

POLICE ORDER No. 174

Detailed instructions for collecting, packing and transporting different types of exhibits to the Forensic Science Laboratories.

1. Instructions finalised by the Central Advisory Committee on Forensic Science are given below:—

There are three main sources from which exhibits for examination can be obtained

- (1) The scene of the crime
- (2) The Victim
- (3) The suspect and his environment,

It very necessary to search the three sources thoroughly, collect all the materials in sufficient quantity and send them to the laboratory. The microscopic fragments, debris and other inconspicuous materials can contribute to the final solution of the crime. The collection of such materials is a specialised task and investigating officer must have a very keen sense of observation.

2. *Precautions to be observed*—(i) Protect the scene of offence immediately after the receipt of information about the offence. Do not allow any unauthorised person to enter the area until the investigating officer has collected all the relevant material. While picking and packing the material for despatch to the laboratory, care should be taken to see that no article is inadvertently contaminated with extraneous matter or likely to interfere in its examination.

(ii) Obtain photographs of the scene from as number of angles so as to later establish the exact position of thing and their condition of lying, there, the body (if any), the weapons, etc. and similar relevant details about which recollection may later fade and become confused.

(iii) After first conducting a preliminary examination before moving the articles and noting down any special points the investigating officer should handle the article with particular care by holding it only by such parts as are unlikely to have been touched by the hands of a person who could have used it previously.

(iv) Look for unusual foreign matter like pieces of hair, fibre, paper clothes, glass, wood, metal, etc. and collect the sweepings from the floor without disturbing other things like blood, saliva, semen stains, etc. (use forceps for picking small items).

(v) It is also advisable to make a rough sketch of position of objects and note the relationship of various pieces of evidence to the surrounding, etc., which often prove of value in the case.

(vi) In investigating cases of murder or suicide a Medical Officer should accompany the police to the scene of crime whenever possible and inspect the body and its surroundings before they are turbed.

3. General directions—Each articles should be separately packed and labelled indicating the serial number of item. Never pack more than one item together. The labels should be numbered consecutively and should bear the signature of the forwarding officer and the number and date of his letter of advice to the Director, Forensic Science Laboratories. All the packets belonging to one case should then be enclosed in one box or outer covering unless disparity in the size of the various articles makes this inconvenient but articles belonging the different cases should never be forwarded under the same cover. Articles sent for examination must never be used as wrappers. Labels should not be pasted over instruments suspected to contain any stains. All parcels should carefully be sealed by the despatching officers and packed in such a manner that they cannot be opened without destroying the seals. The seal should be the same throughout, either a private seal or an official seal which is kept in safe custody. Impression of keys, weigh, etc., must not be used. A letter of advice should be separately forwarded to the Director, Forensic Laboratory. A copy of the forwarding letter should be invariably enclosed in the parcel so that the exhibits can be connected with the relevant case. The case reference should be prominently mentioned on the outer cover of the parcel.

The forwarding letter should contain the following particulars :—

(1) Report number, (2) Case reference, (3) Brief history of the case, (4) Description of article in each packet, (5) Nature of opinion wanted, (6) Forwarding note of the Officer through whom the articles are forwarded, (7) Name of the investigating officer and (8) Facsimile of the seals used on the packet.

4. Directions for specific types of exhibits—

(i) *Weapons and Tools*—Iron metal parts stained with blood should be preserved from getting rusty as far as practicable and should be sent for examination to the laboratory as early as possible. Development of rust under the stains renders them unsuitable for laboratory test. Knives, guns, tools and other weapons should be secured to a board by means of strings. The board should then be placed in a box of suitable size and covered with a neat fitting lid. Large glass articles, stone slabs, metal pieces and other heavy objects can be safeguarded by means of small wooden crates.

(ii) *Hairs and Fibres*—If these are found adhering to some objects with blood, clot, the whole object with the hair or fibre remaining in situ should be sent to the laboratory. In order preserve untouched any foreign matter adhering to them the hairs or fibres should be picked up with forceps. They should be placed in filter or blotting paper which should be carefully folded along the length of the exhibit and enclosed in a suitable container. *A paper with a glazed surface or a cellophane paper can also be used for this purpose.*

Hair from the persons or animals should be obtained by combing. If this does not yield sufficient quantity, a considerable number should be clipped from several points cutting them close to the skin. Pubic hair should be taken from rape victims. This should be clipped close to the skin. This is useful for comparison with the hair found on the person or clothing or handkerchief of the suspect.

(iii) *Dust or soil*—This should be placed in a filter paper and then closed in a suitable container. If the dust is found on any article of furniture, it can be collected directly in a filter paper with the help of a vacuum cleaner. Soils may be collected with a scapol, spatula or a spoon, if the dust is found on an object which can be readily transported such as shoe or clothing, the whole object should be sent to the laboratory, keeping the dust or soil in tact on the material. Metal filings, glass fragments, finger nail scrapings, paint chips, wood chips, plaster and similar samples should be placed in filter paper and enclosed in a suitable container. For all the above purposes, cellophane paper or any other clean preferably with a glazed surface can be used instead of filter paper.

Liquids and greases should be sent in glass container with non-leaking ground-glass stoppers.

(iv) *Blood and Blood stains*—Blood and blood stains constitute a very important aspect of the work of a forensic scientist. The discovery of blood stains depends on the acuity of the eye. The articles should be systematically searched. Blood stains are found on clothing, weapon, vehicle, as well as on the body and clothing of both victim and the suspect. The following procedure should be observed in collecting blood or blood stains articles.

DON'T USE ANY PRESERVATIVE

Fresh moist stains on clothing, sheets, blankets, etc.—Allow the stain to DRY AT ROOM TEMPERATURE. Insert the fabric between clean white paper to protect stain from the rest of the material and send it to the laboratory. If blood is found in large quantities it may be soaked in a filter paper and dried in shade at ROOM TEMPERATURE. A portion of the filter paper should be sent as control. Then allow the rest to DRY AT ROOM TEMPERATURE, insert the dried fabric between clean white paper and send to the laboratory.

Fresh moist stains on solid objects—such as weapon, wood, plaster, automobile, etc.—Blood may be soaked on a filter paper and allowed to DRY IN SHADE AT ROOM TEMPERATURE and sent in an envelope.

Dried stains on clothing, sheets, blankets, etc.—Send the entire fabric to the laboratory, protecting the stain with clean white paper.

Dried stains on solid objects—First remove any crusts, place them in a test tube, stopper and send to the laboratory. The entire object must then be sent to the laboratory. If this is not possible, scrape off as much as possible avoiding scraping the solid object underneath particularly if the object is wood, plants, leather or chumum plaster, and placet the scrappings in a clean test tube, stopper and send to the laboratory. If this is difficult, the stain may be transferred to a moist filter paper, dried in shade at ROOM TEMPERATURE and send to the laboratory in an envelope.

If the blood is found on earth, or earthy material, scrapping should be made deep enough (1) to collect the soaked serum.

If the blood stains is found on dried leaves, embed them in a mass of plasticine, stained side upper-most pack in a suitable container and send to the laboratory.

Blood and Blood stains on the body of a person—Stains from suspected areas should be removed with a piece filter paper soaked in 9 per cent solution of sodium chloride. This should be allowed to lie on the portion till the paper gets stained which should then be removed and dried in shade at ROOM TEMPERATURE. The filter paper is then enclosed in an envelope and sent to the laboratory.

If stains are suspected to be present in the nails, they should be clipped and the clippings packed in a glazed paper and sent to the laboratory. Materials sticking to the nail clippings should not be lost in packing and transit. In clipping nails, care should be taken to avoid cutting the under lying skin of flesh.

A large quantity of stain is required for determining blood group than for determining the origin of blood. A control specimen is essential for determining blood group from stains in cases where the stains is likely to contain blood from different persons this fact of multiplicity of persons should be stated and each spot should be kept separate. These remarks also apply for determining semen group.

Control Samples—If it is not possible to send the entire object to the laboratory, a portion of the unstained area immediately surrounding the stain should always be forwarded for control tests. In case of stains on clothing, an unstained portion of about 2 square inches free from the stain, from the immediate neighbourhood of the stain should be sent. If the stain is on soil, plaster or furniture, etc. a portion (1 gram) of the adjacent unstained area should be scraped to the same depth as the stained area and sent as control. In taking control samples near the stain, avoid the soakage of the stain. In the case of weapons, it is very desirable that the whole object is sent to the laboratory so that the control sample may be prepared from the washings of the surface of an unstained area.

(v) *Semen*—The stain is allowed to DRY AT ROOM TEMPERATURE and the entire object is sent to the laboratory. The garment or fabric may be folded taking care that the stained areas are not folded. Pieces of clean white paper should be inter-laid between folds-

(vi) *Saliva*—If saliva is suspected to be present on any article the entire object should be sent. Control samples of saliva from the victim and the suspected persons should be collected and sent immediately in a small clean phial placed in an ice box. If the persons are dead, swabs from the mouths of both the victim and suspect should be sent.

(vii) *Tissued*—Dry at ROOM TEMPERATURE and send. Don't use any preservative.

(viii) *Arson cases and cases of burning*—In sending cloth and other exhibits in connection with arson cases material suspected to contain inflammable fluid must be put in a bottle with air-tight stoppers. It is very necessary that they should be in air-tight containers as otherwise small amount of inflammable fluid which might be present will evaporate. Even if the inflammable fluid was present at the time of seizure of the article, it may not be found at the time of testing, which has to be necessarily carried out after some days.

(ix) *Tool Marks*—Send the whole tool. If this is impracticable, make several impressions on similar material as evidence, using the entire marking area of tool. This tool mark should be protected by covering with soft paper. It should then be placed in strong wrapping papers the whole thing should be in a strong box and packed to prevent shifting.

(x) *Exhibits for Ballistic Examinations*—A. *Seizure* —The fire-arms seized should be sent with the following particulars if available.

(e) The type and make (b) Serial number (c) Calibre.

The label containing the descriptions should bear the signatures of witness. In the case of fired bullets or cases of revolver and pistol cartridges, the signature of search witnesses should be taken on the accompanying label only. As many cartridge cases or bullets, as possible, should be recovered and sent to the laboratory for future reference or for exhibition in the court by the expert while deposing.

B. *Packing*—Immediately on seizure of a fire-arm, the muzzle end of the barrel should be capped and not plugged. In the case of revolvers, opening on both the front and rear sides of the chamber should be plugged with clean cloth. This should be done at the breech end of the fire-arm. The fire-arms should then be separately wrapped up with paper, tied with thread and kept in a wooden box with packing material such as cotton waste so that it does not move during transit. The investigating officer should in no case try the mechanism of the working of the fire-arms. It should be brought in original condition of the seizure.

In the case of ammunition, the open end of a crime cartridge case should be immediately corked and the base covered with cotton and kept in envelopes.

C. *Tissues surrounding gunshot injuries*—*Instruction for despatch of*—Tissues in cases of death from shooting to be examined for the presence of traces of lead should be sent in lead-free containers. County-made earthen-ware jars have been frequently found to contain lead in their inner surface and should not be used as containers for packing such tissues. A specimen of unaffected tissues from the same body should also be sent in such cases whenever possible for control purpose.

D. In cases of gunshot injuries, the entire cloth of the victim without disturbing the rents, if any made on the cloth by the gunshots should be sent to the laboratory for ascertaining the presence of traces of lead and other ammunition residues.

E. *Labelling*—Each article should be packed, labelled and sealed separately before sending it to the laboratory through a messenger.

5. *Clue materials encountered in certain specific offences*—(i) *Automobile Accidents*—The following clues should be sought.

(a) *Skid marks*—This will give an indication of the point at which the brakes were applied and the speed at which the vehicle was travelling. The length of each skid mark should be measured and recorded.

(b) *Type impression*—This will give information on the make and brand of the type, condition of the tyre, the size of the carrier truck, the direction of approach and departure of the vehicle from the scene.

(c) *Dirt and Debris*—Dirt and debris might have dropped from the vehicles as a result of the jolt. This should be collected and sent to the laboratory for comparison with the direct from the undersurface of the mudguard or outlines of the suspected vehicle.

(d) *Flakes of paint and enamels*—This may be found scattered at the scene of the accident. This should be collected and sent to the laboratory for comparison with similar samples obtained from the suspected vehicle.

(e) *Glass pieces*—From the damaged head lamp side mirror, windows and wind screen found at the scene should be sent. Every piece should be collected so that the article may be reconstructed. These pieces can also be compared with similar pieces obtained from a suspected vehicle.

(f) *Broken equipment*—Such as pieces of metal from a broken bumper bar, door handle, radiator emblem detached from the damaged vehicle should be collected and sent. This will help to connect a suspected vehicle with the accident.

(g) *Fabrics*—Small fragments of cloth or fabrics which have been torn away by the heavy wheels are likely to be found on the scene of the accident. These should be collected and sent for comparison with the similar materials that might be found on the tyres of the suspected car.

(h) *Blood hair and issues*—If found in a car suspected to have been involved in an accident should be sent to the laboratory for comparison with the blood and hair of the victims. This establishes a link between the suspected vehicle and accident.

(i) *Engine oil or any oil*—Found at the scene of the crime should be sent in clean and dry on or glass containers.

(j) *Theft of Telegraph and Telephone wires*—In cases of theft of telegraph and telephone wires and cases involving the examination of tool marks on objects the investigating officer should collect the loose hanging wires and clearly mark the end supposed to have been cut by the culprit to differentiate it from the cut made by the investigating officer in removing at small length of wire. The end of recovered wires should be carefully wrapped in cotton wool and tied with strong thread so that the delicate surface is not damaged during transit. The ends cut from the hanging wires should also be wrapped similarly. The wire ends enclosed in cotton wool wrappings should be packed in a moisture container.

The tools left at the scene of offence recovered from the suspect should be wrapped in cotton wool and care should be taken not to use those instruments in obtaining sample ends.

(k) *Exhibits to be sent to the chemical examiners or Forensic Science Laboratories in case of suspected poisoning*—Exhibits to be sent to the chemical examiners or forensic science laboratories in case of suspected poisoning.

A. In cases of death due to poisoning it is the duty of the Medical Officer to collect and preserve the viscera of the deceased for transmission to the Chemical Examiner. But the mode of collection and preservation particularly is dependant on the history of the case. It is the main duty of the Police Officer to give the full history of the case available to the Medical Officer before he conducts the post-mortem. For instance, in case of poisoning by drinking excess of alcohol, poisoned arrack, etc., the viscera should be preserved in a saturated solution of common salt. If the Medical Officer is not informed that it is a case of death by consuming alcohol he may preserve the viscera in alcohol itself (alcohol being the common preservative) and render the specimens unfit for examination for alcohol. Similarly in a case of barbiturate poisoning (sleeping tablets) the urine and the brain are most important articles required for a satisfactory analysis. As in the case of barbiturate poisoning urine should be preserved in poisoning by other modern sleeping drugs, Dhatura including other vegetable poisons and alcohol poisoning. Unless the Medical Officer is aware of the nature of poisoning he may not preserve and send the brain and urine. In cases of poisoning by carbon monoxide, hydrogen sulphide, alcohol, it is the blood, urine and lungs that are the most important articles for analysis. If these articles are not sent by the Medical Officer nothing conclusive might be obtained by the analysis of other viscera. Hence, it is imperative on the part of every investigating officer to place before the Medical Officer the history of the case available before the post-mortem is done, if the investigation is to be effective, Vague terms like "suspicious death", "death by poisoning", should not be used under the column "History of case."

B. Preservation of Evidence—(I) Evidence to be collected at the scene—A thorough examination of the scene of death for suicide note, source of poison, containers from which the victim may have taken the poison, etc., should be undertaken. Look for cups, glasses, bottles, jars, powders, food material and submit them for chemical analysis. All food material found in and round the premises should be confiscated for analysis in the laboratory.

(II) Evidence to be collected in non-fatal poisoning (Living persons)—1. Food, medicine, drink and the containers from which the poison was administered.

2. *Urine*—24 hours specimen collected in a clean bottle (vegetable poisons, mercury, sleeping tablets, leads).

3. *Blood*—10c.c. Ask doctor to collect (Vegetable poisons, alcohol, sleeping tablets, lead)

4. Vomitous and stomach washing (Indicates poison by mouth but not necessarily that it is absorbed and causing poisonous symptoms).

5. Faces (Arsenic, lead and so on. Indicates poison by mouth but not necessarily that it is absorbed and causing poisonous symptoms).

6. Hair-clippings (Arsenic-chronic)

7. Clippings of finger nails and toe nails (Arsenic-chronic)

8. Food (Bacterial food poisoning other poisons administered through food)

(III) Evidence to be collected in fatal poisoning (dead bodies)—The following viscera are collected at time of post-mortem examination for chemical analysis by the Medical Officer:—

1. The stomach and its contents

2. A loop of small intestine and its contents

3. *Liver*—At least one pound

4. *Kidneys*—At least one

5. All the urine present in the bladder.

The above are collected in a routine post-mortem examination in cases of poisoning. In special cases of poisoning the following are saved for analysis.

1. *Blood*—50 c. c. (Alcohol, mercury, carbon-monoxide)

2. *Lungs* (Respired poisons)

3. *Brain*—At least one half (Alcohol, sleeping tablets, opium, chloroform)

4. *Bone, finger nails, hair* (Arsenic-chronic)

NOTE—In cases of poisoning in which specimens are of medico-legal importance, the investigating officer and the Medical Officer must use care to establish a legal chain of custody in such a way that each person having responsibility of the material can state that it has not been contaminated or changed. They should follow the rules for collecting, packing, labelling and transporting of specimens for chemical analysis, as laid down by rules of the respective State Governments.

(IV) Vomitted matter, if any, and faeces should be packed separately and sent to the laboratory after adding rectified spirit as preservative. If the vomitted or purged matters are mixed with earth in sufficient quantity to render them dry and inoffensive, they may be packed without rectified spirit in any convenient manner.

IN ALL THE ABOVE CASES RECTIFIED SPIRIT SHOULD NOT BE ADDED AS PRESERVATIVE IF THE POISONING IS SUSPECTED TO BE DUE TO POISONS SUCH AS ALCOHOL, KEROSENE, PHOSPHOROUS, PARAALDEHYDE ACETIC ACID AND CARBOLIC ACID. IN SUCH CASES A SATURATED SOLUTION OF COMMON SALT SHOULD BE ADDED AS PRESERVATIVE WITH LAYER OF SALT AT THE BOTTOM.

6. *Collection and preservation of material objects from victim's body*—Most of the collection and preservation of material objects from the victim's body may come within the field of the Medical Officer. However, it is the primary responsibility of the investigating police officer to place the full history of the case before the Medical Officer to enable to collect the required specimens and preserve them in an appropriate manner. Thus in cases with a history of injury or death caused by a sharp weapon, the matter should be intimated to the Medical Officer to enable him to arrive at a conclusion whether such injuries could have been caused by such weapons. Further he will be able to mark the rents caused by such weapons on the wearing apparel corresponding to particular injuries for exhibition in the court at a later date. Further it may be necessary to take specimens of hair from the scalp and other parts of the body for comparison with the hair found on the weapon or weapons used or on the scene of offence, etc., and offering an opinion. A specimen of blood may have to be taken from the victim for a blood grouping test, if it is necessary. Particular care should be taken for the collection of these materials from the victim, if he is already dead, since they cannot be obtained at a later date, when the body has been already cremated, as is the usual custom in this country. Hence the investigating police officer should clearly issue a requisition to the Medical Officer who conducts the post-mortem to preserve these specimens before the body is disposed of.

7. *For collecting, packing and despatching exhibits connected with explosion for explosive substances*—The investigating officers should refer to the instructions issued by the Chief Inspector of Explosives in India.

FORWARDING NOTE

In all cases where the examination of any material is required at the..... FORENSIC SCIENCE LABORATORY, a copy of this form duly filled in should accompany the exhibits.

Case No..... Police-station.....
 District
 State
 Section of Law

I. Nature of crime

(This should cover nature of charge, brief history and any relevant details).

II. List of exhibits sent for examination

Serial No.	Description of the exhibits	How, when and by whom found ?	Source of the** exhibits	REMARKS
(1)	(2)	(3)	(4)	(5)

III. Nature of examination required

(Including any information which will assist the examination)

** (1) The exact place from where the exhibits were collected.

(2) If these exhibits were in the possession of a person (victim/suspect/witness). The names and other details of the owners should be furnished.

MEMO. No....., Dated the.....
Forwarded to the Director..... Forensic Science Laboratory,.....

Signature of the Forwarding Officer.....

Designation of the Forwarding Officer.....

SPECIMEN
SEAL
IMPRESSION

NOTE—In the “Nature of Crime” and “Nature of Examination”.

Care should be taken to ensure that all necessary information regarding individual samples submitted is included.

In the packing of material for expert examination, it is important that the specimen samples should be well protected against contamination, from outside sources. The specimen when received at the laboratory must be a true unadulterated sample of the material found at the scene of the crime.

The exhibits should be collected, packed and transported according to the directions issued in the instructions sheet supplied to all investigating officers. Methods described under each type of exhibit should be meticulously observed.

The specimen must be in a separate clean, glass-stoppered bottles and sealed.

Specimen seal impression should be on the sealing wax.

Certificate to be signed by a competent forwarding authority and forwarded to the Director Forensic Science Laboratory..... with exhibits.

CERTIFIED that the DIRECTOR..... FORENSIC LABORATORY..... has the authority to examine the exhibits sent to him in connection with the case of Stat^o versus..... under section..... and, if necessary, to take them to piec^o or removed portions for the purposes of the said examination.

Date..... Signature and designation of forwarding authority
Place.....

II. The State Forensic Science Laboratory has been opened at Cuttack where following examinations will be done:—

- (i) Fire-arms and ammunition
- (ii) Telegraphic and other wires
- (iii) Restoration of erased numbers or writings on metallic, wooden, plastic and leather surfaces.
- (iv) Tool marks left on various surfaces
- (v) Comparison of cloth fragments
- (vi) Pieces of broken utensils, broken glass, glass bangles and other broken articles
- (vii) Miscellaneous physical examinations such as that of packing materials, gunny bags, metal clips, fittings, drillings and the like.

These articles should be sent to the Scientific Officer, Care-Superintendent of Police, C. I. D., Crime Branch, Cuttack. Procedure and the method of sending these articles will be the same as detailed above. Other articles should be sent to the Chemical Examiner, Calcutta and the Forensic Laboratory, Calcutta as the case may be.

(Previous Police Order Reference No. 4 of 1962)