

Tools in Forensic Science

Barricade Tape

yellow tape used to mark off crime scene areas

Personal Protective Equipment

barrier to keep biological or chemical hazards from contacting the skin or eyes

Evidence Markers

numbered or lettered markers placed next to each piece of evidence at the crime scene

Crime Scene Documentation Tools

used to record as many details as possible regarding the crime scene and evidence

Scalpels

knives with a small flat blade at the end of a handle

Forceps, Tweezers and Needle Nose Pliers

tools consisting of two prongs with small pointed ends which are pressed together to pick small pieces of evidence off an object

Vacuum Cleaners with Special Filters

used with filter traps to collect very small evidence

Tape

plastic adhesive strips used to lift evidence from an object

Combs

flat strip of narrow teeth used collect evidence from a persons hair including foreign objects deposited by an assailant

Brushes

bristles of hair or wire set in bundles

Fingerprint Powders

very fine, dry particles used to find latent fingerprints by dusting over objects with brushes

Magnifying Glass

handheld lens set in a frame which produces an enlarged image of an object when looked through

Tools in Forensic Science

Sterile Cloth Swabs

small pieces of absorbent material attached at the end of a stick

UV Light

an invisible form of electromagnetic radiation which carries more energy than regular light; helps identify fluids not visible to the naked eye

Scissors

cutting instrument consisting of two blades and a ring shaped handle which pivots and cuts against the other

Shovel

digging instrument with a broad blade or scoop at the end of a handle

Sifting Screen

wire screen with set in a frame which filters evidence from dirt

Metal Detectors

electronic devices used to detect metal objects by sweeping the device over an object or the ground

Molds

hollow frames which hold a particular shape

Microscopes

optical instruments used for viewing very small objects

Stereomicroscopes

binocular microscope which provides a relatively low-power view of the subject

Compound Microscopes

uses a two lens system and an eyepiece, mounted in a tube which produces very high magnification

Polarized Light Microscopes

produces a centralized light source focused on the item; observes and photographs specimens which are visible primarily due to their optically anisotropic character

Anisotropic

exhibiting properties with different values when measured in different directions

Tools in Forensic Science

Comparison Microscopes

two compound microscopes which display two items side-by-side at the same time

Scanning Electron Microscopes

high resolution microscopes which allows small items to be viewed in great detail by using a beam of electrons reflected on an object to form an image

Macrophotography

extreme close-up photography

Gel Electrophoresis Apparatuses

uses biological samples placed in a gel; uses negative and positive charges to separate DNA molecules according to size

Gas Chromatographers

separates various elements of a compound by observing how they react with a specific solvent

Spectroscopes

measures the intensity of light transmitted or emitted by particular substances allowing forensic scientist to identify the substance

Mass Spectrometers

separate a sample into individual ions in order to determine the samples composition

Toxicology

study of chemical agents affect on living organisms

Vacuum Metal Deposition

technique used to develop latent prints by coating evidence with a thin layer of evaporated metal film under a high vacuum

X-Ray Machine

photographs or creates a digital image of the internal composition of a person or object

Trajectory Analysis Software

uses measurements and observation to reconstruct how a shooting most likely occurred to determine to location of the shooter

Tools in Forensic Science

Computer Software

programs used to store information and create forensic science databases

Meter Stick

measuring stick one meter in length which is marked in inches, centimeters and millimeters

Tape Measure

narrow strip of cloth or steel tape marked in inches or centimeters

Measuring Wheel

quickly records distance by pushing the wheel around an area or large object

Thermometer

used to measure temperature

Timing Device

used to measure time

Analytical Balance Scale

used to measure weight with extreme sensitivity

Moisture Analyzer

measures moisture content in an object

Precision Scale

used for complex measurements for exact weights

Triple Beam Balance Scales

consists of three beams with a sliding weight in the middle which balances the weight horizontally

ABFO Scales

L-shaped measuring device used in photography to measure the length of evidence

Lab Glassware

used to store liquids or powders

Hot Plate

flat heated surface used to heat samples and perform chemical reactions

Tools in Forensic Science

Prepared Slides

flat rectangular pieces of glass which items are placed upon to be viewed under a microscope

Stereoscopes

device by which two photographs of the same object are taken at slightly different angles are viewed together, creating an impression of 3-D depth

Micropipette

fine pointed pipette with a plunger used to measure and transfer small amounts of liquids

Pipette

slender tube attached to a bulb used to transfer or measure out small quantities of liquid

Storage Cabinets

shelves used for organized; safe storage of evidence

Lab Incubators

provide controlled, contaminant-free environment for storage of cell cultures

Evidence Drying Cabinets

ventilated cabinet designed to store, dry or process forensic evidence in a controlled environment