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Police Science Technical Abstracts and Notes

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POLICE SCIENCE TECHNICAL ABSTRACTS AND NOTES

Edited by

Joseph D. Nicol*

Abstractors

Richard O. Arther†

Ordway Hilton§

William H. Storer‡

Putting the Finger on Lead—H. G. Bourne, Jr. and S. Seferian, *Law and Order*, 6 (3): 10-11 (March, 1958). Since lead compounds are toxic when swallowed, definite precautions *must* be taken by fingerprint experts utilizing lead-compound fingerprint powders. Authors write how they discovered that two officers' exposure was 1 to 73 times the maximum safe value, which apparently caused them to suffer chronic lead poisoning. Described is how to determine by chemical means if powders contain lead, and if they do, what precautions must be followed. (ROA)

Scientific Examination at the Scene—A. C. Wood, *Law and Order*, 6 (3): 12 (March, 1958). Written for the patrol officer who does not have any expert help available. However, several basic rules are completely omitted, e.g., photographing a footprint before a cast is made. The recommended procedure to follow with tool marks is extremely poor. (ROA)

Locate that Latent Print—C. L. Frappoli, *Law and Order*, 6 (3): 24 (March, 1958). Good non-technical short article on searching for latent prints. (ROA)

Smoke Out Latent Prints—D. Macdonald, *Law and Order*, 6 (3): 46 (March, 1958). When latent prints are very old they sometimes are developed with dense smoke from the burning of camphor gum. Apparatus used is described. (Abstractor suggests that possibly a beekeeper's smoke-pot could also be used.) (ROA)

* Associate Professor, School of Police Admin. and Public Safety, Michigan State Univ., E. Lansing.
† Scientific Lie Detection, Inc., New York City.
‡ Graduate Assistant, School of Police Admin. and Public Safety, Michigan State Univ., E. Lansing.
§ Examiner of Questioned Documents, New York City.

Are Lie Detectors Really Scientific Tools?—J. H. Ruiter, *Law and Order*, 6 (3): 6-8 (March, 1958). Basic, non-technical information about the polygraph. (ROA)

Photography and Jaywalking—S. Holmes, *Law and Order*, 6 (4): 6 (April, 1958). How photography assisted the Rochester, N. Y., Police Department in its anti-jaywalking campaign. (ROA)

The Foto Focuser—M. Picard, *Law and Order*, 6 (4): 12 (April, 1958). Adapter turns 4 x 5 speed or crown Graphic Camera into a fingerprint camera. It also makes 1 to 1 b & w or colored photographs with a standard flash unit, however, area covered is 174% greater than with standard fingerprint camera. Also, can photograph convex and concave surfaces without distortion. (ROA)

The Camera Column—D. O. Moreton, *Law and Order*, 6 (4): 13-14 (April, 1958). Film characteristics covered are: latitude, resolving power, overcoating, and film base. (ROA)

Dri Powder Extinguisher—*Law and Order*, 6 (4): 46-47 (April, 1958). Small-size extinguisher to be used on fires where water should not be used. Also it can be used on humans with clothes afire. (ROA)

New Method for Precise Determination of Carbon Dioxide in Blood—Edward A. Gaensler, John B. Cadigan, Jr., Margorie F. Ellicott, Robert H. Jones, and Asher Marks, *Journal of Laboratory and Clinical Medicine*, 49 (6): 945-57 (June, 1957). The method utilizes the standard Van Slyke manometric apparatus plus a modified infrared gas analyzer. A measured volume of blood is introduced to the chamber of the Van Slyke apparatus, the

hemoglobin is converted to methemoglobin, and extraction is made in the usual manner. The extracted gas is diluted with room air and transferred to a tonometer. The CO concentration of the gas is measured with the infrared analyzer. The content of the blood, in volumes percent, can be calculated from the known volume of blood sample, volume of tonometer, and CO concentration in the tonometer gas. Accuracy of results in blood CO content analyses depend on the quality of the standard CO mixture. A number of applications of the method are illustrated. (WHS)

Unusual Accident—NRA Tech. Staff, *The American Rifleman*, 105 (9): 72 (September, 1957). The victim of this accident removed the loaded cylinder from his .22 cal. revolver and placed it in his shirt pocket. When he leaned over, the cylinder fell out and struck a cement floor in such a manner that a cartridge was discharged inflicting a fatal wound in his neck. (JDN)

Can a 9 mm. Cartridge Be Fired from a 7.62 mm. Pistol—Walter Hepner, *Kriminalistik*, 12 (3): 101-104 (March, 1958). The investigation of a suicide revealed that a 9 mm. Short had been fired from a 7.62 mm. Russian Tokarev Pistol. The projectile was elongated, and some of the lead core extruded from the base. The cartridge was not ejected. This interchangeability is possible due to the bottleneck character of the 7.62 mm. cartridge. (JDN)

The Examination of Exhibits in Suspected Arson Cases—B. B. Coldwell, *News Letter*, International Association of Arson Investigators, 8 (3): 25-36 (January-March, 1958). A survey of the investigation of suspected arson cases with respect to accelerants. Comparisons are made between steam distillation, alcohol extraction and distillation, vacuum distillation, and carrier distillation (Brackett). The author favors vacuum distillation. Suggested tests for flash point, boiling range, density, refractive index, capillary analysis, and light absorption. In most cases the specific source of the accelerant cannot be determined. (JDN)

Chemical Tests to Determine Alcoholic Influence—Their Use and Misuse—Robert L. Donigan and Edward C. Fisher, *Traffic Digest and Review*, 5 (10): 11-29, October 1957, discusses the status of alcoholic tests and certain cases in which they have been accepted and rejected by the courts.

The authors comment on the failure to prosecute when tests indicate blood-alcohol concentrations of less than 0.15 percent, the minimum level for legal presumption that a person is under the influence of alcohol. They point out the fact that some individuals show definite evidence of being under the influence at a lower level and discuss errors in presenting these cases including failure to show clinical symptoms indicating intoxication. In addition ten categories of blood-alcohol test cases which have been reversed are analysed. All laboratory personnel and law enforcement officers using these test will want to become familiar with the details of the paper. (OH)

Trap Materials and Marking Materials—A. Cuelenaere, *L'Officer de Police* (Belgium), numbers 5-6: 1-15, May-June 1957, considers the problem of trapping the criminal who commits repeated crimes, such as repeated pilfering of a cash box, by using powders or chemicals which will adhere to his hands or clothing and by actually marking the objects which he may steal. The article is of use to law enforcement officers and technicians in that it recommends specific substances and methods of application including colored dyes which blend with the object marked, but adhere strongly to the criminal's hands. Also discussed are indicators, silver nitrate, and fluorescent powders. Objects which may be stolen can be marked with fluorescent crayons or nickel sulfate. The marking of currency and other documents, coins and metal objects, inks, and petroleum products are treated (OH).

Correction

Col. Carl E. Heustis wishes to call attention to the following omission in his article, "Police Unions," (Vol. 48, No. 6, March-April 1958.) The paragraphs beginning with the second column on page 644 with the statement, "One of the best considered and widely cited rulings..." should have been enclosed in quotes. This quotation should continue through the second paragraph of the first column on page 645. The following footnote at the close of the quotation was omitted: Audrey M. Davies, "History and Legality of Police Unions," *GRA Reporter* 5 (4):42 (July-August 1953.) The author wishes to acknowledge this fine article as a major source of much of the information contained in the earlier parts of his present paper.