

Safety Manual



Escondido Police Department Forensic Services Unit

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1. GENERAL COMMENTS

These procedures are used for lab operations involving any chemical or alternative procedures for particularly hazardous chemicals. Materials and equipment in the Forensic Services Laboratory are to be used only for the purposes for which it was designed.

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2. CHEMICALS

2.1. ORDERING AND RECEIPT OF CHEMICALS

- a) Before a substance is received, information on its proper handling, storage and disposal is provided by the FSU Personnel to those who will use it.
- b) When received, the container must have an adequate identifying label or the FSU personnel must reject the shipment.

2.2. ROUTINE HANDLING OF CHEMICALS

- a) Avoid unnecessary exposure to chemicals by any route.
- b) Do not smell or taste chemicals.
- c) Apparatus that might discharge toxic amounts of chemicals (vacuum pumps, distillation columns, etc.) must be vented into local exhaust devices. Check with the FSU personnel if unsure of the adequacy of available ventilation for any chemical.
- d) Inspect and test glove boxes (if any) before each use.
- e) Do not release toxic substances in rooms that use recirculated atmospheres.
- f) Mouth suction for pipetting or starting a siphon is prohibited.
- g) Each employee, when removing a chemical from storage, checks the storage location for remaining inventories, general condition and container integrity.
- h) Obtain information and advice about the hazards of chemicals unfamiliar to you.
- i) Plan for appropriate protective measures and positioning of equipment before beginning each new operation.
- j) All lab employees should stay alert to unsafe conditions and seek correction if any are noted.

2.3. CHEMICAL INVENTORY

- a) FSU personnel will maintain a log listing the chemical containers on site, their contents, dates of receipt and shelf life expiration (if any), and the amounts received. [Chemical Logs Folder](#)

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2.4. CHEMICAL STORAGE

- a) The FSU does not use chemicals in quantities large enough to require a dedicated storeroom.
- b) Flammables are stored in approved cabinets.
- c) Acids and bases are kept in small amounts in ventilated cabinets under lab hoods or in the Wet Print Room (Room #: 241C).
- d) Storage is not allowed in aisles or walkways and not allowed to block exits or access to emergency or utilities equipment.

2.5. CHEMICAL LABELING

- a) The minimum labeling information is: the identity of the contents and an appropriate hazard warning(s). The label must be legible, prominently displayed and in English.
- b) The manufacturer or distributor of a hazardous chemical is required by the OSHA Hazard Communication Standard to label every container they ship with the identity of its contents, appropriate hazard warning(s) and their contact information. Do not remove or deface this label. In the usual case, our labeling requirement will be met by retaining this label in place.
- c) During their regular and frequent workplace inspections, the FSU personnel or other lab employees look for unlabeled or incorrectly labeled containers of known or suspected hazardous chemicals. Where it is obvious that a container was received with a label that has since come loose or become illegible, the container is immediately relabeled either with a duplicate label or an equivalent.
- d) Portable containers into which hazardous chemicals are transferred from labeled containers and which are intended for the immediate use of the employee who performs the transfer are not required to be labeled.

2.6. CHEMICAL SECONDARY CONTAINERS

- a) A secondary container not intended for the immediate use of the employee who transfers the chemical from its original container must be labeled with a duplicate of the original container's label or equivalent.
- b) Conflicting information on the secondary container must be removed or obliterated before the hazardous chemical is transferred.

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2.7. DISPOSAL OF CHEMICALS

- a) The FSU personnel ensure the proper disposal of unneeded, deteriorated or out-of-date chemicals in accordance with the EPA Hazardous Waste regulations. The amounts of hazardous waste being accumulated on site are tracked as part of the chemical inventory data base.

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3. USE OF LAB HOODS

- a) Operations that might release toxic amounts of vapor or dust or that use a highly volatile substance are performed in a hood.
- b) Sashes are kept at their indicated closure height at all times except when making adjustments inside the hood.
- c) All apparatus is kept at least 6 inches back from the plane of the hood face.
- d) Only the minimum needed materials are stored inside and must be kept from blocking air flow through the slots in the hood baffle.
- e) At all times when toxics are present inside, even when the work surface is not being used, the exhaust fan should stay on or the hood sash opening shall be covered or the container shall be capped. The exhaust shall stay on if there is any doubt concerning adequacy of lab general ventilation.

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4. HANDLING OF GLASSWARE

- a) Handle and store lab glassware with care.
- b) Do not use damaged glassware.

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5. HOUSEKEEPING

- a) Routine cleaning of floors and work surfaces is done on a regular basis.
- b) Each employee continually observes the work area and performs cleaning as necessary (e.g., end of the work day or upon completion of processing or demonstration).
- c) Slip hazards are removed immediately using the most appropriate cleaning method. Then marked with the appropriate signage.
- d) Whenever feasible, clean as you go.

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6. PERSONAL CONDUCT AND GROOMING

- a) Food, beverages, tobacco, gum chewing and cosmetics are prohibited in lab work areas when chemicals are present. Mixed storage of any of these items with materials used in lab operations is not allowed.
- b) Smoking in the lab is prohibited at all times.
- c) Wash hands before using or consuming the above items or when leaving the lab work area on breaks, etc.
- d) Do not engage in horseplay while in the lab.
- e) Confine long hair and loose apparel.
- f) Wear proper shoes at all times; open or easily permeated footwear is not worn while working with hazardous material.
- g) Wear suitable gloves for all work where contact is possible.

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7. UNLABELED CONTAINERS

- a) An unlabeled container of unknown content or a container suspected to be mislabeled is immediately removed from service and not used until its contents are positively identified.
- b) If identified, it must be labeled as described in “Chemical container labeling” above and may then be returned to service.
- c) If the contents are not positively identified, it must be handled as an acutely hazardous waste.

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8. INSPECTIONS AND MAINTAINANCE

- a) Biannually, the FSU personnel jointly conduct an inspection of all chemical storage for general condition, container integrity and accuracy of the chemical inventory database.
- b) Biannually, the FSU personnel jointly conduct a formal housekeeping and chemical hygiene inspection.
- c) Yearly, city's contract will inspect, measure the air flow for each lab hood and verify that the air flow is within the required limits.
- d) Each month, one of the designee performs the following tests and inspections:
 - i. The drench shower and all emergency eye washes are tested. Equipment found not in good working order is either corrected immediately or red tagged for correction as soon as possible but not to exceed two weeks.
 - ii. All fire extinguishers are inspected and units in need are sent for recharge.
 - iii. First aid and spill response kits are checked and replenished as necessary.
- e) Biannually, the designee inspects the hazardous waste storage for general condition, container integrity and accuracy of the chemical inventory database.

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9. PERSONAL PROTECTIVE EQUIPMENT

The FSU will maintain a Respiratory Protection Plan in accordance with subpart Z of title 29 of the Code of Federal Regulations part 1910.134 Respiratory Protection.

Employees will be provided with appropriate Personal Protective Equipment to prevent potentially infectious materials from reaching their person or their clothing. This equipment will be accessible and maintained to provide the necessary effectiveness in accordance with the following guidelines:

9.1. PERSONAL PROTECTIVE EQUIPMENT

When there is a potential for occupational exposure, appropriate personal protective equipment shall be used by employees.

Personal protective equipment is considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use, and for the duration of time which the protective equipment will be used.

Personal protective equipment must be removed prior to exiting exposure areas.

9.2. ACCESSIBILITY

Personal protective equipment shall be:

- a) Provided, repaired, replaced, cleaned, laundered and disposed of at no cost to the employee.
- b) Placed in areas accessible to any employee required to use them.
- c) This equipment is normally carried in the crime scene van or is stored with the crime scene supplies.
 - 1) dust masks
 - 2) shoe covers
 - 3) coveralls
 - 4) disposable gloves
 - 5) hair covers
 - 6) air-purifying respirators (These are kept in FSU and taken as needed).

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9.3. CONTAMINATION

Contaminated personal protective equipment shall be:

- a) Removed immediately if the garment is penetrated by blood or other potentially infectious materials
- b) Removed prior to leaving the work area
- c) Placed in an appropriately designated container for holding contaminated garments to be laundered or, if not to be reused, disposed of in biohazardous waste receptacles.

9.4. GLOVES

- a) Gloves shall be worn when it can be reasonably anticipated that the employee may have hand contact with blood or other potentially infectious materials, or when handling or touching contaminated items or surfaces.
- b) Disposable (single use) gloves, such as surgical or examination gloves, shall be replaced as soon as practical when contaminated, or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised.
- c) Disposable (single use) gloves shall not be washed or decontaminated for reuse.
- d) Utility gloves may be decontaminated for reuse if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibits other signs of deterioration, or when their ability to function as a barrier is compromised.

9.5. FACE PROTECTION

- a) Face protection shall include, but not limited to, Masks, Eye Protection, Face Shields and Fume Hoods
- b) Masks in combination with eye protection devices (such as goggles or glasses with solid side shields, or chin-length face shields) shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated, and eye, nose, or mouth contamination can be reasonably anticipated. A fume hood with the sash closed (at an adequate height to provide face protection) may be substituted for the above masks and eye protection devices.

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9.6. LAB COATS, APRONS AND OTHER PROTECTIVE BODY CLOTHING

- a) Appropriate protective clothing such as, but not limited to, lab coats, aprons, coveralls (used exclusively in and removed prior to exiting exposure areas), or other similar garments shall be worn in occupational exposure situations. The type and characteristics depend upon the task and degree of exposure anticipated. Head covers and shoe covers shall be worn in instances when gross contamination can reasonably be anticipated (e.g., autopsies).
- b) A clean lab coat plus safety glasses and/or face shields are worn by all persons, including visitors, where chemicals are present or being handled.
- c) Appropriate chemical protective gloves are worn when toxic materials may be contacted. Gloves are inspected before each use, washed before being removed and replaced as often as necessary to maintain protection.

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10. IN CASE OF EXPOSURE

- a. In case of contact with a hazardous chemical, the following steps are taken and the employee involved files an incident report at the earliest opportunity.
 - i. **EYE CONTACT:** Promptly flush eyes with water or prepared saline solution for a prolonged period (e.g., 15 minutes) then seek medical attention.
 - ii. **INGESTION:** Seek immediate medical advice from poison control (800) 222-1222. Identify the chemical and use all available means (SDS, etc.) to obtain toxicological information as quickly as possible.
 - iii. **SKIN CONTACT:** Promptly flush affected area with water and remove any contaminated clothing. Identify the chemical and use all available means (SDS, etc.) to obtain toxicological information as quickly as possible. If symptoms persist or delayed symptoms appear, seek medical attention.
- b. Remove a lab coat immediately if it becomes contaminated by a chemical and obtain a clean one. It is not necessary to file an incident report for a contaminated lab coat.
- c. An emergency eye wash and drenching shower station is available in the far corner of the Processing Area in case of exposure.
- d. Five sinks, in each of the following areas, are equipped with an emergency eye wash hose: 241D - Powder Room; 241C – Wet Print Room; 241B – Drying Room; (2) in Processing Area.

Forms to complete should an exposure incident take place:

[Hazardous Materials Exposure Form](#)

[Post Exposure Evaluation Form](#)

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11. CITY SAFETY PROCEDURES

The following are locations for the health and safety procedures implemented by the City of Escondido or the Escondido Police Department:

[Injury & Illness Prevention Program \(IIPP\)](#)

[Bloodborne Pathogens Program](#)

[Hazard Communication Program](#)

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12. EMERGENCY ACTION PLAN

Refer to the [Emergency Action Plan](#)

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