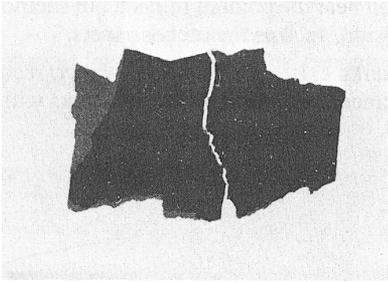
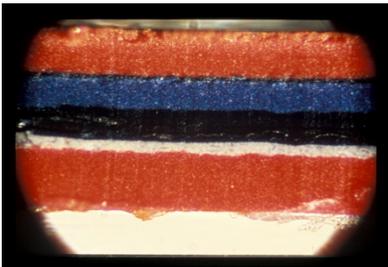


# Paints

**P**aint chips and fragments of other protective coatings such as varnishes, sealers, lacquers, enamels, and plastics are frequently recovered at scenes of burglaries, hit and run vehicles and scenes, forced entries, etc. A determination of common origin is possible in cases where irregularly shaped adjoining edges of paint chips can be physically joined to form a fracture match (see Figure 20-1). However, the value of a single-layered paint chip or paint smear should not be overlooked.



**Fig. 20-1** Fracture match of paint chips. Two fragments of paint showing a common fracture match. One fragment was found at the scene of a crime. The other was recovered from the suspect vehicle.



**Fig 20-2** Cross section of multi-layer paint chip. Each layer represents a separate painting operation. (Magnification approximately X350).

## Procedure

The following procedures are recommended for recovery of paint samples.

**Caution: Observe laws relating to the collection of evidence.**

- A. Recover, package, and seal all paint samples separately.
- B. Recover known paint samples from areas immediately adjacent to the damaged area. The hoods, trunks, and fenders of vehicles may not be painted at the same location or with the same paint used on the body. Therefore, it is of utmost importance that a known paint sample be taken from the **exact part of the vehicle upon which the damage occurred**. In hit-and-run investigations, the known paint samples should be taken near the point of impact, but should not be taken from areas of corrosion, such as the rocker panels.
- C. When tool marks exist on a damaged object, recover paint samples from areas immediately adjacent to tool marks without mutilating the tool mark. If feasible, the item may be submitted to the laboratory for paint collection.



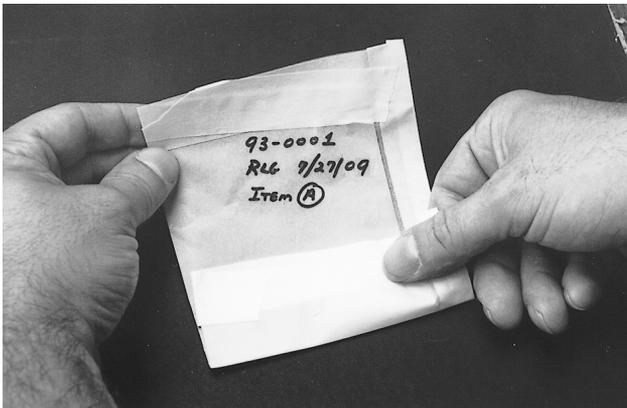
**Fig 20-3** Recovery of Paint Sample: Tape a clean sheet of paper (**do not** use envelopes) to the object in the manner shown, forming a pocket. Mark the paper for identification. Scrape the questioned paint into the pocket formed by the paper. It is important to use a new, disposable scalpel blade or razor blade for each sample to avoid contamination. Some razor blades are coated with oil to prevent rusting. Therefore, **all** razor blades should be thoroughly cleaned with a clean cloth or tissue just before they are used.

- C. When areas of paint are missing from sheet metal parts of vehicles or doors and windows of residences and businesses, consideration should be given to bringing the entire part to the Laboratory for possible fracture match analysis.

- D. Avoid use of any container which would permit loss or contamination of contents, especially envelopes and plastic Petri dishes, since the manufacturer's seal is not leak proof.
- E. Use a new, clean scalpel blade or razor blade for each sample recovered. A plastic specimen bottle or 35mm film canister can be used for paint sample. Fold paper packets containing paint samples and place in an envelope, pill box or other suitable container. Seal and mark appropriately. **Safety tip** – when using a single-edged razor blade, a commercially available razor blade holder should be used to avoid injury if the blade slips or breaks during sampling.

A clean, sharpened putty knife or slot-head screwdriver can be used at times to start collecting harder paint samples. A separate pre-cleaned putty knife or screwdriver should be used for each known and questioned paint.

- F. **DO NOT USE tape lifts or other gummed tapes to recover paint samples** because it interferes with the chemical analysis.



**Fig 20-4** Packaging Paint Sample

Carefully remove the paper from the object and fold each edge toward the center so that the packet is completely closed.

# Notes