

SAN BERNARDINO COUNTY SHERIFF DEPARTMENT
CSI TRAINING UNIT
LATENT FINGERPRINT DEVELOPMENT

- I. Introduction
 - A. What are fingerprints
 - 1. Development
 - 2. Ridges
 - 3. Minutia
 - B. Pattern Recognition
 - 1. Loops
 - 2. Arches
 - 3. Whorls
 - C. Blocking
 - D. Classification
 - E. Palm prints
 - F. AFIS
- II. Locating latent prints
 - A. Where to look
 - B. Visual search
 - C. Crime Scene Scope
 - D. Low angle light
- III. Basic equipment / supplies
 - A. Brushes
 - B. Lifting tapes
 - C. Cards
 - D. Gel lifters
 - E. Liqui-lift
 - F. Mikrosil
- IV. Lab Safety
 - A. Location of emergency supplies
 - B. Chemical spill procedures
 - C. Mixing chemicals
 - D. Mixing equipment / supplies
 - E. MSDS's
 - F. Equipment cleaning & maintenance
- V. Powder Development
 - A. Black
 - B. White, gray, bichromatic
 - C. Magnetic
 - D. Fluorescent
 - E. Superglue
 - 1. How it works
 - 2. Chambers
 - 3. Procedures
 - 4. Types of evidence
 - 5. Advantages

- VI. Photography
 - A. Tripods
 - B. Copy stands
 - C. 1:1 setup
 - D. Lighting
 - E. Manual camera settings
- VII. Porous Evidence
 - A. Ninhydrin
 - B. DFO
 - C. Silver Nitrate
 - D. Physical Developer
- VIII. Dye stains / ALS
 - A. Rhodamine 6G
 - B. Ardrex
 - C. Sudan Black
 - D. UV Light
 - E. ALS
 - F. Photography
- IX. Sticky-side Processing
 - A. Basic procedures
 - B. Powder solutions
 - C. Small Particle Reagent
- X. Latents in blood
 - A. Amido Black
 - B. Ninhydrin
 - C. Hungarian Red
 - D. Acid Yellow
 - E. Photography
- XI. Testimony
 - A. Know your procedures
 - B. Know your chemistry
 - C. Educating the jury

EXERCISES: Students will be given a variety of “evidence” materials to process for each technique presented. Students will first learn each technique under the direct guidance of instructors, then be expected to develop prints using each technique without assistance.

SAFETY: Students will be provided with all necessary safety equipment such as gloves, face masks, lab coats, and disinfectant wipes. Processing facilities are well ventilated, outdoors, or fitted with exhaust hoods, as is appropriate. MSDS’s for all chemicals used will be available for student review. All flammable materials are stored in appropriate cabinetry. Appropriate emergency equipment is available including shower, eye-wash, and first-aid kit. An instructor certified in First-Aid and CPR will be present at all times.