

Crime Lab Capabilities & Packaging of Evidence

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Crime Labs in the United States

- Four major federal crime labs
 - FBI, DEA, AFT and US Postal Inspection Service
 - Each offers services to any local agency requesting assistance with investigative matters
- State crime labs
 - Services state and local law enforcement agencies
- Local labs
 - Provide services to county and municipal agencies
- Private labs
 - Provide specialty services for a fee

Crime Lab Services

- Services offered in different communities vary for multiple reasons
 - Variations in state and local laws
 - Capabilities of the lab
 - Budgetary and staffing limitations

The next slides will briefly describe services that may be offered at different labs

Crime Lab Services

Physical Science

- Applies principles and techniques of chemistry, physics and geology to the identification and comparison of crime scene evidence
- Examples: drugs, glass, paint, explosives and soil

Biology

- Staffed with biologists and biochemists
- Identifies and performs DNA profiling on biological evidence and compares hairs, fibers and botanical materials, such as wood and plants

Crime Lab Services

Firearms

- Examines firearms, discharged bullets, cartridge cases, shotgun shells and ammunition of all types
- Examines garments and other objects to detect discharge residues
- May also examine tool mark impressions

Document Examination

- Studies handwriting on typewriting on questioned documents to ascertain authenticity and/or source
- Analyzes paper and ink, indented writings, obliterations, erasures and burned or charred documents

Crime Lab Services

Photography

- Examines and records physical evidence
- Utilizes highly specialized photographic techniques including digital imaging, infrared, ultraviolet and X-ray photography to make invisible information visible

Toxicology

- Examines body fluids and organs to determine presence of absence of drugs and poisons

Crime Lab Services

Latent Fingerprints

- Processes and examines evidence for latent fingerprints or other friction ridge skin impressions
- Attempts to identify the source

Polygraph

- Staffed with individuals trained in criminal investigation and interrogation techniques
- May reside in a lab or as a unit of a police agency

Crime Lab Services

Voiceprint Analysis

- Performs voiceprint analysis to connect a voice to a particular person
- Used in cases involving telephone threats or tape recorded messages

Crime Scene Investigation

- May be incorporated in lab environment or police agency
- Dispatches specially trained personnel (civilian and/or police) to collect and preserve physical evidence

Other Forensic Services

- Forensic Pathology**
 - Determines cause and manner of death
- Forensic Anthropology**
 - Identification of skeletal, decomposed, or unidentified human remains
- Forensic Entomology**
 - Application of insect evidence to criminal investigations
- Forensic Odontology**
 - Examines teeth and marks left by teeth
- Forensic Psychiatry**
 - Examines relationship between human behavior and legal proceedings
- Forensic Engineering**
 - Failure analysis, accident reconstruction and causes of fires or explosions
- Forensic Computer and Digital Analysis**
 - Identifying, collecting, preserving and examining information derived from computers and other digital devices

Packaging of Evidence

- Always select the correct type of container to protect the evidence from destruction and cross-contamination
- Secure evidence inside containers to prevent damage to fingerprints, tool impressions, fracture matches, etc.
- Air dry biological evidence and use caution for bio-hazards
- Maintain a record log for chain of evidence
- Properly seal the container to maintain integrity of evidence

Packaging of Evidence



Packaging





Questions & Discussion