FEDERAL LAW ENFORCEMENT TRAINING CENTER

STUDENT GUIDE

INTRODUCTION TO CRIMINALISTICS SG-203 (4-72)

DEPARTMENT OF THE TREASURY

CAVEAT

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COURSE	CRIMINALISTICS
STUDENT REFERENCES:	"Evidence and its Presentation in Court" "Suggestions for handling of Physical Evidence"

INTRODUCTION

At the conclusion of this course you will be able to:

(1) Participate as a member of a team which collects, marks and preserves items of evidence found at a crime scene in accordance with the procedures set forth in this student guide and in "Suggestions for Handling of Physical Evidence".

(2) Participate as a member of a team which makes and properly identifies a heelprint impression by use of a plaster cast.

(3) Identify various types of flourescent material and the investigative use for each material.

(4) Operate a two-way radio with basic proficiency sending and receiving at least one message accurately.

(5) Make a rough sketch of a crime scene containing at least five items of evidence and five pieces of furniture according to the procedures set forth in this student guide.

NOTE: Item one will be tested in group practical exercise 99.8, Execution of a Search Warrant.

Items two, three and four will be taught and tested in group practical exercise 99.2, Criminalistics.

Item five will be a graded homework assignment.

COURSE 32:	CRIMINALISTICS
PART 1:	ANALYSIS OF PHYSICAL EVIDENCE
STUDENT ASSIGNMENT:	Pre-Class Reading Assignment (See Page 1)

INTRODUCTION

At the completion of Part 1 of this course you will be able to:

(1) Define CRIMINALISTICS.
(2) State four types of work performed by a CRIME LABORATORY.
(3) State three ways that the CRIME LABORATORY can assist the investigator.
(4) Define ASSOCIATIVE EVIDENCE, IDENTIFICATION AND IDENTITY and the difference between IDENTIFICATION AND IDENTITY.
(5) Explain NEUTRON ACTIVATION ANALYSIS and state four things that can be analyzed by the Neutron Activation Process.

DISCUSSION:

1. Definitions:

1.1 CRIMINALISTICS

That profession and scientific discipline directed to the recognition, identification, individualization and evaluation of physical evidence by application of the natural sciences in law/science matters.

1.2 GENERALIST v. SPECIALIST

(1) GENERALIST: (in terms of criminalistics) one who has not specialized in a particular field such as balistics, fingerprints, etc., but rather through experience and training is capable of recognizing and causing the proper handling of physical evidence. (A GENERALIST can also be a specialist or expert in one or more fields of criminalistics but when described as a GENERALIST his functions are not limited to his specialty(s).)

(2) SPECIALIST: An Expert in a specific field such as fingerprints, ballistics, questioned documents, pathology, toxicology, etc.

(3) Advantages of having a GENERALIST or a SPECIALIST at a crime scene.

(a) GENERALIST:

(1) Knowledge of more types of evidence

(2) Broader knowledge of collection and preservation methods

(b) SPECIALIST:

(1) Reduces chain of custody

(2) Will better recognize evidentiary potential in his field

2. CRIME LABORATORY

2.1 Reasons why crime labs are not utilized to their fullest potential

(1) Laboratory not given clear insturctions regarding what analysis is desired.

(2) Failure of Investigator to collect and submit

(3) Improper collection methods destroy evidence.

2.2 Methods to use that will more completely utilize laboratory

(1) ASK for analysis

(2) TRAIN investigators to recognize laboratory potential

2.3 Types of work performed by crime laboratory

(1) Alcohol analysis

(2) Drug & Narcotic analysis

(3) Photography

2.4 Ways the crime laboratory can assist the investigator:

(1) Link the crime scene or the victim to the criminal.

(2) Establish elements of the crime.

(3) Corroborate or disprove alibis and/or excuses

- recognize and utilize trace materials
- relates trace materials to perpetrator
- identifies unknown victims & suspects
- aids in reconstruction of scene

3. ASSOCIATIVE EVIDENCE

3.1 A non-legal term that signifies that a connection or association has been established between the crime scene and the criminal.

3.2 Difference between IDENTIFICATION AND IDENTITY

(1) IDENTIFICATION: The process of placing an entity in a predefined class. (Example: a .38 cal. S & W revolver, model M & P)

(2) IDENTITY: An extension of identification that establishes an individualization combining conditions that uniquely characterize an entity (Example: serial no., make, model of a pistol)

3.3 Comparison of Details

(1) CLASS characteristic differences

- features, characteristics, or qualities of an item which are not unique for that item alone.

(2) INDIVIDUAL characteristic differences

- features, characteristics, or qualities of an item which are unique to that item alone.

4. NEUTRON ACTIVATION ANALYSIS - FILM

(1) Definition

Neutron Activation Analysis is a method of measuring through induced radioactivity the qualitative and quantitative details of chemical trace element composition in physical evidence.

(2) Some items that can be analyzed

(a) Petroleum

(b) gun powder residues

(c) minerals

(d) pesticides on crops, in food or dirt

(e) narcotics

(f) soil (to determine source)

(3) Advantages of N.A.A.

(a) Minutest particles can be analyzed

(4) Disadvantages of N.A.A.

(a) Cost

(b) Limited facilities available.

SUMMARY

A crime laboratory cannot be of any value unless evidence is properly collected, preserved, packaged and submitted for analysis. The laboratory must know the acquisition conditions and what analysis is requested.

ASSOCIATIVE EVIDENCE signifies a connection or association between the crime scene and the criminal.

NEUTRON ACTIVATION ANALYSIS is used to determine the elements of which a substance is composed and to accurately measure the amounts or percentages of the various components present in the substance or compound. It is an analysis process by which the NEUTRON is ACTIVATED to a specific extent by each of the chemical trace elements in the substance or compound.

COURSE 32:	CRIMINALISTICS
PART 2:	COLLECTION AND PRESERVATION OF EVIDENCE
STUDENT REFERENCES:	"Evidence & Its Presentation in Court" by Dr. H. C. Harrison, Director of Crime Laboratory, Kingston, Rhode Island "Suggestions for Handling Physical Evidence" Federal Bureau of Investigation
STUDENT ASSIGNMENT:	Prepare a rough sketch of a simulated crime scene in accordance with listed procedures. (Must include at least 5 pieces of furniture & 5 pieces of evidence)

INTRODUCTION

This course is designed to enlarge upon the knowledge gained in Criminalistics, Part 1, "Analysis of Physical Evidence" by establishing what you, the investigator, must do before the crime laboratory can properly assist you. You will learn that you must be able to establish the integrity of the evidence before it will be accepted in court. This responsibility rests solely with the investigator who originally discovered the evidence at the crime scene.

In order to accomplish this the investigator must become a CRIMINALIST and be able to recognize evidence as such, properly collect and identify the evidence, see that it is properly processed and delivered to the court at the time of trial.

INTERIM PERFORMANCE OBJECTIVES:

At the completion of this Part you will be able to:

(1) State at least three sources of potential physical evidence.
(2) Identify 8 clues left at a given crime scene.
(3) Explain identity and chain of custody .
(4) List at least three ways evidence may undergo physical change
(5) List 3 steps to minimize or eliminate these changes.
(6) State at least 5 types of containers & tools for collecting and preserving evidence.
(7) State two purposes of a transmittal letter .

DISCUSSION

1. SOURCES OF POTENTIAL PHYSICAL EVIDENCE

1.1 Traces of persons

1.2 Clothing

1.3 Crime Instruments

1.4 Miscellaneous

2.0 FILM: COLLECTION AND PRESERVATION OF EVIDENCE

2.1 Viewing objectives

(1) Identify the clues at the crime scene

(2) Identify the methods used by the officers in collecting and preserving the evidence.

3.0 LEGAL ASPECTS

3.1 (1) IDENTITY

The discoverer of any physical evidence must be able to identify each itme as being the specific item found at a specific location in the crime scene in order to connect it with the crime.

(2) RECORDING

(a) Photographs

Take overall crime scene shot followed by intermediate shot or shots followed by individual shots of specific items BEFORE anything has been moved.

(b) Sketches

Basic rules to follow in making a rough sketch of a crime scene are:

(1) Decide what is to be sketched
(2) Determine the direction of north & indicate on sketch.
(3) Indicate date-time-location-weather (if pertinent)
(4) Identity of others present
(5) Control all measurements by starting from a fixed object and have another officer verify your measurements using a tape measure, etc.. DON"T PACE OFF DISTANCES. BE EXACT.
(6) Letter walls at corners.
(7) Letter furniture after lettering wall, don't duplicate.
(8) Number evidence (arabic numbers).
(9) Locate all items accurately including all essential items (exclude irrelevant but indicate by letter or number).
(10) Make a separate key to all items.
(11) Use stick figures for bodies.
(12) Indicate position of camera at time photos were taken.
(13) Include exact room measurements in sketch.
(14) Take two measurements of larger objects (bodies, etc.), one from each end, additional if needed.

(15) KEEP SKETCH READABLE. Don't clutter with irrelevant. Make necessary descriptive data in legend and/or notes which will include any specifics such as gun serial number, knife brand & blade length, etc.
(16) Make corrections at crime scene.
(17) Have another officer double check you and your sketch before leaving the scene & make a note of his name.

(3) MARKING

Place a unique, personal mark directly on all evidence, except when marking will alter, destroy or compromise the evidence; date and have corroborating witness do same. Place each item of evidence in a separate protected container and mark in same manner as the evidence itself. However, you may add more descriptive information on container.

3.2 CHAIN OF CUSTODY - accountability of evidence

The prosecution may be required to produce proof that the evidence since discovery has been preserved in substantially the same condition as when the crime was committed. SET UP A CHAIN OF CUSTODY AT THE OUTSET. Store evidence in a secure place. Keep number of persons handling the evidence to a minimum as everyone doing so may have to testify. YOU, the discovering investigator, are responsible for the evidence until it is introduced AND accepted in court.

1. list of individuals who handled or collected the evidence
2. records the movement of evidence
3. protects evidence

4.0 SCIENTIFIC ASPECTS:

4.1 Changes or Modifications

4.2 Steps to Minimize or Eliminate Changes

4.3 Types of Containers

4.4 Types of Tools needed to gather evidence (including evidence marking devices)

4.5 Comparison Samples

Include known samples for laboratory to use in comparison. Example: all contraband must be collected and if appropriate submitted to laboratory for analysis.

5.0 TRANSMITTAL TO LABORATORY

Use separate, complete, protected containers for each item submitted.

5.1 Transmittal Letter

(a) State your purpose in submitting. Tell the lab what you want.

(b) Identify source of each item submitted and conditions under which gathered if such conditions may affect analysis. Get receipt (on chain of custody) from person who accepted at laboratory.

(c) Know your agency policies on handling evidence & submission for analysis.

(d) Laboratory complaints: Transmittal letter does not state what is wanted, conditions under which specimen was acquired (weather-tools-etc.)

6.0 CRIME SCENE SEARCH

6.1 Viewing Objectives

(1) Order of priority of various actions

(2) Identify search procedure used in search

EXAMPLES:
1. point to point
2. spiral
3. strip search
4. zone
5. grid
6. wheel

(a) Search of each area should be repeated by a different officer.

(b) Each officer at scene should be given specific areas of responsibility.

(3) Identify procedure used to maintain identity & chain of custody

(4) List steps used to make a plaster cast.

6.2 Film Presentation

6.3 Critique

SUMMARY

Criminal Investigators operate under the theory that the violator does not leave the crime scene the same as when he arrived. He will leave something behind and/or take something with him. The Criminalist must be able to identify that "something," collect and preserve it, have it "expertly" identified and produce it in court. To do this you must:

(1) Obtain it legally

(2) Describe it accurately in notes

(3) Identify it properly

(4) Protect it properly

(5) Maintain a chain of custody

REMEMBER: Your actions will determine whether the evidence at hand can qualify for the non-legal term "ASSOCIATIVE EVIDENCE" and thereby be admitted into evidence by the court. The two handouts "Evidence & Its Presentation in Court" and "Suggestions for Handling Physical Evidence" will assist you greatly in doing so. The ability to analyze a situation, collect & preserve evidence is a major factor in determining if you are actually a Qualified Criminal Investigator.