

1957

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Recommended Citation

C. J. Rehling, Legal Requirements of Preserving and Processing Evidence in Arson and Other Criminal Investigations, 48 J. Crim. L. Criminology & Police Sci. 339 (1957-1958)

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LEGAL REQUIREMENTS OF PRESERVING AND PROCESSING EVIDENCE IN ARSON AND OTHER CRIMINAL INVESTIGATIONS

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The crime of arson is rather singular in nature as to the physical evidence usually found during investigation. The physical evidence at the scene is often destroyed by the fire, but not always. Any detected materials related to the crime can often speak very strikingly and forcefully with the aid of laboratory studies thereon.

As a review of the field of evidence in law, we meet the classification of (1) testimonial evidence and (2) physical evidence. Under the first class fall those statements of witnesses and suspects, which may or may not be reduced to writing. The second class, namely, physical evidence refers to those material things we can see, feel, smell, and taste. Fuels, containers, metal parts of an incendiary contraption, partially burned wood, tire tracks, etc., are examples of physical evidence the arson investigator may encounter.

The witness may be examined and cross examined to test his accuracy and veracity at the trial. Physical evidence can speak rather fluently and convincingly for itself *if it is competently handled from scene to trial*. Technical findings obtained by processing of this evidence are presented as expert testimony, and therefore as advisory aid to the court and jury at the trial.

In all criminal cases including arson, the law requires careful scrutiny of the evidence offered in order to safeguard the rights of the defendant. This is to make certain that it is competent, and sheds some light on the question at bar, namely, the guilt or innocence of the defendant. These safeguards are not tricks, nor red tape, nor stumbling blocks for the prosecution, but safeguards that you, too, as a defendant would want to see observed. You, as a defendant, would certainly want to see negligence, gross carelessness, and possibility of fraud ruled out when some object was introduced against you as evidence at your trial.

The law requires such safeguards for all defendants by requiring that certain basic rules must be met. These may be summarily listed as follows:

1. Is the object related to the crime?
2. Was its authenticity and competence maintained from scene to trial?
3. Was it competently examined?
4. Are the results competently and properly presented and interpreted?

Three general points arise in connection with admitting into evidence any laboratory findings made on objects secured during the investigation:

1. Admissibility of the object.

2. Admissibility of the results of laboratory processing of that object.
3. Interpretation of those findings.

(1) *Admissibility of the Object or Substance.* Selecting the objects at the scene is the first step. Here the broad experience of a trained investigator shines forth at its best. He is aware of the varied *possibilities* and does not freeze his mind on some pet theory of his own or that suggested by another. He is aware of the basic principle in searching a scene, namely, that the original position, condition, and relationship of an object to its surroundings are equally as vital many times as its identity. Therefore, he is cautious in noting such relationship before he disturbs that evidence. Other questions arise in his mind: Was it here at the time of the crime? Did it play a part in the crime? Is its present condition the same as when the crime was completed? What natural changes took place? Is there any indication that unauthorized persons tampered with it since the crime? These and more are points he must consider. He can reasonably expect this to be covered on cross-examination when he testifies. The answer may rest entirely with the laboratory findings. In that case he must answer simply and directly about the items collected, and let others develop the significant conclusions. The investigator's function here has been to find and properly deliver the evidence.

The alert investigator is also thorough and tenacious in his crime scene search. He is not frugal with materials he suspects might be related to the incident. He does not, for example, take only a minute quantity of a substance for possible analysis on the theory that the analyst requires only a tiny sample for spectrographic tests. He *may* get the right fragment, but the chances are he will not. Therefore, he will take the entire object or some generous portion thereof, and let the chemist select the samples for analysis according to the overall requirements of the total investigation. It is to be expected that many items taken for testing will prove worthless and will later be discarded. But this should not make him reluctant to exercise his suspicions and take any suspected materials. The materials taken can always be discarded, but it is not often possible to secure more after the initial search has been completed.

It is best to take and preserve specimens separately and thereby avoid intercontamination before laboratory processing. Even though no *actual* contamination does or can occur in a given instance, we must face the inevitable question of *reasonable doubt* to which the defendant is entitled, and which counsel is likely to develop from your admission that these objects were placed together in the same container before examination. This legal point is well remembered after only one such thorough cross-examination by an alert attorney. Court room experience, therefore, is the crowning test and experience without which the investigator is not yet well rounded.

A related, competent item of evidence may be lost to the case by the simple negligence of failing to provide for its absolute security, free from all outside influences, prior to its examination. Many officers have obtained an object of important evidence from the scene and then failed to thereafter secure it free of all access by other persons. Then the trial question comes: "How do you know some unknown person did not handle this, add some substance to it, or substitute another similar object for the original?" While it may be doubtful that anyone did, still the door is thereby opened for that reasonable doubt that can provide the difference between a verdict of guilty and not guilty.

The court requires a full accounting of the security of the material so as to determine its authenticity upon arrival for laboratory processing. For this purpose, the preservation of original packaging materials and containers as exhibits does much to reinforce the oral testimony of witnesses who received and handled the evidence. The complete chain of persons handling such evidence must be presented in court. However, most courts will accept the proper postal handling of a package as admissible for the interval of its postal custody. Important evidence should best be transmitted in person to avoid any question on this point.

The writer has experienced a number of blistering cross-examinations as to the condition and custody of specimens received and later offered in evidence at the trial. The retained, *original* packaging materials, the accounting for its security *during* examination, and the presentation of the sealed package in which the specimens were secured *since* its processing,—these served to avoid thereafter the necessity of a repeat performance by these attorneys on subsequent trials. They were convinced that we were strict to maintain the authenticity of the evidence throughout our part of the chain of custody, and did not question it thereafter.

(2)*Laboratory Findings.* Assuming that the object or material is authentic, competent, and admissible, the next question presented is whether the laboratory results obtained thereon are admissible and probative. Here, the prior opinions and requests of the investigator and the subsequent ideas of the forensic scientist may diverge considerably at times. The court, however, decides this point, but we should consider further.

A full discussion of all the facts secured in the investigation will permit the technical laboratory man to make certain suggestions as to other kinds of examinations and to suggest search for other evidence that might prove even more probative than the investigator's original request. Cooperation of all investigators is imperative. For example, an investigator's requested analysis of a specimen for lime was of no value to the arson investigation since plaster from the building contaminated the powdery specimen. However, the other investigative facts suggested another laboratory approach to the problem, and the subsequent results proved quite helpful to the investigation of that fire. Competence of the first specimen and results thereon would have been a major legal question at trial.

If a particular *kind* of laboratory examination is helpful in ascertaining a fact for the trial, other questions remaining for disposition are the competence of the analyst, and whether the analysis was made in a *legally competent manner*. The qualifications of the technician answers this. Here is where the difference between a trained forensic scientist and the commercial scientist becomes apparent. His safe-guarding of the sample in process is as important as the security given the specimen from scene to laboratory. Complete personal custody is required to satisfy the legal demand for certainty of any findings he may make. The question of possible contamination of the sample, especially by others during analysis, must always be borne in mind since the rules of evidence applied by the court will seek out any such sources of error in the true interest of justice.

Regardless of the high qualifications of the scientist who made the examination or analysis of the specimen, regardless of the wonderful and helpful results he may have

obtained, yet all this is for naught if the specimen was previously at any time handled improperly or improperly taken from the scene. We see, then, that the validity of each and every subsequent step or link in the chain of evidence is entirely dependent upon the validity of each and every previous step. Like a living thing, evidence may die at any stage during its life from the scene to the court room.

(3) *Interpretation of Findings.* Results from the laboratory processing of evidence are usually without meaning or weight to the court and jury unless an interpretation can be provided in non-technical language. This applies to both scientist and investigator of technical ability. The investigator continues to acquire knowledge through training, experience, and associations to permit him to interpret or evaluate most laboratory findings. His continued close association with both legal and scientific minds will provide unusual opportunity to continue learning the legal requirements for handling evidence and also what science can do to help him.

These legal requirements or safeguards for handling physical evidence usually seem trite to the untrained and inexperienced. This distorted view is dispelled through court experience and constructive association with legal minds. Legal training will clarify the matter fully, and we often find legal training a prerequisite for certain positions of investigator.

Aside from the basic rules for the handling and processing of evidence, the investigator like other witnesses is subject to numerous marginal or "fringe area" questions from opposing counsel designed to gain some form of admission from his showing a weak point in the chain of handling the evidence. If gained, counsel then has located an Achilles' heel and will work arduously to develop it as a broken link and therefore prevent the admitting into evidence of the article, or any laboratory findings thereon.

No all-inclusive advice can be given to forewarn the investigator of every possible pitfall on cross-examination. Experience in testifying, and observing others while testifying, have no equal in providing the necessary training. Such investigator will soon discover that honesty and vigorous cross-examination of himself as he makes his investigation is the best preparation he can make in building his case and testifying on the witness stand. Remember, you are not merely satisfying your own mind, but a court and jury. During an investigation, try to imagine a thorough, blistering cross-examination by an aggressive attorney, and then make observations, take specimens, take photographs, and make measurements to answer in point any such possible questions. True, many measurements, photos, and specimens taken are never called for at the ensuing trial. But it should be pointed out that after an attorney learns that you prepare your cases in such thorough and competent manner, he is not likely to trouble you very much thereafter. And if he does, you are quite ready for him. Also, your direct, intelligent answers will carry much more weight with the court and jury in the true interests of justice.