

EVIDENCE SCREENING

Overview

The Evidence Screening Section (ESS) of the Phoenix Police Department is comprised of laboratory services covering forensic serology, latent print development, and trace evidence collection. The ESS team conducts casework in compliance with ANSI-ASQ National Accreditation Board (ANAB) standards and strives to provide excellent, accurate, and timely analysis of physical items of evidence.

Items of evidence are examined for latent prints (impressions left by friction ridge skin), biological material (DNA) and trace evidence. Clean techniques are applied to prevent loss, destruction or contamination of evidence. Photographs and any evidence collected are forwarded to other sections of the laboratory such as Latent Print Comparative, Forensic DNA and Trace for further analysis to determine the source of the evidence.

Evidence Screening Terms

Friction Ridge Skin — “biologically unique and persistent skin that makes up the palmar surfaces of the fingers and palms of the hands and the plantar surfaces of the feet”

Serology — “biological evidence consisting of blood, semen, other bodily fluids and touch DNA (skin cells) left behind on evidence”

Normal white lighting



Chemical processing



Trace evidence collection



FLS (Forensic Light Source)



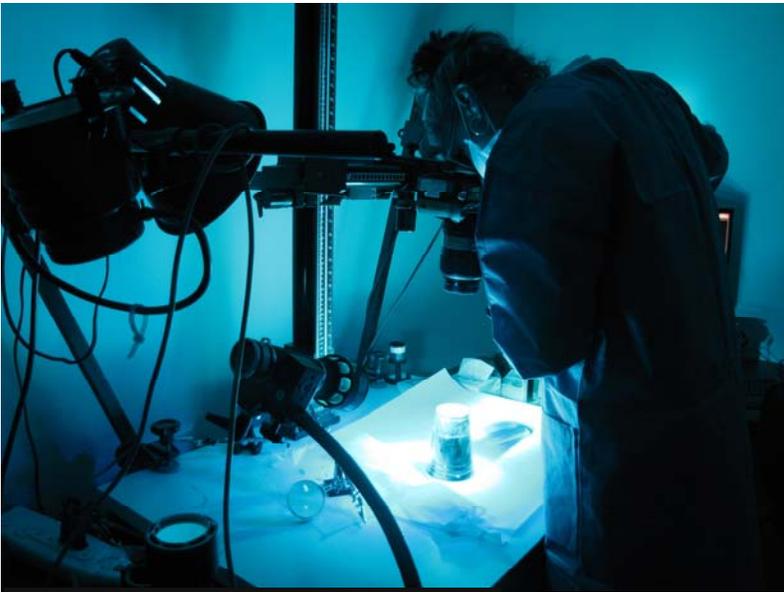
Biological collection



Forensic Serology, Latent Print Development and Trace Evidence Collection

Evidence Examined

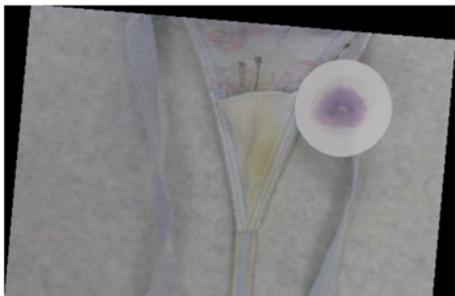
- A large variety of physical evidence such as firearms, cans, bottles, tools, bicycles, purses, various types of tape, and miscellaneous papers that may render viable latent prints, biological material, and trace evidence.
- An assortment of clothing, bedding, footwear, swabs, and other types of materials that may yield biological and trace evidence.



Darkroom photography

Examinations Performed

- White light and forensic light source for screening and preservation of evidence
- Application of powders and chemicals for latent print development
- Digital darkroom photography for preservation of evidence
- Presumptive biological testing for the presence of blood, semen and saliva
- Collection and preservation of biological material



Acid Phosphatase for Semen



Fingerprint powder

Equipment, Tools, & Supplies Used

- Compound microscopes
- Stereozoom microscopes
- Chemical reagents
- Cyanoacrylate (superglue) chambers
- Digital cameras
- Forensic Light Sources
- Photographic filters/lighting techniques
- Heat press
- Swabs
- Swab dryer
- Scalpels
- Other miscellaneous laboratory/scientific equipment



Kastle-Meyer presumptive testing for blood

Latent Print Development

Latent fingerprints are chance impressions left on a surface. They are often deposited by oils, perspiration and other substances on the skin. Evidence is examined and processed with special techniques utilizing various powders, chemical applications, forensic light sources and digital darkroom photography.

Forensic Serology

Items of evidence are examined for blood, semen, and other biological substances to determine the best evidence to forward for DNA analysis. All examinations of items begin with a visual examination. Any items where the presence of blood is suspected are chemically tested using the Kastle-Meyer test. When the presence of semen is suspected, an acid phosphatase test is performed followed by a microscopic exam to search for further identifying characteristics.

Career in Evidence Screening

Education Requirements

Bachelor's degree in a science such as chemistry, biology, forensic science or a closely related field.

Training Program

ESS has an 18 month comprehensive training program consisting of two branches: friction ridge development (fingerprints) and serology (bodily fluids). Training modules include development and preservation of latent prints (on various surfaces), digital photography, biological material, trace preservation and courtroom testimony training. In addition to the in-house training program, forensic scientists further their education by attending seminars, conferences, workshops and other related technical training throughout their career.

Contact Us

Phoenix Crime Lab Internship/
Volunteer Program

Cynthia Gutierrez

602-262-6197

Cynthia.Gutierrez@phoenix.gov

Phoenix Crime Lab Career Opportunities

Laboratory Technician

Crime Scene Specialist Series (I,II,III)

Forensic Scientist Series (I,II,III,IV)

Forensic Scientist Section Supervisor

Assistant Laboratory Director

Human Resources Connection Center

Employment Services

<https://www.phoenix.gov/hr/current-jobs/>



Mock testimony training in presenting findings and conclusions of laboratory analysis performed in court proceedings