish to classify the waste as non hazardous, based on generator knowledge, must be able to show documentation upon which the waste classification was made. This information may be supplied by the vendor or chemical company producing the sterilant. Solutions that do not use glutaraldehyde or OPA may or may not be toxic, depending on the cleaning and sterilizing agents used. Check with the manufacturer for guidance, and your sanitary district inspector who may be familiar with the products as well. Many manufacturers of ultrasonic and autoclave systems claim that the chemicals used in their systems are not toxic.

## ***What can I do with formalin and other laboratory waste chemicals?***

Formalin is commonly used as a tissue preservative and other chemicals are commonly used in a clinical setting. Health and Safety Code section 25200.3.1 allows the treatment of hazardous wastes without a permit generated in laboratories where relatively small quantities of hazardous chemicals are handled or used. The laboratory must meet the following conditions: The laboratory must be associated with education, research, chemical analysis, clinical testing, product development, testing or quality control.

Treatment of laboratory waste may be conducted without a permit, as long as the laboratory waste treatment methods used have been published in either a peer-reviewed scientific journal or the National Research Council's [Prudent Practices in the Laboratory: Handling and Disposal of Chemicals](#). Please see Health and Safety Code section 25200.3.1 for further details.

DTSC has determined that pathology labs conduct activities that qualify as "clinical testing," and may treat waste formalin or formaldehyde generated from medical specimen preparation or preservation. When a preserved specimen is being disposed of, the formalin must be decanted off of the specimen. The specimen must be managed in accordance with medical waste management requirements, and the formalin as hazardous waste.





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If you prefer to dispose of your wastes rather than treat them onsite, you will still need to characterize them as hazardous or non-hazardous, and handle them appropriately. Formalin solutions may vary in their toxicity, depending on the formulation. Some manufacturers have related to DTSC that formulations containing greater than 2.9% formaldehyde may fail the aquatic bioassay or acute toxicity tests. Generators may characterize their waste formalin by having it analyzed or by getting toxicity information from their supplier, if it is available. If toxicity information is not available for their brand of formalin, and the generator does not want to characterize it by laboratory analysis, it may be assumed to be hazardous and sent off for treatment and disposal as a hazardous waste.

### ***How should I handle lead foil from x-ray film and scrap dental amalgam? Are they hazardous wastes?***

The lead foil from dental x-ray film, lead blankets and lead film storage boxes are considered to be scrap metal if they are sent to a metal recycler, but they are hazardous wastes if you dispose of them. Most metal recyclers accept lead scrap. Dental amalgam is nearly 50% mercury, a metal that is a hazardous waste constituent and may be managed under the universal waste management standards or as fully regulated hazardous waste. Because amalgam contains mercury, copper and zinc, the amalgam cannot be considered an exempt silver-only waste.

Extracted teeth that have amalgam fillings will likely be hazardous waste. Many scrap amalgam recyclers accept teeth with amalgam as long as the sender certifies that they are not infectious wastes. Extracted teeth without attached tissue are considered non-infectious wastes, unless the extracted teeth are deemed infectious or biohazardous waste by the attending surgeon or dentist.

Changes to the universal waste regulations now allow unused mercury, scrap amalgam, extracted teeth with amalgam fillings, chair traps, sink traps and filters containing amalgam to be handled under the universal waste management standards rather than full hazardous wastes standards. Empty used amalgam capsules are not considered hazardous waste and may be disposed of with solid waste. Check the DTSC publication [“Managing Universal Waste in California”](#) for details on management standards for amalgam and other universal wastes.

### ***What do I do with photofixer and other "silver-only wastes"?***

For many dental, medical and veterinary establishments, the only hazardous waste you generate is x-ray fixer that is hazardous for the silver content. Health and Safety Code section 25143.13 contains the management standards for silver only wastes. DTSC has prepared a Fact Sheet, [“Onsite Tiered Permitting: Changes in Regulation of Silver Wastes”](#) (Jan. 2000)

### ***In my office, photo fixer is the only waste. Can I treat it onsite without a permit and discharge to the sewer?***

[Health and Safety Code section 25143.13](#) regulates photofixer that is hazardous only for silver. If the silver is sent for recycling, you may treat the photo fixer waste onsite without a hazardous waste permit from DTSC or your local CUPA. Prior to beginning treatment, you must notify your local sanitation department if you discharge the treated photo fixer to the sewer.





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You may not discharge untreated fixer directly to the sewer. You must treat it first to remove the silver by using a silver recovery unit. All recovered silver must be reclaimed. Furthermore, you may also take the waste fixer solution to a permitted recycler or have it hauled off by a service company. You do not need to use a hazardous waste manifest or a transporter registered with DTSC when shipping either the recovered silver or the fixer.

***My office generates more than 100 kilograms (that is, about 220 pounds or 27 gallons) of federally-regulated (RCRA) hazardous waste per month. What are my options?***

You must have an EPA ID Number for shipping those other hazardous wastes. Further those wastes must be transported offsite by a registered hazardous waste transporter under a hazardous waste manifest.

Again, you do not need a permit to treat the fixer before it is discharged but you will need a permit if you treat other hazardous wastes. Contact your local CUPA for permitting requirements for onsite treatment of hazardous wastes.

As in the previous examples above, you may not discharge untreated fixer directly to the sewer. You must first use a silver recovery unit to reduce the silver concentration to the discharge level allowed by your sanitation district. You must notify your local sanitation department if you discharge to the sewer after the treatment. Another option is to have the silver only waste taken to a permitted recycler. To fit this category, any recovered silver must be reclaimed.

***I have been offered a chemical that solidifies my x-ray chemical wastes, and the salesperson claims that it can be disposed of to the municipal trash dumpster after it has been solidified. May this system be used in California without a permit or other authorization?***

No, such a system cannot be used to treat hazardous waste without a permit. Conducting treatment for the purposes of disposal would require a treatment permit and the resulting waste would have to be sampled to determine if it is a hazardous waste or not.

***I understand that electronic devices, batteries, fluorescent lamps and video terminal are now called “universal wastes.” What does that mean for me?***

Universal wastes include most consumer-type batteries (nickel-cadmium or Ni-Cad, lithium, silver button, mercury, alkaline, small sealed lead-acid batteries used for burglar alarms and emergency lights (but not auto batteries), as well as fluorescent lamps, electronics, which include electronic devices (CEDs), cathode ray tubes (CRTs) from TVs, computer monitors, and other devices, and mercury containing medical devices such as thermometers and dental amalgam (as discussed earlier), and spent aerosol cans that still contain hazardous materials. While all of these are classified as hazardous wastes, they may be managed under the universal waste management regulations.





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The universal waste management regulations specify management standards in line with the risk presented by these waste. In general, you may take these wastes to a universal waste collector for management or to a recycler for recycling.

Please see DTSC's website for the management requirements for universal waste.

<http://www.dtsc.ca.gov/HazardousWaste/UniversalWaste/index.cfm>.

As discussed earlier, nearly all mercury-containing wastes and devices may now be handled as "Universal Wastes", including dental amalgam, mercury switches, sphygmomanometers and other mercury-containing gauges. These may not be disposed of in municipal landfills, so cannot be discarded with your regular office trash.

## ***A final word . . .***

Remember that all businesses are required to determine whether the wastes that they generate are hazardous wastes. If you have unknown substances, it is your responsibility to determine whether they are hazardous or not. Wastes that have been determined to be hazardous must be labeled and managed as hazardous wastes, regardless of whether you are eligible to treat them onsite under exemptions, or send them away with a hazardous waste hauler for offsite treatment or disposal. If you generate less than 100 kilograms of hazardous waste per month, you may be eligible to take your waste to a small business/house-hold hazardous waste program, if your local agency has one. Call your county environmental health program (look under "Local Environmental Agencies" in the "[Information Resources](#)" section of the DTSC website) or your DTSC Regulatory Assistance Officer to determine whether you have a small business program in your area. If you cannot find the answer to your question in this fact sheet, please contact the Regulatory Assistance Officer directly. You can call them at 800-728-6942, or contact them via the Department of Toxic Substances Control website -- <http://www.dtsc.ca.gov/> -- click on "Regulatory Assistance Officers" and you will go to a page with links to the Regulatory Assistance Officers' email.

**DTSC Regulatory Assistance Officers** provide informal guidance only regarding management of hazardous waste for the convenience of the public. Such advice is not binding upon DTSC, nor does it have the force of law. If you would like a formal opinion on a matter by DTSC, please contact the responsible program office directly. You should also refer to the statutes and regulations, DTSC Policies and Procedures, and other formal documents. If you believe that you have received incorrect information from a Regulatory Assistance Officer, please contact External Affairs, at 916-322-0476. We also encourage you to complete a Cal/EPA Customer Satisfaction survey (<http://www.calepa.ca.gov/Customer/>) so that we may improve our Regulatory Assistance Program.

