**Preservation of Forensic Evidence**

**Evidence**- Any item or information legally submitted and accepted by court or tribunal for the single purpose of determining the truth of particular issue in the investigation at hand.

**Preservation** of evidence is the process of saving information that may be relevant to a potential or ongoing lawsuit so that it cannot be altered, lost or destroyed. In other words, evidence preservation is the active avoidance of spoliation. It includes appropriate packaging with correct and consistent information on labelling and procedural documentation for all items.

Preservation of evidence is dependent on the type of material whether physical or biological. Preservation of evidence from crime scene to forensic laboratory to courtroom, all evidence must be listed and secured to preserve its integrity.

**Purposes of Preserving Evidence**

* To prevent contamination
* To prevent destruction and alteration
* To prevent loss

**Types of packaging and preservation materials and containers**

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|  | **Physical evidence** | **Package/ preservation** |
|  | Dry trace evidence such as fiber, hair, dried fingernail scrapings | Clean dry envelops, paper bags, filter paper provides a secure package |
|  | Dry documents | Clean dry, sealed in plastic cover |
|  | Photographs  Evidence such as arrow tips, bullet casings, debris, cigarette butts, hats, shoes, clothing | Dry picture may be sealed in plastic cover: however as a result of photographic paper and the various chemical compounds utilized to produce the image, care must be taken to the time factor if the picture is placed in plastic cover as moisture may be produced( e.g heat causes a chemical reaction that may seriously damage the image and paper)  Clean dry vials, canisters, metal containers, plastic pill bottles, plastic bags |
|  | Volatile evidence such as charred fire residue that may contain an accelerant such as gasoline or kerosene, which is a hydrocarbon of petroleum | Clean dry, paint can with a secure, tight lid, tightly sealed jar; attention must be paid to secure the glass jar to prevent breakage |

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|  | **Biological evidence** | **Package/ preservation** |
|  | Tissues for histo-pathological examination | Preserved in 10% formalin |
|  | Urine | Saturated solution/ rectified spirit/ hydrochloric acid |
|  | Human viscera’s (liver, stomach, kidney, etc) | Saturated saline if there is no chance of acid poison  Rectified spirit if poisoned by acid  (The stomach with its contents should be preserved in wide mouth glass bottle, small intestine with its contents in another and liver should be preserved separately. The stomach and intestine are opened before they are preserved. The liver and kidney are cut into small pieces to ensure penetration of the preservative into tissues.) |
|  | Liquid blood | Collect in EDTA, through syringe or gauze/cotton and air dry it |
|  | Clot blood | Transfer clot to glass tube and equal volume of saline, transfer to cotton cloth and dry |
|  | Wet blood on cloth | Air dry the cloth at room temperature and transfer to paper bag, avoid contamination |
|  | Wet blood on object | Air dry at room temperature and transfer to gauze/ paper envelope |
|  | Stain blood on unmovable surface(e.g floor) | Collect by swab DO NOT SCRAP (double swab method) |
|  | Blood in carbon monoxide poisoning | A layer of 1-2cm liquid paraffin should be added immediately over the collected blood to avoid exposure to atmospheric oxygen |
|  | Maggots | Dropped alive into boiling absolute alcohol or 10% hot formalin |

**Sealing/packing of samples**

* Lid of bottle should be tightly sealed and labelled
* Bottle will be placed in viscera box(wooden box) sealed and labeled again
* Key of boxes sealed in envelop, handover to police with proper receiving