Training Guidelines for the Fire Debris Analyst

Lesson Plan (Module) 8

Date: November 2006
Instructor: Qualified Instructor

Subject: Evidence Collection, Documentation and Packaging, Preservation and Chain of Custody

Total Time: 8 hours

Learning Objectives

- Demonstrate an understanding of evidence collection.
- Demonstrate knowledge of correct documentation and packaging of evidence.
- Demonstrate correct evidence preservation techniques.
- Demonstrate correct procedures to establish valid chain of custody.

Suggested Reading

Introduction

The student will learn the importance of proper evidence collection. Correct procedures will be taught concerning how to seal physical evidence as well as how to properly document and preserve any recovered evidence. Additionally, the student will learn the importance of a proper chain of custody.

Outline

1. Documentation of Evidence
   a. Scene
      i. Date/time of evidence collection
      ii. Scene conditions
      iii. Photography
      iv. Sketches
      v. Notes
   b. Laboratory
      i. Date/time of examination
      ii. Description of Evidence Packaging
      iii. Preliminary Description of Evidence
          1. odor
          2. general evaluation of contents
      iv. Post-Analysis Description of Evidence

2. Collection of Evidence
   a. Tools
   b. Gloves
   c. Cross sections
   d. Absorbents
   e. Adsorbents
   f. Quantities

3. Packaging of Evidence
a. Containers
   i. Metal cans (unlined and lined)
   ii. Vapor-tight bags (nylon, Fire DebrisPAK, others)
   iii. Glass jars
   iv. Vials
   v. Unacceptable containers
b. Labeling Information
   i. Description of material
   ii. Location information
   iii. Agency information
   iv. Date and time
c. Sealing
   i. ASCLD/LAB requirements for a seal
   ii. Tape, heat sealers
   iii. Unacceptable seals

4. Preservation of Evidence
a. Refrigeration
b. Freezing
   i. Microbial degradation
c. Protection
   i. Sunlight
   ii. Heat
   iii. Breakage (glass containers)
d. Time
   i. Shelf life
   ii. Visual inspection

5. Chain of Custody
a. Intact
b. Legible
c. Complete
d. Documented transfers

Teaching Aids

   Visual aids
   Sample containers
   Chain of Custody forms
   Handouts
   PowerPoint presentation

Summary
Upon completion of this training, the student will have learned the basics of proper evidence documentation, collection and preservation of fire debris evidence. The student will be able to correctly select the appropriate materials and containers used to gather this type of evidence. Additionally, the student will be able to properly label and seal recovered fire debris evidence and complete accurate chain of custody forms.

**Test Questions**

1. Microbial degradation is reduced by:
   a. Room temperature storage
   b. Heating
   c. **Freezing**
   d. Anti-bacterial reagents

2. Which of the following is not an appropriate container for storage of fire debris suspected of containing an ignitable liquid?
   a. Polyethylene bags
   b. Nylon bags
   c. Fire DebrisPAK bags
   d. Glass jars

3. A complete chain of custody should include documentation of:
   a. name of individuals transferring the evidence
   b. date of transfer
   c. location
   d. **all of the above**

4. How full should jars or cans be filled for laboratory analysis?
   a. 90-100%
   b. **40-70%**
   c. 1-10%
   d. Any of the above

5. Which of the following should not be used as an absorbent for suspected ignitable liquids?
   a. self-rising flour
   b. unscented cat litter
   c. tampons
   d. first aid gauze
   e. diatomaceous earth