# CRIMINAL DEFENSE

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## AN INTRODUCTION TO CHEMISTRY FOR LAWYERS

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## COMING EVENTS

**July 3-24:** American University of Washington, D.C. is offering a special seminar on Drugs, Crime and Justice at the London School of Economics in London, England. The Institute will cover heroin addiction in Britain and America, drug abuse treatment programs, the handling of drug offenders by police courts and the medical profession, the nature and extent of crime in Britain, and the organization and operation of the British criminal justice system. The Institute is designed for professionals and students from America in the fields of criminal justice, law, medicine, drug abuse treatment, and social work. Total cost of the Institute is $465.00 which includes room and breakfast. Low cost meals are available in the University cafeteria.

For further information, contact Dr. Arnold S. Trebach, Director, Institute on Drugs, Crime and Justice in England, Center for the Administration of Justice, The American University, Washington, D.C. 20016, or call the English Institute Coordinator, (202) 686-2405.

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**August 26-28:** The National College of Criminal Defense Lawyers and Public Defenders presents a Forensic Science Institute in Minneapolis, Minnesota. The Institute will feature direct and cross examinations of forensic science experts by criminal defense lawyers, followed by analysis of what happened and why. Topics covered will include handwriting analysis, forensic psychology, chemical analysis, and forensic pathology. The Institute will cost $100.00. A limited number of scholarships are available covering transportation costs. Contact the Registrar, NCCDLPD, College of Law, University of Houston, Houston, Texas 77004. (713) 749-2283.

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**September 23-25:** The National College of Criminal Defense Lawyers and Public Defenders will present an Institute on "The Trial Jury" in Jackson Hole, Wyoming. Focus of this Institute will be on methods of selecting and influencing juries. Cost will be $100.00. A limited number of scholarships covering transportation costs will be available. Contact the Registrar, NCCDLPD, College of Law, University of Houston, Houston, Texas 77004. (713) 749-2283.

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# CRIMINAL DEFENSE

January-February 1977 Volume 4, Number 1

A MESSAGE FROM THE NATIONAL ASSOCIATION OF CRIMINAL DEFENSE LAWYERS



ARTICLES



FEATURE





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This issue of *Criminal Defense* marks the beginning of our fourth year of publication. We hope we've been of value to you in the past and can be of more help to you in the future. *Criminal Defense* is the only magazine speaking to a national constituency of criminal defense lawyers. As such, it is your magazine, not ours. If there are articles you'd like to see in the magazine, please let us know. If you would like to write articles yourselves, submit them to us. We are open to all your suggestions — but we can only serve you if we know what you want. So drop us a line. We'd like to hear from you.


# Partisans in a Common Cause

by

C. Anthony Friloux

The new slogan of the National Association of Criminal Defense Lawyers — *Partisans in a common cause, partisans for each other when threatened* — signifies the new direction, dedication and commitments of the Association in these troubled days.

Liberty, freedom, privacy and due process have been placed on the endangered species list as a result of a well-directed assault by partisans in the judiciary, in the Justice Department, in legislative bodies, and in a mis-led lay public.

In this atmosphere the slogan "Partisans in a common cause" takes on a particular significance for the criminal defense lawyer. There is a growing strength, dedication and determination among those who seek to strip away our basic Constitutional protections and to emasculate the defense adversary — and thus the system itself. No unified group has heretofore picked up the gauntlet and flung it back into the faces of those whose short term solutions to long term societal problems threaten the entire system of criminal justice.

It is time for plain talk, not expedient hypocrisy. The defense bar has two choices at this crucial point in American history:

(a) we can organize and *fight* those growing forces across the nation who are so successfully destroying the criminal justice system, or

(b) we can ignore the threat and trust to time, fate or whatever rationalization one can trust to preserve these endangered concepts.

The National Association of Criminal Defense Lawyers has picked up the gauntlet and is prepared to fling it back into the faces of those who have so cynically chosen to attack the defense bar, the adversary defense lawyer, and the basic Constitutional protections defense lawyers seek to uphold.

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No one questions that the criminal justice system is in trouble. Chief Justice Burger has constantly cried out in alarm at the weakness of the defense structure, yet the Supreme Court has been an exponent of continual federal restrictions, limitations, and increased sanctions primarily directed at the defense structure. Federal jurists across the nation are, for the most part, an entirely different breed from their state counterparts. They have shown in all too many instances no understanding of the role of the defense adversary and no understanding for (or perhaps little patience with) the procedural and substantive due process concepts which were designed to protect the individual against an overzealous sovereign.

If they are to follow Chief Justice Burger's concern, defense partisans must take a cold, analytical look at the adversaries we face. Is all well with the federal judiciary and the prosecutorial and investigative arms of the federal system, or is there room for criticism? Does the adversary system still embody the historical concept of two equal opponents (or champions) locked in battle while an objective judge acts as arbitrator and referee? Or does that system now increasingly involve the judge and the prosecutor in an unholy alliance arrayed against the defense structure?

Any fair appraisal of the federal judiciary (such as that made of the defense bar by the Chief Justice) would reflect obvious deficiencies, not only in methods of selection, but also in the quality of those chosen.

*C. Anthony Friloux, a member of the Board of Directors of the National Association of Criminal Defense Lawyers, is the former Dean of the National College of Criminal Defense Lawyers and Public Defenders.*

Political patronage selection is the worst possible method of choosing judges. Rarely do experience, capability, and temperament blend with the overriding political benefit to the senator who is the architect of selection in lower courts or to the party in power when United States Supreme Court judges are selected.

Despite the archaic method of selection (which ignores for the most part the organized bar and the lay public), we do have some capable federal judges. Generally, however, experience, expertise and a proper judicial temperament are matters relegated to secondary consideration when a judge is selected. And the pay scale, only recently raised, has kept many of the better trial lawyers from seeking or accepting an appointment to the federal bench.

Keeping in mind these observations, one wonders when the Chief Justice and other eminent jurists will call for an end to this archaic system of selection and ask for the substitution of a truly professional method of selecting our most capable lawyers to sit on the federal bench.

One can justly lay equal criticism at the door of the prosecutory and investigative agencies. Recent exposure of illegal acts of long duration by those who were charged with prosecuting and upholding the law speak more eloquently than any argument the defense bar can make.

So we find all three legs of the criminal justice stool in trouble! Yet the primary targets of most reaction are the accused — and his champion, the defense lawyer.

Reaction against the defense adversary over the past few years has been overt, deliberate, and for the most part delivered in advance. The object of destroying the exclusionary rule was given advance billing by the Chief Justice himself. The evolution of the law since that declaration has been a systematic destruction of the intent and tenor of this judicially created rule. The emasculation of the right to privacy and the sanctity of one's own papers plus the stripping away of the fifth amendment's prohibitions and protection also signal how successful this reaction has been.

A citizen charged with a violation of a criminal law today has few Constitutional protections left on which to rely. A partisan statement? Yes. But any capable criminal defense lawyer in trial practice knows the grim truth of that partisan statement.

The state systems are not immune either. Federal actions trickle down to the states, and the acceleration of this movement is continuing. The effect is just as destructive as in the federal arena.

A defense lawyer may rightfully ask, "Well, you are sounding the alarm, but what can I as an individual defense lawyer do about it?"

You can make a basic decision to stand and be counted, to fight and not allow the battle to be lost for want of a champion.

The National Association of Criminal Defense Lawyers urges every defense lawyer, whether in private practice or engaged in a defender project, to join us immediately in this struggle to preserve due process, to uphold basic Constitutional protections, to stand as the preservers of the adversary system, and to seek to improve the criminal justice system in a manner which seeks justice, not expediency, which recognizes the dignity of the individual, and which guarantees that the individual's confrontation with the state will be one in which his rights are not sacrificed because of the inability of the present system to guarantee them.

Defense lawyers, one and all, when united, compose the last partisan force in our criminal justice system which is capable of effective reaction. We must become strong, well-lead, well-financed, and capable of entering the arena as equals. We must become a viable force in the selection of judges, in the rule making process, in the formulation of the procedural systems used in our courts, and in the legislative bodies which consider our laws and procedural statutes. We must be a free and independent voice whenever a court or prosecutor or enforcement agency unfairly attacks or obstructs the ability of a defense advocate to perform his role in giving "effective assistance of counsel." Our lawyers assistance committee has and will increasingly bring the most capable defense advocates to the aid of member defense lawyers when they are improperly or unfairly put upon. This dedication is symbolized by the second part of the NACDL slogan: *Partisans for each other when threatened.*

If you care about your profession, if you care about preserving our nation's basic ideals, if you care enough to resent the intrusions upon the work of the defense advocate, then join the hundreds of dedicated lawyers who are rallying behind the NACDL banner and who, by such actions, show they *care.*

Address your membership inquiries to the National Association of Criminal Defense Lawyers, 806 Main Street, Suite 1512, Houston, Texas 77002. Telephone: (713) 224-6577.

The National Association of Criminal Defense Lawyers will hold its annual meeting August 10-14, 1977, in Williamsburg, Virginia. If you wish to attend, please contact the NACDL at 806 Main Street, Suite 1512, Houston, Texas 77002. Telephone: (713) 224-6577.

# CRUEL AND UNUSUAL

National College of Criminal Defense Lawyers and Public Defenders

The September 1976 cover of *Criminal Defense* is now available as the poster above. The poster measures 17" by 25" and costs $4.00, including postage. Copies may be ordered by sending the following form to the National College of Criminal Defense Lawyers and Public Defenders, College of Law, University of Houston, Houston, Texas 77004:

Name _____

Address _____

City _____ State _____ Zip _____

I am enclosing a check/money order to cover the cost of _____ poster(s) at $4.00 each.

# THE GRAND JURY'S ROLE IN THE DEFENSE ARSENAL

by
Dominic Gentile

## I. Introduction

Now that the Federal Rules of Evidence are a reality in the trial of cases in the United States District Courts and are being increasingly adopted in the original or modified versions by the states, defense lawyers are confronted with motivating factors that did not exist under prior practice. It is the intention of this article to highlight the motivational factors involved in defense counsel's decision to bring to a grand jury's attention evidence favorable to a client he suspects or knows is the target of investigation. It also hopes to provide the defense lawyer with some insight into the methodology he should employ and some awareness of the various problems he will encounter when he tries to introduce such evidence.[1]

## II. Motivating Factors

*A. Avoidance of indictment*

It should be obvious to any person involved in the criminal justice system that the main goal of a defense lawyer who represents a client who is the target of a grand jury investigation is to avoid indictment if possible. As we know, however, despite the traditional theory that the grand jury is an independent body capable of functioning on its own, its function has degenerated in recent years until it is now merely a tool of the prosecutor. A prosecutor who has control of a grand jury can indict any person at any time for practically anything he chooses. Some courts have recognized this fact and are no longer even paying lip service to the traditional "sword and shield" rationale for the grand jury's purpose.[2]

*B. Perpetuation of testimony for use at trial*

Although counsel can scarcely depend on the return of a No Bill by a grand jury, he can at least manage to perpetuate favorable evidence presented to the grand jury and have it used for post-indictment consideration by the trier of fact. This consideration is most important in the following situations:

1. "Weak sister" witness

Federal Rule of Evidence 801 (d) (1) (A) relates to the substantive use of the contents of a prior inconsistent statement if the declarant testifies at trial, is subject to cross examination regarding the statement previously made, and the statement is inconsistent with his testimony at the trial and was given under oath and penalty of perjury at the previous trial, hearing or other proceedings. The rule as adopted covers statements before a grand jury.[3]

Federal Rule of Evidence 607 allows impeachment of one's own witness. If this rule is read in conjuction with Rule 801 (d) (1) (A), it is clear that one can use the prior inconsistent statement for its substantive value by calling the turn-coat witness and introducing the prior inconsistent statement. This tactic becomes extraordinarily important when an affirmative defense is being used and when instructions and arguments depend upon the substantive use of this evidence. Here the Federal Rules are consistent with the common law theory that prior statements are superior in trustworthiness because the memory of the declarant was fresher, fuller and more accurate.[4]

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This paper, in a slightly different form, appeared as part of materials for a Grand Jury Seminar presented by the National Association of Criminal Defense Lawyers. These materials are available from the NACDL, 806 Main Street, Suite 1512, Houston, Texas 77002.

2. The integral witness

Federal Rule of Evidence 801 (d) (1) (B) allows the use of prior consistent statements to rebut the charge or inference of recent fabrication and, when proper, permits the defense to obtain an instruction in this regard. When the prosecutor raises the issue of recent fabrication, the prior consistent statement is removed from the realm of hearsay. This prior consistent statement need not have been made under oath or have been recorded to fall within the rule. However, if the grand jury has heard the prior consistent statement, the prosecutor will certainly be aware of the fact that the declarant has not changed his testimony. It follows that the perpetuation of the testimony at the grand jury stage precludes the prosecutor from offering any evidence at the trial for the purpose of creating the inference of recent fabrication.[5] This would hold true even when the testimony is not in fact given to the grand jury but is made known to the prosecutor with the intent that he relate it to the grand jury. However, it should be obvious to the experienced practitioner that the offer to the prosecutor should itself be memorialized.

3. The absent witness

Federal Rule of Evidence 804 (b) (1) recognizes a hearsay exception for testimony given by a witness who is unavailable to testify at the trial or hearing if the testimony was given at another hearing of the same or different proceedings and if the party against whom it is offered had an opportunity and similar motive to develop the testimony by direct, cross or redirect examination. The witness is considered unavailable if he claims lack of memory, asserts a testimonial privilege or a constitutional privilege, is dead or infirm, refuses to testify or is otherwise absent through no fault of the party seeking the introduction of the prior statement.

It must be noted that the defendant does not have an opportunity to cross-examine a witness before the grand jury. Therefore the government cannot use this rule to admit grand jury testimony when the witness is unavailable at the trial, for to do so would defeat the defendant's right of confrontation.[6] Perpetuation of testimony is thus essential if any of the above reasons for the defense witnesses' absence occur.

## III. Methodology

*A. Informing the court or the prosecutor*

Once he has resolved the question of whether or not to seek the presentation of favorable evidence to the grand jury, counsel is confronted with a second problem — that of determining the manner in which to bring this evidence before the grand jury. The law is well settled that there is no constitutional right to appear as a witness before a grand jury. However, it may be possible for the witness to apply to the court for an order directing the grand jury to permit his testimony or to proffer other evidence if he can convince the court that otherwise the grand jury process will be abused.[7] Such a course may not be open to counsel in jurisdictions where the grand jury is considered a "tool of the prosecutor" and it has been held that the government need not present evidence to the grand jury which undermines its own.[8]

There is a growing body of law on the state level that seems to support a grand jury target's right to have the grand jury consider favorable evidence before it commences deliberation on an indictment. In *Johnson v. Superior Court of San Joaquin County,*[9] the California Supreme Court decided *en banc* that a California statutory provision placed a duty upon the district attorney to inform the grand jury of the existence of favorable evidence known to him.[10] Although the court in *Johnson* based its opinion on statutory grounds, much of its rationale dealt with the protective role of the grand jury and the fifth amendment guarantee of due process. The court went on to hold that when a district attorney seeking an indictment is aware of evidence reasonably tending to negate guilt, he has an obligation to inform the grand jury of its nature and existence so that the grand jury may exercise its statutory power to order the evidence produced. The court expressly did not consider the alternative due process argument, although a concurring opinion by Judge Mosk fully analyzed the due process aspect as well as other constitutional ramifications of the problem.

The Iowa Supreme Court in *State v. Hall,*[11] confronted with the same issue as in *Johnson,* held that due process of law requires that a prosecutor who has information that tends to explain away the charge being investigated is under a duty both to inform the grand jury of the existence of the evidence and to present it to the grand jury. Much of the language in *Hall* treats the grand jury as being a buffer standing between the state and the potential defendant.

While no court of review in New York has yet considered the question directly, *People v. Dumas*[12] did hold that the prosecutor has a duty to make the grand jury aware of evidence tending to negate the defendant's guilt prior to deliberations on the return of an indictment.

It would seem that in jurisdictions which currently require the prosecutor to present or make known to the grand jury favorable evidence, the defendant can lose nothing by memorializing and communicating to the prosecutor any evidence he feels would negate or explain away the charge. Communication with the courts will generally be futile because of their historical reluctance to intercede in grand jury investigations, and, as shall be demonstrated shortly, direct communication with the grand jury can present counsel with problems that need not be confronted in these jurisdictions.[13]

*B. Direct communication with the grand jury*

Any recognition of the grand jury as a body functioning separate and apart from the ordinary branches of government must include the notion that the grand jury has intrinsic power to conduct investigations on

its own and without the prosecutor's assistance or consent.[14] It follows that the grand jury can also obtain its own leads and tips and carry out its own investigation.[15]

Whether or not to communicate directly with the grand jury is a question not so easily answered. Many pitfalls and obstacles line the path to direct communication. Counsel must be extraordinarily cautious in considering each of them before making his decision.

The ultimate question to be resolved in the light of the circumstances of a particular case is "Does the first amendment give a person who has knowledge of the facts which the grand jury is investigating the right to inform the grand jury of these facts?"

In *Wood v. Georgia*[16] the United States Supreme Court held that the "clear and present danger" standard applies to first amendment protection of statements made out of court which are calculated to be communicated to the grand jury. This was a state case and came before the Court as a review of a conviction for criminal contempt. On the state level, the Georgia appellate court, while affirming the counts that ultimately went to the United States Supreme Court, had reversed a count by which the petitioner had been convicted of contempt for directly communicating to the grand jury by means of a letter.[17] The Georgia court so held even though the letter contained the statement that the grand jury should investigate the Democratic Party Committee instead of the communicant.

The "clear and present danger" standard, when applied to communications to a grand jury, must focus on the question of whether the communication is calculated to obstruct the grand jury or intimidate its members. In *Thomas v. Crevasse*[18] a charge was made that a written communication passed out in the corridor leading to the grand jury's deliberation room represented a "veiled threat" to the grand jurors because the message contained in the communication was intended to intimidate. The Fifth Circuit held that the first amendment protected such a communication and that the language in any communication directed to the grand jury must present an "extremely serious threat to the grand jury deliberations in order to justify a contempt conviction."[19]

Not all courts have maintained this liberal view of the right to communicate to a grand jury. In a somewhat different context, the Illinois Supreme Court held in *People v. Parker*[20] that a letter directed by the defendant to the grand jury charging the *Chicago Tribune*, the Cook County Regular Democratic Organization, the States Attorney, the County Assessor, the State Director of Revenue and others with illegally avoiding property taxes and conspiring to do so, was not protected by the first amendment. The letter contained an offer to appear before the grand jury to produce evidence in support of the accusations. The court held that this conduct tended to obstruct the administration of justice and that the defendant could not avail himself of the Constitution as a shield.[21] Some years before this decision, in *People v. Doss*,[22] the Illinois Supreme Court had also held in contempt a grand jury target who sent to the grand jury copies of his own newspaper articles. The court believed that he had tried to influence the grand jury concerning the criminal charges under investigation and that the first amendment provided no protection in such a situation. The articles, however, appear to have been argumentative and not intended to inform the grand jury of exculpatory evidence.

A lawyer or target who communicates with a grand jury may face other problems than contempt of court. 18 U.S.C. § 1504 prohibits attempts to influence any grand juror upon any issue or matter pending before such juror by writing or sending to him any communication. In *Duke v. United States*[23] the Fourth Circuit upheld a conviction for violation of this statute's predecessor. Eleven years after *Duke*, the statute was amended to add the language "nothing in this section shall be construed to prohibit the communication of a request to appear before the grand jury." This additional language, when construed with *Wood v. Georgia*,[24] should give first amendment protection to a communication in writing to the grand jury requesting an opportunity to appear before it for the specific purpose of proferring specific, enunciated evidence. And since the grand jury can consider hearsay testimony, there does not appear to be any requirement that the communication be made by the same witness who would have to appear before the trial jury. Any witness, as long as he was trying to avoid indictment, could make this request. Of course, if the goal is to perpetuate the testimony for later use at a trial, the request to communicate information should be made by a person with direct knowledge of the facts.

No matter what form the communcation to the grand jury takes and regardless of from whom the communication is received, counsel should be aware of the common law crime of embracery (which has been codified by many states into statutory law). Embracery is defined as "the offense of attempting to corrupt, influence, or instruct a jury or juror or of inducing them in any way, such as by promises, persuasions, entreaties, money, entertainment, etc., except by the strength of evidence and the arguments of counsel in open court, to be more favorable to one side of a case than to the other."[25] The core of the charge of embracery is the attempt to curry favor with the grand jury. All that need be proven is the attempt. Success is not a material element.[26] Therefore, counsel should take every available precaution to insure that the communication, whatever its nature and regardless of its source, is stated in clearly objective and non-argumentative language.

**IV. Conclusion**

No general rule can be stated about the wisdom of volunteering information to a grand jury. Each case must turn on its own facts. When the decision has been made to inform the grand jury of the existence of exculpatory evidence, counsel should choose the method best calculated to succeed in getting the grand jury to hear the evidence without himself or his client being exposed to charges of contempt, violation of statutory law, or embracery. Great care must be taken in drafting any communication to a grand jury (a suggested form is included as an appendix to this article). Regardless of the form employed, counsel should serve copies on the prosecutor and the court in order to preserve his record.



# FOOTNOTES

[1] This entire discussion presupposes that counsel has knowledge of the existence and scope of a grand jury investigation of which his client is a target and that evidence exists which is exculpatory in nature. It further assumes that counsel's investigation has revealed to him the subject matter of the grand jury inquiry and the potential charges against his client. Counsel should also have decided that his client will not be prejudiced by a pre-indictment disclosure of favorable evidence.

[2] Hawthorne, Inc. v. Director of Internal Revenue, 407 F. Supp. 1098, 1119 (E.D.Pa., 1976).

[3] H.R. REP. NO. 93-1597, 93d Cong., 2d Sess. (1974). *Cf.* 4 WEINSTEIN, EVIDENCE 801-77 (1975).

[4] MCCORMICK, EVIDENCE 75 (1954).

[5] Napue v. Illinois, 360 U.S. 264 (1959); Giglio v. United States, 405 U.S. 150 (1972); King v. United States, 372 F.2d 383, 394 (D.C.Cir. 1967); ABA CANONS OF PROFESSIONAL ETHICS 7 (EC 7-13; DR 7-102[6] and 7-106[c] [1]).

[6] *See, generally,* MCCORMICK, EVIDENCE §255 (2d ed. 1972).

[7] *See In re* Application of Iaconi, 120 F.Supp. 589 (D.Mass 1952) (a court can intervene to prevent the process of the grand jury from being used abusively); *In re* Investigation by the January, 1952 Grand Jury, 102 F.Supp. 911 (W.D.Pa. 1952).

[8] United States v. Gardner, 516 F.2d 334 (7th Cir. 1975); United States v. Eucker, 532 F.2d 249 (2d Cir. 1976); Jack v. United States, 409 F.2d 522 (9th Cir. 1969). The irony implicit in this situation is that the United States Supreme Court, in its recent opportunities to define and limit the scope of grand jury investigations, has consistently relied upon a "sword and shield" theory of the grand jury's existence. United States v. Calandra, 414 U.S. 338 (1974); United States v. Dionisio, 410 U.S. 1 (1973).

[9] 15 Cal.3d 248, 539 P.2d 792, 124 Cal. Rptr. 32 (1975).

[10] The statute read as follows:

> The grand jury is not required to hear evidence for the defendant, but it shall weigh all the evidence submitted to it, and when it has reason to believe that other evidence within its reach will explain away the charge, it shall order the evidence to be produced, and for that purpose may require the district attorney to issue process for the witness.

CAL. PENAL CODE §939.7.

[11] 235 N.W.2d 702 (Iowa 1976).

[12] 51 Misc. 2d 921, 274 N.Y.S. 764 (Sup.Ct. 1966).

[13] *Cf.* People v. Sears, 49 Ill.2d 14, 273 N.E.2d 388 (1971).

[14] United States v. Thompson, 251 U.S. 407, 413-415 (1920); *In re* Report and Recommendation of June 5, 1972, Grand Jury, 370 F.Supp. 1219 (D.D.C. 1974).

[15] This proposition is lucidly presented in United States v. Smyth, 104 F.Supp. 283 (N.D.Cal. 1952). In Dolan v. United States, 214 F.2d. 454 (8th Cir. 1955) it was held that, whatever leads are received by the grand jury, they must be followed as fully as possible in order to find out the truth.

[16] 370 U.S. 375 (1962).

[17] Wood v. State, 103 Ga.App. 305, 119 S.E.2d 261 (1961).

[18] 415 F.2d 550 (5th Cir. 1969).

[19] *Id.* at 553.

[20] 397 Ill. 305, 74 N.E.2d 523 (1947).

[21] This was the second time Parker had communicated with the grand jury. *See* People v. Parker, 374 Ill. 524, 30 N.E.2d 11 (1940).

Two points relating to *Parker II* should be noted. First, it was decided some fifteen years before *Wood v. Georgia*. Second, the U.S. Supreme Court (with Justice Jackson not participating in the question on the merits of first amendment protection) affirmed by an equally divided court, 334 U.S. 816 (1948).

[22] 382 Ill. 307, 46 N.E.2d 984 (1943).

[23] 90 F.2d 840 (4th Cir. 1937).

[24] 370 U.S. 375 (1962).

[25] 12 AM. JUR. 2D *Embracery* §1.

[26] Osborn v. United States, 385 U.S. 323 (1966).

# APPENDIX:

## Suggested Form for Communications to a Grand Jury

Mr. John Q. Public, Foreman
October 1976 Federal Grand Jury
219 South Dearborn Street
Chicago, Illinois 60602

Re: Investigation of Sam Spade
Enlistment into U.S. Army by Employment of a False Statement

Dear Mr. Public:

It has come to my attention that you are the Foreman of the Federal Grand Jury which is investigating the alleged enlistment by Sam Spade into the United States Army on August 18, 1975, said enlistment allegedly being accomplished through the presentation of false identification and discharge papers.

I am hereby requesting an opportunity to appear before the Grand Jury and to inform its members, under oath, that Sam Spade was with me in Monterey, Mexico, continuously and uninterruptedly, from August 1, 1975 through September 1, 1975.

I am communicating this request to you with full knowledge that I am under no duty to appear before the Grand Jury and that I needn't communicate this information to it. Furthermore, I have conferred with John Doe, attorney at law, and he has advised me that I have no duty to present such testimony unless I am subpoenaed. Notwithstanding his advice, I persist in my request to appear and give testimony.

_____
John Smith

I hereby acknowledge that I have been retained by John Smith as his legal counsel, that I have advised him that he is under no duty to appear before the grand jury and give any testimony without having first been properly served with a subpoena, and that he nevertheless has informed me that it is his wish to do so.

_____
John Doe

# THE NATIONAL JOURNAL OF CRIMINAL DEFENSE

## A Law Review for Criminal Defense Lawyers

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# An Introduction to Chemistry for Lawyers

by
ROBERT H. SHAPIRO*

One of the burdens of proof in drug cases is for the prosecution to demonstrate, beyond reasonable doubt, that the alleged drug is, in fact, the actual drug. For example, when a defendant is charged with possession of heroin, it is the burden of the prosecution to prove that the white powder is heroin. Usually the prosecutor obtains his proof of identity from a chemist, employed in a law enforcement laboratory, who performed an analysis on the seized substance. In cases in which the defense does not stipulate to the identity of the drug, this chemist appears in court as an expert for the prosecution. He will testify, occasionally in detail, that he thoroughly "tested" the material and found it to be the substance with which the defendant is charged.

The basis of "chemical defense" is to cast some doubt on the conclusions drawn from the chemist's analysis. In favorable cases, the chemist's testimony can be decimated and the trial can terminate in a directed verdict for the defense, acquittal or a plea of guilty to a lesser charge. Chemical defenses, however, are very difficult to perform. Even if the defense attorney can learn the necessary chemical language, ask the right questions and destroy the chemist's testimony, the problem of whether the jury understood the cross examination exists. In cases in which the defense uses an expert chemical witness who helps cast doubt on the testimony of the prosecution's chemist, there is always the problem of whom the jury will believe.

The prosecution's chemist works for a law enforcement agency and is therefore the "good guy" by definition regardless of how bad his analysis is. It is of the utmost importance, therefore, for the defense to obtain the services of an expert chemical witness with not only unimpeachable qualifications, but with qualifications vastly superior to those of his adversary. Another difficulty with chemical defenses is that the judge frequently does not understand the chemical arguments, gets bored with them and cuts off discussion as well as favors the prosecution in objections.

Because of these difficulties chemical defenses should probably be resorted to only when no other defense is feasible, or in the ideal case when it is known that the alleged drug is, in fact, bogus. In these latter, and extremely rare, instances, the prosecutor will usually dismiss the charges. If he does not, then the chemical defense becomes the primary courtroom weapon.

In order to carry out a chemical defense, the defense attorney should know some of the principles behind the primary tests which are performed by the analyst. Without this knowledge there is no way of impeaching this witness, and his testimony will stand as gospel. The chemical tests which are commonly

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carried out by prosecution chemists are color tests and some form of chromatography, usually thin-layer chromatography (TLC) and less frequently gas chromatography (GC). On occasion, depending on the nature of the contraband, microscopic examinations, microcrystalline tests, several types of spectroscopic examinations, and combinations of chromatographic and spectroscopic techniques are employed.

### Analyses

*Color Tests* — Basically, a color test is a chemical reaction between two reagents to produce a characteristic color. Reputable chemists everywhere use color tests to determine whether certain groups of atoms (i.e. functional groups) are present in organic molecules, but no reputable chemist would ever say he "identified" a compound on the basis of a color test or series of color tests. It is very probable that when a series of reagents is used, each reagent is reacting with the same functional group in the organic molecule. If, on the other hand, a reputable chemist is faced with distinguishing between two possible compounds, that is, he *knows* that the material is either, say, heroin or amphetamine, then a color test can be used to distinguish them. Many forensic chemists have abused this type of analysis simply because they *assumed* that the alleged drug must be, in fact, a drug. There are approximately two million known organic compounds, most of which have not been subjected to color tests, and the probability of many other organic compounds showing the same color reactions in a series of three or four color tests is obviously high.[1] One must always remember that drugs are organic compounds which are physiologically active; living cells may be able to distinguish small differences in large molecules, but non-specific color reagents probably cannot.[2] Some of the more common color tests will be specified with the discussion of specific drugs (*vide infra*).

Color tests must be regarded as presumptive or screening tests only. That is, a given color test may be consistent with a given organic substance, but it does not "identify" it. Most prosecution chemists will admit this if pressed during cross examination, but they will also argue that they have other confirmatory evidence. In many, perhaps most, cases these other pieces of confirmatory evidence are also presumptive tests. Their argument is that no other substance which they have tested gives all the same responses to the presumptive tests and therefore the substance must be what it is alleged to be. The chemist may, in fact, be right, but he is not necessarily right.

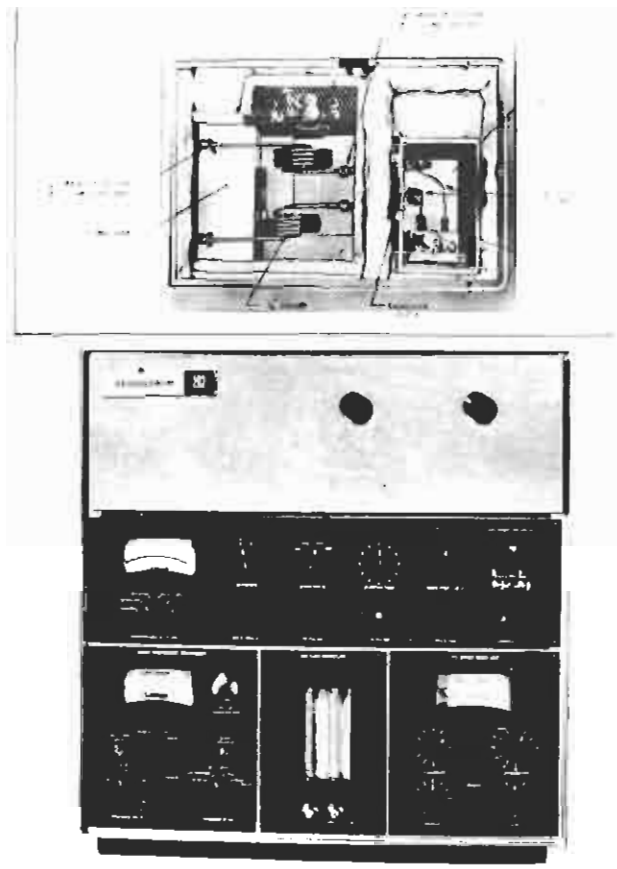
*Microcrystalline Tests* — In principle, microcrystalline tests are similar to color tests. The suspected drug is allowed to interact with a reagent (usually a heavy metal salt) and a positive response is manifested by the precipitation of crystals of "characteristic" shape and color. Microcrystalline tests are also presumptive for the same reasons as are color tests. In addition, they are a bit more difficult to perform than color tests and are, therefore, less frequently encountered.[3] In principle, microcrystalline tests are better presumptive tests than color tests, since they give two responses per test, *viz.* shape and color. However, when microcrystalline tests are employed in an analysis, it is usual that only one is employed. It is incomprehensible to me why melting points of the crystals produced in this test are not taken by forensic chemists. The melting point would add a third response and increase the probability of identification. Moreover, mixing these crystals with "authentic" crystals and taking a melting point of the mixture would, in fact, constitute a good scientific identification.[4] The honest forensic chemist will admit that microcrystalline tests (as they are performed) are not specific, but will argue that in conjunction with color tests they constitute strong confirmatory evidence.

**Melting Point Apparatus**

*Chromatography* — All the forms of chromatography are methods of separating mixtures of compounds, but can also be used to help identify compounds. The two most commonly employed chromatographic techniques are thin-layer chromatography (TLC) and gas chromatography (GC).[5] All the chromatographic techniques work on the same principle, and that principle is based on the affinity (or attraction) of the substance to be separated to another substance — the so-called stationary phase of the chromatographic technique. In TLC, the stationary phase is almost invariably silica gel, which is similar to very finely divided sand. In GC, there are hundreds of different stationary phases.[6] The substance being separated is allowed to pass through the stationary phase and will do so in a given amount of time. A substance which has a great affinity for the stationary phase will pass through it more slowly than one which has little affinity for it. Thin-layer chromatography employs a plate, made from glass, aluminum or plastic, which has the stationary phase spread on one of its surfaces in a thin layer (about .025 mm thick). The plates may be any size, but they are usually 5 x 10 cm (2 x 4 inches) in forensic work. The substance to be separated is dissolved in a very small volume of appropriate solvent and a small amount of the resulting solution is applied as a spot to the stationary phase near the bottom of the long side of the plate. The solvent is allowed to evaporate and the plate is placed in a container which contains the so-called developing solvent at a level below the placement of the spot of organic substance. The developing solvent is absorbed by the stationary phase at the bottom on the plate and slowly (10-20 minutes) rises to the top by capillary action.[7] The combination of the nature of the developing solvent and the substance's affinity for the stationary phase determines how far up the plate the substance will travel. This distance is called the $R_f$ (ratio to the front).[8] Different developing solvents change the $R_f$. The $R_f$ is also dependent on the age of the plate, its moisture content and contaminating substances in the sample. For this reason TLC should never be used to assist in an identification unless "authentic" material is also spotted on the plate alongside the suspected material. In this way a comparative analysis is made; that is, the $R_f$ of the suspected drug is compared with that of the authentic drug. The probability that two different substances (out of the two million) will have the same $R_f$ in a single TLC experiment is high and such an experiment does not constitute proof of identity. It is considered good scientific practice to run three such TLC experiments, using a different developing solvent in each case, to indicate identity, but in many cases similar compounds simply will not separate.

There are three methods of detecting the compounds on TLC. If the compounds are colored (all drugs are colorless), they can be seen with the naked eye. Colorless compounds are detected with an ultraviolet lamp or by spraying the plate with a reagent, i.e. by a process similar to a color test.

Gas chromatography employs a heatable tube (column) which contains the stationary phase. The substance to be separated is dissolved in a solvent and the resulting solution is injected into the column. The



**Gas Chromatograph**

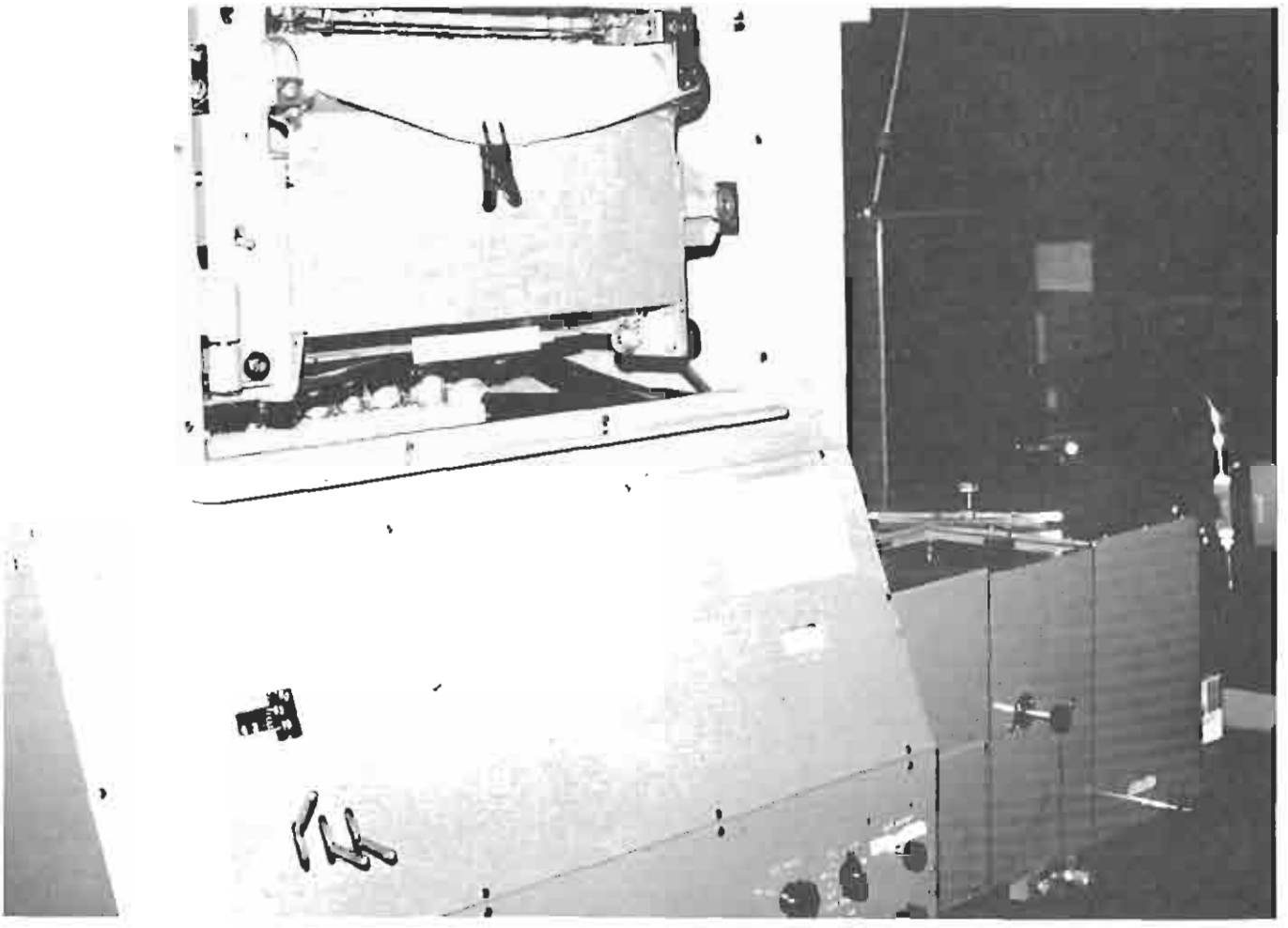
substance is pushed through the column by a flow of inert gas (carrier gas; e.g. helium) and ultimately emerges from the end of the column. The emergence of a substance is detected electronically and is recorded as a peak on a chart. The time that it takes for a substance to emerge is called the retention time. The retention time of a given substance is dependent on (1) its affinity for the stationary phase (2) the temperature of the column, (3) the length of the column, (4) the age of the column (they wear out), (5) the flow rate of the carrier gas and other less important factors. Obviously changing stationary phases (i.e. entire columns) will change retention times. Comparative analysis with GC involves mixing the authentic drug with the alleged drug and enhancing the peak caused by the latter. Because of the probability that two different substances may have the same retention time, under a given set of conditions, it is considered good scientific practice to run three GC experiments, using a different column (i.e. stationary phase) in each experiment, to demonstrate identity. Forensic chemists

are not, however, known to perform such thorough analyses, perhaps because of time limitations or perhaps because analyses are seldom challenged. Their usual procedure is to perform one TLC *or* GC experiment; in the latter case they measure the retention time and in a separate GC experiment, measure the retention time of the authentic drug. This practice is untrustworthy at best and is unacceptable as an identity by scientific standards. TLC is by far more common in forensic work than GC, since GC involves elaborate equipment, gas tanks, etc.

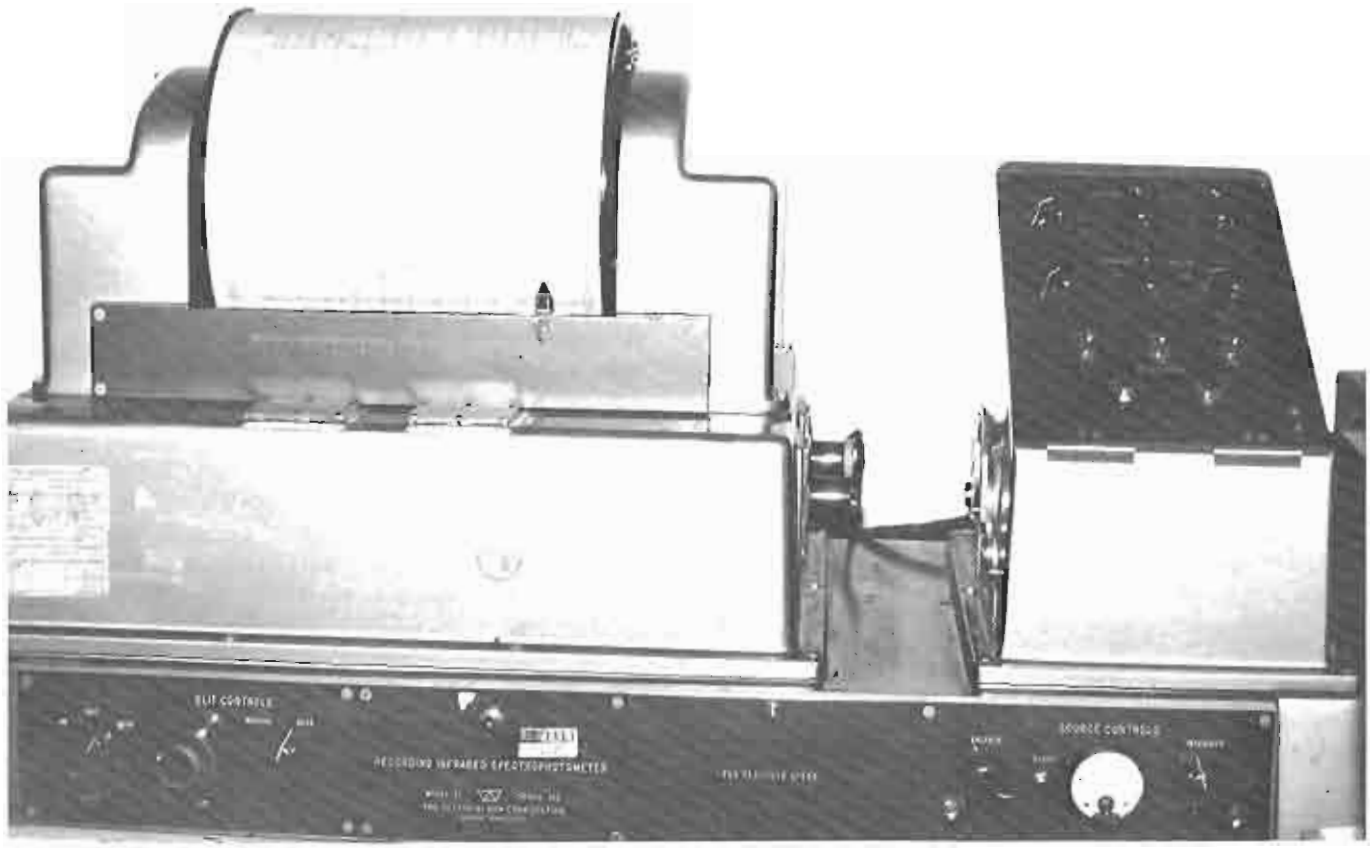
*Ultraviolet Spectrophotometry* — The principle behind ultraviolet spectrophotometry (UV) is that many organic compounds absorb UV energy, and the wave length of the absorbed energy can be accurately measured. The compound is dissolved in a non-absorbing solvent (water, ethanol, chloroform, etc.) and the solution is put in a quartz (also non-absorbing) cell in a UV spectrophotometer. The wave length of the light impinging on the sample in the cell is varied continuously and when the light is absorbed it is recorded as a peak on a chart. The wave length of absorption is measured in nanometers (nm = $10^{-9}$ meters; 1 meter is about 39 inches), formerly called millimicrons, and the resolution of the instrument is about one nanometer. The entire UV region is about 200 nm wide, which means that there are only 200 different values for a UV absorption. If only 20% of the known organic compounds absorb UV light, i.e. 400,000 compounds, then statistically 2000 different compounds will absorb at a given wave length. Therefore, it is clear that the UV is not a specific test for identity.

UV is, however, a very decent device for performing a quantitative analysis.[9] It must be remembered that quantitative analyses can only be performed after a qualitative analysis, i.e., after the identity of the substance has been determined.

*Infrared Spectrophotometry* — Infrared spectrophotometry (IR) works on the same principle as UV, but the energy being absorbed is heat energy as opposed to light energy. In contrast to UV spectra, IR spectra show many peaks and constitute a "fingerprint" of the molecule. A comparative analysis involving IR spectra of authentic and suspected drug, provided both are pure chemicals, is one of the strongest proofs of identity known. It is, in fact, scientifically acceptable proof of identity, in the absence of any other test.[10]



**Ultra-violet Spectrophotometer**



**Infra-red Spectrophotometer**

The problem with the use of IR in forensic analyses is that most street drugs are not pure chemicals, and the impurities, which are also chemicals, contribute many peaks to IR spectra. If the forensic chemist separates the pure drug from the contaminants (e.g. by chromatography) and then performs a comparative analysis, then he will have proved an identity. This practice is very seldom done.

Even a very small amount of impurity in a substance will show up in an IR spectrum. In these cases, it takes a skilled eye to pick out the spurious peaks.

*Mass Spectrometry (MS)* — One of the most reliable methods of identifying organic substances is mass spectrometry. The technique involves very elaborate and expensive equipment and, for this reason, is seldom used by prosecution chemists. However, in cases in which an analysis of a drug is performed without the aid of a mass spectrometer and/or an infrared spectrophotometer, as well as with incomplete chromatographic experiments *(vide supra)*, the identification is presumptive at best.

The principle behind mass spectrometry is similar to that behind UV and IR, but the energy used to excite the organic molecules is much higher and induces fission of some of the molecules into smaller pieces. Some of the molecules stay intact. The mass spectrometer has the ability to measure the masses of all the excited particles including the intact molecules, and the result is a spectrum of masses. Thus the observer receives a chart containing lines corresponding to the mass of the molecule (i.e. the molecular weight) and the masses of all the fragments. A typical mass spectrum may contain upwards of a hundred peaks and, as with an IR spectrum, is a "fingerprint" for the molecule. An even more reliable technique is the combination gas chromatograph-mass spectrometer. The effluent from the gas chromatograph flows directly into the mass spectrometer. This combination technique is the strongest method of identification known, stronger even than IR since analyses can be performed on mixtures of compounds, because of separation of mixtures in the gas chromatograph. Modern GC-MS combinations are completely automated through the use of computers. The cost of such a system is well over $100,000 and can be as high as $250,000.

*Microscopic Examinations* — The examination of substances with a microscope is used to observe the shapes of crystals in the microcrystalline tests and also to observe the morphological features of plant materials, e.g., *Cannabis*. Microscopic examinations are simply visual determinations of gross charac-

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teristics of the material in question and are very commonly encountered in court, especially in marijuana cases. The Cannabis leaves have cystolithic hairs, which are readily observed under the microscope, and are described as being "very characteristic." Other plants (e.g. hops ) have cystolithic hairs, but at the base of the Cannabis hair lies a crystal of calcium carbonate. A drop of hydrochloric acid placed on the slide during the microscopic examination will result in effervescence ($Ca\text{-}CO_3 + 2HCl \rightarrow CaCl_2 + H_2O + CO_2$), i.e. bubbles can be observed. The formation of bubbles does not *prove* that calcium carbonate is present, but they are consistent with its presence. Many other chemicals, e.g. sodium bicarbonate (baking soda), also liberate carbon dioxide bubbles when treated with hydrochloric acid.

## Drugs

*Isomers* — Two or more compounds which have the same molecular formula[11] but different molecular structures[12] are called *isomers*. It is important for defense attorneys to know the meaning of the word, because forensic chemists almost never distinguish between isomers, especially one type called enantiomers, i.e. non-superimposible mirror image molecules. Enantiomers have the same relationship as a left hand has to a right hand, or a left-threaded screw to a right-threaded screw. Two enantiomers will give the same color reactions, the same shaped crystals, identical UV, IR and mass spectra, and will not be separated by TLC or GC. They can easily be distinguished with an instrument called a polarimeter or a more sophisticated instrument called a spectropolarimeter. Compounds which have a handedness have the ability to rotate the plane in opposite directions.[13] In many cases, isomers of all types are covered by drug laws, but in some cases they are not. For example, there appears to be no law against the enantiomer of natural (—) cocaine, and it also appears that no forensic chemist has ever determined that alleged (—) cocaine actually rotates a plane of polarized light in the counterclockwise direction.

*Common Drugs*—The most commonly encountered abused drugs are listed below.

I. Opium Derivatives
   A. Morphine
   B. Heroin

II. Amphetamines
   A. Amphetamine
   B. N-Methylamphetamine (Speed)
   C. Methylenedioxyamphetamine (MDA)
   D. 2,5-Dimethoxy-4-methylamphetamine (DOM, STP)

III. Ergot Derivatives
   A. N,N-Diethyllysergeamide (Lysergic acid diethylamide, LSD)

IV. Cocoa Derivatives
   A. Cocaine
   B. Benzoyl Ecgonine (metabolite of cocaine)

V. Plant Materials
   A. Cannabis (Marijuana)
   B. Peyote (active component = Mescaline)
   C. Mushrooms (active components = Psilocybin and Psilocin)

VI. Indole Alkaloids
   A. N,N-Dimethyltryptamine (DMT)

*Heroin*—Heroin is not a natural product. It is synthesized from morphine, which is a natural product, the principal alkaloid from the opium poppy. The most common analysis of heroin usually involves three color tests and TLC. The color tests are usually (1) the Marquis test (purple), (2) the Froehde test (purple changing to green) and (3) the Nitric Acid test (yellow changing to green). Occasionally microcrystalline tests are done. Less frequently GC-MS and/or purification followed by IR are performed. Quantitative analysis is usually done by UV, but sometimes by GC.

Morphine analyses are similar.

*Amphetamines*—The analyses of all the amphetamines are notorious for usually being the weakest proofs of identity presented in the court: one color test, the Marquis (color dependent on the derivative), occasionally a microcrystalline test, TLC or GC (one test only). IR has been used, but hardly ever with pure material, and is therefore only *indicative* evidence.[14] UV spectroscopy is also used occasionally, but, as usual, is not specific.

*LSD*—Because of the very small doses involved in the use of LSD, one color test (Marquis) and TLC (one test) are the principal techniques used. On occasion UV is used. As mentioned earlier, TLC can be strong evidence if performed properly, and even one dose[15] of LSD provides enough material for many, many TLC experiments, but routinely only one is done. LSD is detected on the TLC plate with an ultraviolet lamp (blue fluorescence) or by spraying the plate with a chemical (*p*-dimethylaminobenzaldehyde) to give a blue colored spot. Perhaps a *good* analysis of the LSD would be three TLC experiments and a mass spectrum.

LSD, like heroin, is not a natural product, but is synthesized from a natural product. The ergot fungus produces several of the so-called ergot alkaloids, which serve as precursors for lysergic acid from which LSD is synthesized. Contrary to popular belief, the conversion of lysergic acid to LSD involves rather sophisticated chemistry. Since much of the LSD found in the streets is rather pure, it is apparent that the producers of LSD are well-experienced chemists.

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*Cocaine*—Cocaine is the principal alkaloid from the coca tree which is indigenous to parts of South America. Some cocaine, especially material from large seizures is an extraordinarily pure chemical as street drugs go, and is extremely easy to identify by IR. Material which has passed through the hands of middle-men will have been "cut" or diluted with a sugar (e.g. mannose, glucose, lactose, etc.) and frequently adulterated with a local anaesthetic such as procaine (Novacaine). Adulterants can interfere with color tests, microcrystalline tests and spectroscopy. Forensic chemists are now known to separate cocaine from diluted and adulterated samples by chromatography and run an IR spectrum on the purified material. More common, however, are incomplete TLC or GC experiments, as well as the ubiquitous color tests (cobalt thiocyanate gives a blue color).

As mentioned earlier, natural cocaine rotates a plane of polarized light in a counterclockwise sense and is (—)-cocaine. In some places there seems to be no law against isomers of cocaine.[16] The (+)-cocaine appears to be legal and to my knowledge no forensic chemist has distinguished between the two enantiomers. Another type of isomer (technically a disastereoisomer) of cocaine is known. The relationship between two diastereoisomers is the same as the one between two left hands when one finger on one of them has been turned over.[17] One of the known diastereoisomers of (—)-cocaine is pseudococaine. It would be a very difficult task indeed for a forensic chemist to determine that he did not have pseudococaine, even though the compound is rather esoteric and rare.

*Cannabis*—The most commonly encountered drug is marijuana, which is the leaves of the Cannabis plant. The resin from the flowering tops of the female Cannabis plant is called hashish and contains a higher concentration of euphoric substances. The principal euphoric substance is ($\Delta^1$-tetrahydrocannabinol ($\Delta^1$-THC), in some literature called $\Delta^9$-THC by an older nomenclature system.[18] The analysis of marijuana usually involves the microscopic examination mentioned earlier, a Duquenois test (a presumptive color test), and occasionally TLC. In one case known to me, the GC-MS combination was used and this analysis would have represented the best proof of identity of $\Delta^1$-THC, but the prosecution's chemist "manipulated" his data and the manipulation was discovered by the defense's chemist. This case terminated in a mistrial—and embarrassment for the prosecution.

Most laws state that illicit material is the plant *Cannabis sativa* L. (the L is for Linnaeus, the first person to describe the plant). There now seems to be some question as to whether *sativa* is the only species of the genus *Cannabis*. Shultes (Harvard) argues that there are, in fact, three species, *viz. sativa, indica and ruderalis* while Small (Canada) argues that there is only one, *viz. sativa*, and that there are varieties of this species. At this writing, the question has not been resolved.

## SUMMARY

A forensic chemist recently testified that he performed over 1000 heroin analyses during his three year tenure at a small southern state's Bureau of Investigation. If it is assumed that he took weekends and holidays off, then he did these 1000 heroin analyses in 750 working days. Absurd! This type of testimony may typify the biggest problem facing defense attorneys using a chemical defense in drug cases. The prosecution's chemist is the "good guy," can say anything and probably will be believed. The most successful chemical defenses result from the *detected* inconsistencies and half-truths in the prosecution's chemist's testimony. Detection is possible only when the defense attorney knows what to detect.

## NOTES IN PASSING

1. Many laws state that not only the drug is illegal, but so are its *isomers*, salts, etc. The 1973 index of *Chemical Abstracts* shows 96 different compounds with a molecular formula of $C_{21}H_{30}O_2$, one of which is $\Delta^1$-THC. Most of these compounds are chemically unrelated to the THC's. Are they all against the law?
2. Most forensic chemists have routine jobs doing, according to their own testimony, ten to twenty-five analyses a day. They frequently find what they are looking for.
3. Most forensic chemists have no theoretical background in the chemistry or physics behind their analytical methods.
4. Many forensic chemists are not chemists. The analyses they carry out and interpret can be done by untrained high school students.[19]
5. Most forensic chemists have testified many times in court, but have never had their testimony challenged.

## BASIC BOOKS

The two books listed below contain basic treatments of most areas likely to be encountered in chemical testimony. Both are designed for students in an introductory course in organic chemistry and are written in relatively simple language. The authors assume, however, that such students have some working knowledge of chemistry.

1. Banks, James E. NAMING ORGANIC COMPOUNDS—A PROGRAMMED INTRODUCTION TO ORGANIC CHEMISTRY. Philadelphia: W.B. Saunders, 1976.

This is a programmed text designed for self study. It contains the rules used for nomenclature, symbolism, isomerism and steroisomerism in organic chemistry.

2. Moore, James A. and David L. Dulrymple. EXPERIMENTAL METHODS IN ORGANIC CHEMISTRY. Philadelphia: W.B. Saunders, 1976.

This book is designed as a laboratory manual for a one-year organic chemistry course. Two-thirds of the book describes experiments. The first third of the book is an introduction which contains sections on chromatography (e.g. GC and TLC) and spectroscopy (e.g. UV, IR, nuclear magnetic resonance [NMR], and a small section on polarimetry). The introduction also deals with other physical properties (e.g. melting and boiling points) of organic substances.

# FOOTNOTES

[1] If we assume that there are 20 distinguishable colors, then there are 8000 possible responses in three color tests and 160,000 possible responses in four color tests. Statistically, 250 different compounds (out of 2,000,000) would give the same three color tests, and 12 would give the same four color tests. This type of argument is used for ultraviolet spectrophotometry *(vide infra)*.

[2] For example, a reasonably large molecule such as $\Delta^1$-tetrahydrocannabinol has several functional groups which apparently interact with Duquenois reagent to give a blue to blue-violet color. One part of this molecule is quite unreactive to almost all chemical reagents and modifications of this part of the molecule would probably not affect the Duquenois reaction or any other color test. To my knowledge such modified molecules have not been synthesized.

[3] Microcrystalline tests are frequently used in Colorado by the CBI, especially with suspected amphetamines.

[4] Two identical substances have identical melting points. Mixing two non-identical substances lowers the melting point of both. This is the principle behind using salt to melt ice on days in which the temperature is below 32° F.

[5] GC is correctly referred to by some as gas-liquid chromatography (GLC), vapor-phase chromatography (VPC) and vapor-phase-liquid chromatography (VPLC).

[6] The term stationary phase as applied to GC is used rather loosely here for simplicity.

[7] This process is analogous to the absorption of ink by a blotter.

[8] The Rf is defined as the ratio of the distance the substance travels to the total distance where the latter is the distance from the starting spot (not the bottom of the plate) to the solvent front.

[9] The determination of how much of a given substance is present.

[10] The one major exception to this type of proof is considered in the discussion of isomers *(vide infra)*.

[11] The molecular formula is the number and kind of atoms making up a molecule, e.g. $\Delta^1$-tetrahydrocannabinol ($\Delta^1$-THC) has the molecular formula $C_{21}H_{30}O_2$.

*CRIMINAL DEFENSE, page 20*

[12] The molecular structure is the arrangement of the atoms in a molecule. $\Delta^1$-THC and $\Delta^1(6)$-THC, both found in marijuana, are isomers. So is any other compound with a molecular formula of $C_{21}H_{30}O_2$.

[13] The symbol (+) is used for compounds which rotate the plane clockwise; (—) means counterclockwise. Older symbols are *d* (for dextrorotatory) and *l* (for levorotatory) for (+) and (—) respectively. For example, natural morphine rotates a plane of polarized light *counterclockwise and is* (—)-morphine or *l*-morphine.

[14] I have performed several amphetamine analyses in which the determination of the presence or "absence" of drug was in direct opposition to the conclusions of the forensic chemist. The word "absence" is in quotation marks because very small amounts (i.e. beyond the limits of detectability) may be interpreted as being absent.

[15] The usual dose of LSD is about 100 micrograms or about 300,000 doses per ounce.

[16] A defense based on isomers of cocaine was invented by and used with success by James Shellow of Milwaukee, Wisconsin.

[17] Another analogy of "diastereoisomers" is the relationship between two left hands, one of which is encased in a left-handed glove and the other which is encased in a right-handed glove.

[18] Frequently forensic chemists refer to $\Delta^1$-THC and other Cannabis components as "alkaloids." None of the compounds is, in fact, an alkaloid, which means alkali-like and the name is reserved for nitrogen-containing substances from plants. None of the components of Cannabis contains nitrogen, and they are the only known euphoric substances which do not.

[19] Typical analysis: Mix two drops of Marquis reagent with the substance in a white porcelain spot plate. Deep red-purple indicates opium derivative, orange indicates amphetamine, etc. (The preparation of the Marquis reagent, and other reagents, involves the simple mixing of two commercially available chemicals).

# NEWS AND INFORMATION

## ALBERT KRIEGER RECEIVES "OUTSTANDING PRACTITIONER" AWARD

The New York State Bar Association's Criminal Justice Section recently awarded its "Outstanding Practitioner" award to Albert Krieger who has often appeared as a faculty member at NCCDLPD Institutes and Summer Sessions. Mr. Krieger, who practices in both New York and Florida, began his career in 1949 after graduating from New York University Law School. His initial practice concentrated on Federal narcotics law but he eventually moved on to the defense of organized crime figures — the most famous being Joseph "Joe Bananas" Bonanno. His recent cases have included white collar criminal defense, tax evasion matters, representation of nursing home owners, and the defense of lawyers in trouble with the law. He was also one of several volunteer lawyers who defended the American Indians indicted after the Wounded Knee incident in 1974.

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## NLADA APPOINTS NEW DIRECTOR OF DEFENDER SERVICES

Frank N. Jones, NLADA Executive Director, has announced the appointment of Laurence A. Benner, former Chief Defender of Grand Rapids, Michigan, as Director of Defender Services and Associate Director of the National Legal Aid and Defender Association. Benner, a 1970 graduate of the University of Chicago Law School, practiced law in Chicago until 1972 when he became Director of the National Defender Survey, a criminal justice study of indigent defense services sponsored by the NLADA and funded by LEAA. While in that position he co-authored *The Other Face of Justice*, the official report of that survey. He has also been Assistant Appellate Defender in Chicago and Chief Defender in Grand Rapids, Michigan.

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## FORMER PUBLIC DEFENDER FIRST WOMAN TO SERVE AS CHIEF JUSTICE OF THE CALIFORNIA SUPREME COURT

Rose Elizabeth Bird, former public defender in Santa Clara County California, is the new Chief Justice of the California Supreme Court. At a news conference after her approval by a state judicial commission, she was quoted as saying, "I hope to dedicate my professional life in terms of this position to ensuring fairness and that justice is done."

## REGENT B.J. GEORGE, JR. IS NEW PRESIDENT OF SOUTHWESTERN LEGAL FOUNDATION

B.J. George, Jr., a member of the NCCDLPD Board of Regents, will become the new president of the Southwestern Legal Foundation of Dallas, Texas on August 1, 1977. Mr. George is Professor of Law and Director of the Center for the Administration of Justice at Wayne State University, Detroit, Michigan. The announcement was made by Leon Jaworski, Chairman of the Board of Trustees of the Foundation.

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## LEGISLATIVE DRAFTERS NEEDED BY ANTI-CAPITAL PUNISHMENT GROUP

The newly formed National Coalition Against the Death Penalty (NCADP) is compiling a package of proposed legislative amendments (concerning right to counsel, jury selection, evidence at the penalty phase of a two-stage trial, appelate review, and other procedural matters) that can be presented to state legislators who are sympathetic to anti-death penalty arguments.

This legislative drafting project is an effort of the Legal Defense Fund under Professor Anthony G. Amsterdam of Stanford Law School and the Capital Punishment Project of the ACLU.

Interested lawyers are urged to contact Henry Schwarzwild, Director, ACLU Capital Punishment Project, 22 East 40th Street, New York, New York 10016. (212) 725-1222.

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## FORMER REGENT AND FACULTY MEMBER NOW ON CARTER TEAM

President Carter has appointed Barbara Babcock, former NCCDLPD Regent and faculty member, to a post as Assistant Attorney General in charge of the Civil Division of the United States Justice Department. Babcock, who was an associate professor of law at Stanford University, directed the D.C. Public Defender Service in the 1960's and later founded San Francisco's Equal Rights Advocates, which specializes in opposing sex discrimination. She is one of a number of public interest lawyers who have been brought into the new administration.

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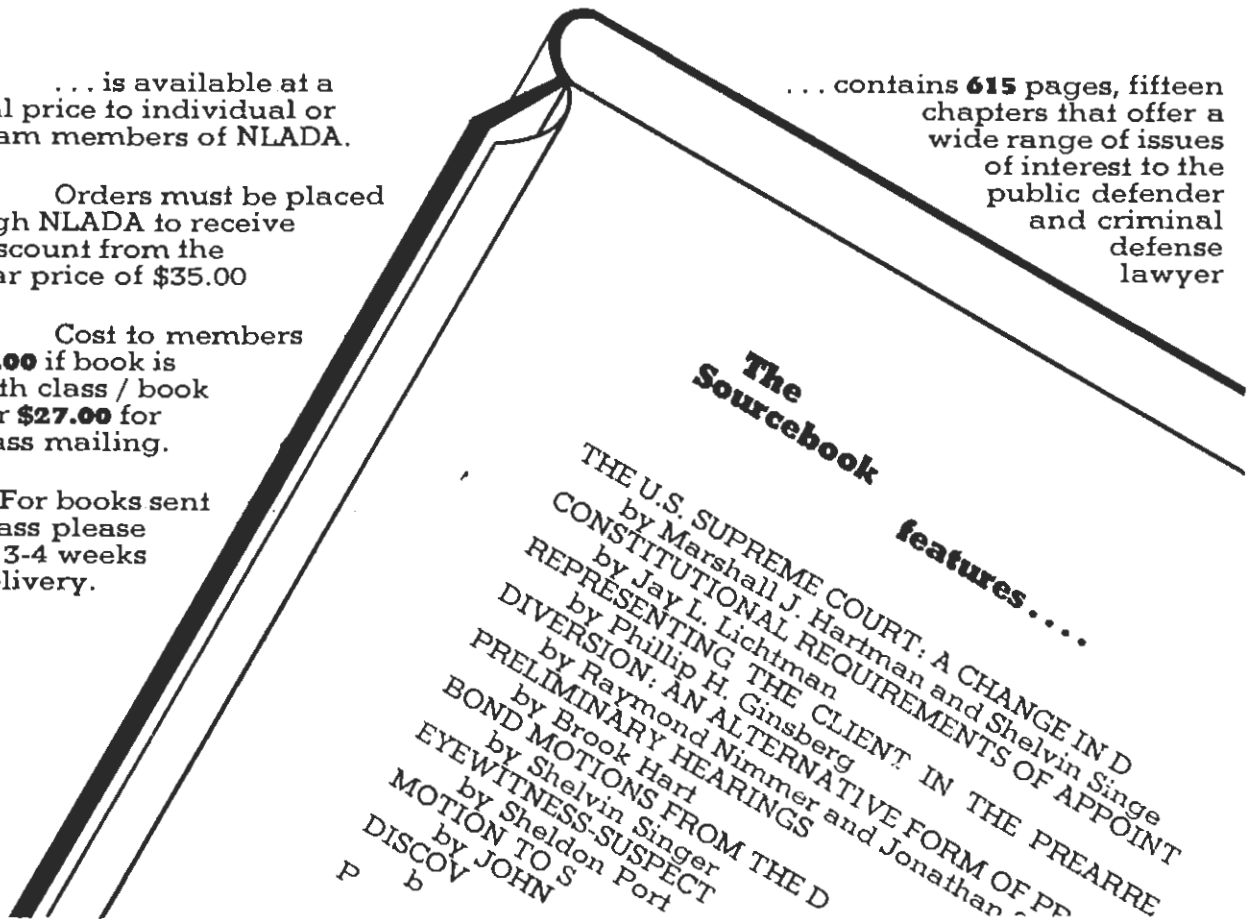


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