

ULTIMATE MEDICAL ACADEMY Standard Operating Procedure SOP-ED-147 Development Date: 9/20/2017 Effective: 9/20/2017 Revised: X/X/XX	Applies to: <ul style="list-style-type: none"> • Clearwater
DENTAL LABORATORY WASTE MANAGEMENT	

Policy

DAEF program laboratory at Ultimate Medical Academy meets applicable requirements of the US Environmental Protection Agency (EPA), Florida Administrative Code (FAC) Rule 62-730 and Title 49, Code of Federal Regulations (49 CFR), related Occupational Safety and Health Administration (OSHA) regulations. This policy describes steps of hazardous chemical waste, while Biomedical Exposure Control Plan (SOP-GEN-177) outlines management of the regulated medical waste.

Purpose

Waste materials are routinely generated during the provision of oral healthcare. Most of this waste is nonhazardous and can be managed in the same way as household waste. However, some products used in dental practices can pose a risk to humans or the environment if discarded into landfills or poured down drains. These types of waste are regulated and must therefore be managed separately. Two types of regulated waste are generated as a result of dental care: regulated medical waste and hazardous chemical waste. These two types of waste each necessitate their own procedures and have different requirements for labeling, storage, disposal, and recordkeeping. The goal of implementing the correct procedure for management of hazardous chemical waste at UMA laboratory is to eliminate the risk of transmission and define accepted procedures for treating & handling of waste materials. Representation of these behaviors are designed to meet existing legal requirements & established clinical procedures.

Scope

The US Environmental Protection Agency (EPA) regulates hazardous waste. The standards set by the EPA are generally administered by a state or county agency. These relate to limitations on the amount of certain types of waste allowed to be discharged, the use of hazardous waste manifests, and storage, transport, and destruction of the waste. Hazardous material may enter the environment as a byproduct of dental procedures, such as when amalgam restorations are removed and high-speed suction lines carry the material to the wastewater stream. It may also enter the environment after use when disposing leftover or expired products that contain hazardous chemicals. Some common materials whose disposal is monitored include X-ray lead foil and x-ray chemicals (e.g., developer, fixer).

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Definitions

Personal Protective Equipment (PPE) is equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses.

Regulated hazardous waste includes products that are flammable, corrosive, toxic, or reactive, or pose some other risk to health or the environment.

Mercury is a heavy, silvery element that is liquid at standard conditions for temperature.

Amalgam is the silver alloy in dental fillings composed of a mixture of metals, consisting liquid (elemental) mercury and a powdered alloy composed of silver, tin, and copper.

Radiology is the science that uses body imaging to diagnose and therefore treat diseases.

X-Ray Developer is a substance that has superior anti-oxidation properties for longer life of the radiography film.

X-Ray Fixer is a liquid used to easily wash off the radiography film surface, extending the life of radiographs.

X-Ray Lead Foils is a component of the x-ray film used as an image intensifier.

Ultrasonic cleaning is a process that uses ultrasound and an appropriate cleaning solvent to clean items.

Autoclave is a healthcare sterilizer used to completely sterilize instruments and equipment for safety as well as infection control.

Responsibility

Each department is listed in this section. Place “YES” under “Procedures” for each department that has a role. If a department has no role, “N/A” is placed under “Procedures” for that department.

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DEPARTMENT	PROCEDURES
Accreditation	YES
Admissions Department	N/A
Career Services (All Placement and Externship)	N/A
Compliance	YES
Education	YES
Finance	N/A
General—institution-wide policy	YES
Human Resources	N/A
Information Technology	N/A
Learner Services	N/A
Marketing	N/A
Registrar	N/A
Student Finance	N/A

Procedures

Dental Material Containing Mercury

Mercury containing waste present in the UMA DAEF laboratory space is:

1. Amalgam

Some of the materials in amalgam are hazardous to the environment. Regulations prohibit the release of these wastes (mercury & silver,) into regular waste & further restrictions apply to these metals within the sewer systems. Minimizing the release of these metals is important within the laboratory including by means of spills or airborne.

2. Scrap Amalgam:

Demonstration teeth that have been filled with amalgam, & will be repurposed by drilling out the amalgam & using suction within the operatory for the removal of the scrap. Amalgam disposal container (Amalgam Safe) will be kept in operatory 1, top shelf.

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Proper Personal Protective Equipment (PPE) Used in Handling, Cleaning/Maintenance of Amalgam, Radiography Materials, X-Ray Developer and Fixer, and Lead Foil.

PPE's are to be used for all handling of any hazardous materials & maintenance/cleaning procedures of any equipment used with hazardous waste materials within the laboratory. Mandatory PPE's for all are determined by mandatory category (1) or (2):

Category:

(1) gloves & mask.

(2) laboratory coat, mask, gloves, & safety glasses.

PPE (1) is to be used when amalgam capsules are handled, before during & after use, during set-up and after use including when amalgamator machine is triturating.

PPE (2) is to be used while the amalgam capsules are being triturated and open for use.

Amalgam Cleaning/Storing Procedures

Amalgamator Machines are used to triturate the amalgam capsules. are located in the back room.

Cleaning and de-contamination must be provided for all of the following, *PPE's used; (2)*

- Suction lines- They are cleaned weekly by using Or-Evac Evacuation System Cleaner & Deodorizer.
- Trap within the lines of the operatory- Lines will be cleaned & maintained weekly with cleaner solution Or-Evac. The disposable trap (Dispos-a-trap), after the lines have been flushed the disposable trap is then removed. Any scrap amalgam that has made its way into the trap is removed and placed into the amalgam safe container and then the trap is disposed of in a red biohazard bag and placed into biohazard waste. The lid and inside of the trap is cleaned with disinfectant and a new disposable trap is placed.

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Or-Evac cleaner is used in accordance with the manufacturer’s instructions. A minimum of 12 ounces of Or-Evac solution per line is to be flushed with approximately 1 liter of water. There are 2 lines per operatory (high & low speed).

- Operatory Surface - Instructor or Laboratory Assistant will do weekly cleaning of each operatory with germicidal wipes *PPE’s used; (1)*.

Contaminated Instruments

Instruments exposed to mercury contamination in the UMA DAEF laboratory are: amalgam well, amalgam carrier, carvers & burnishers. All Amalgam instruments (set-ups and extra instruments) are all stored in a sealed sterilization bag and kept in the operatory storage. Instruments that are used for the purpose of placing amalgam into a model will be cleaned with the recommended ultrasonic procedure prior to autoclaving.

Ultrasonic Cleaning Machine

Preferred procedure for ultrasonic cleaning is to place instruments directly into the Ultrasonic machine, using the appropriate inserts. Instruments should be kept separate in a presoak of the approved ultrasonic cleaner and ran through the ultrasonic as soon as instruments are no longer being used for that day. Maxizyme Cleaning Tablets for ultrasonic cleaning are the preferred method for UMA the ultrasonic cleaning machine. The tablets and water are to be dispensed & changed with water every morning, daily. *PPE’s used (1.)*

Autoclave

Based on the nature of the DAEF instruments being sterilized, an autoclave cycle at UMA laboratory follows industry recommended time of 35 minutes.

Instruments that are used exclusively with Amalgam will be separately pouched, & kept from other items.

Autoclave Maintenance:

Water will be drained from the machine weekly. Distilled water only, will be replaced and filled to meet the requirements of the operation of the machine.

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The autoclave needs to be cleaned on a quarterly cycle with Chamber bite. *PPE's used; (1.)*

Scrap Amalgam Removal

PPE's used (1.) Adela Health Amalgam Safe brand of a sponge type mer-container is used at UMA to store scrap amalgam. Date must be marked clearly on the container before first use. Upon packing for removal, the canister will be properly marked with the canister closed/shipping date & the container logged out in the central tracking system.

Container is to be sent quarterly to the below provided address in the shipping box which is provided.

Address: *1905 West Blue Heron Blvd; Riviera Beach, FL 33404-9998; Phone:800-333-9990*

Email:info@starrefining.com

Radiography Materials

- a) X-Ray Developer and Fixer *is used in the daylight loader x-ray processing machine to develop x-ray films.*

The solution UMA uses for care and maintenance of radiograph is Peri-Pro Developer & Fixer.

PPE's used; (2.) X-ray developer and fixer is removed quarterly form the DAEF laboratory. Disposal method is used per manufactures instructions by using Chem-Gone jug. When deactivated after 24 hours it may be disposed of in regular trash.

- b) Lead Foil

Federal Regulations prohibit the disposal of lead foil in the trash. It is a hazardous waste unless it is recycling. Federal regulations allow for lead foil to be recycled at licensed facilities. Foil Lead X-Ray Waste produced at DAEF laboratory is stored in the Solmetex Waste Lead Container (bucket). PPE's are to be used with the following:

PPE's used; (1.) Waste is located in the cabinet under operatory 4. Bucket is dated for initial opening & is being disposed of semiannually, following the manufactures instructions: Foils are placed into the DOT/EPA approved storage/ bucket, an approved shipping container. A supplied with a return label and proper documentation.

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Authorized manufacturer for disposal is: *Solmetex; 50 Bearfoot Road; Northborough, MA; 01532; Phone: 1-800-216-5505; E-mail: <http://www.solmetex.com/get-started/>*

Biomedical Waste

Contaminated medical waste is generated as a product of healthcare services when disposable items such as gauze are contaminated with blood or other body fluids and when used sharp items such as needles and blades are discarded. The US Occupational Safety and Health Administration (OSHA) defines regulated medical waste in the Blood-borne Pathogens Standard. Those standards are followed by related UMA policy of the Biomedical Exposure Control Plan (SOP-GEN-177).

Training and Oversight of Dental Waste Management Program

DAEF Program Director has the responsibility for instructors and laboratory assistants to be trained and monitors any updates of the dental waste removal process. This includes the oversight of the logbook and publishing of maintenance schedule that is to be recorded daily, weekly, monthly, quarterly, & semiannually.

If there is a breach in the process, it is the instructor’s/laboratory assistant’s responsibility to report this to the Program Director & Laboratory Compliance Specialist.

In the event of a breach in the process, the Program Director & Laboratory Compliance Specialist will ensure the appropriate steps are taken to correct the situation.

End of Procedure

Procedures are maintained by the Campus Directors (ground) and Business Unit Owners (online) and reviewed with department managers to ensure proper implementation. Departmental managers are responsible for implementing and monitoring the procedures that pertain to their department and are responsible for training their staff.