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Police Science Technical Abstracts and Notes

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POLICE SCIENCE TECHNICAL ABSTRACTS AND NOTES

Joseph D. Nicol*

Night Photography—W. H. Ford, *The Police Journal* (London), 26:213-7 (July, 1953). The depth of subject encountered in night accident photography requires a compromise "flash" shot and a return to the scene the next morning. Ford recommends a "light painting" technique which records the entire scene evenly lighted and preserves vehicles and tire marks not available at a later date. A spot light is used to "paint" the dark areas between street lamps and other shadow areas. With practice a very even lighting can be obtained. The head lights of moving vehicles are excluded by covering the lens for the interval that they are in the area, and pedestrians are not recorded if they are not illuminated. At f. 7.7 exposures of 4 to 6 minutes are required. Although such a picture is not a reproduction of what the eye "sees" at night, nevertheless, it is a truer picture of the night scene than one taken by daylight.

Economy of Manpower—Godfrey Duncan, *The Police Journal* (London), 26:187-200 (July, 1953). Recommendations for the better employment of trained policemen by (1) replacement of policemen by civilians in purely non-police positions, such as clerical jobs, (2) curtailment of unnecessary duties, such as not requiring the officer's presence in court unless a "Not Guilty" plea is entered, (3) improvement of public co-operation by removing long out-of-date laws and building good press relations, and (4) improvement of the morale of the individual policeman by giving him a voice in the development of his department.

The Use of Tear-smoke by Police—Tipstaff, *The Police Journal* (London), 26:217-25 (July, 1953). A continuation of a discussion of tear-gas tactics begun in the July-Sept., 1948, issue. In the current article, the practical aspects are discussed. How to make use of wind, dealing with mobs at long and short range and close quarters as well as tactics for dividing a large mob into sections are included. Diagrams accompany the article showing the projection of smoke and the deployment of policemen.

Our Parole Problem—E. J. Hickey, *Vox-Cop*, 9:2-5 (May-June, 1953). A practical analysis of the parole problem as it must be faced up to by the police and the community.

Western German Proofmarks—A. Engelhardt, *The American Rifleman*, 101:46 (August, 1953). The proofmarks used by the new proof house at Ulm are given.

.45 Auto Serial Numbers—J. S. Hatcher, *The American Rifleman*, 101:46 (August, 1953). The official assignments of serial numbers for the .45 Colt Automatic pistol to Colt's, Remington, Ithaca and Union Switch and Signal are given. The finding of weapon with serial number outside of the assigned group for which it was manufactured would indicate alterations had taken place.

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Laboratory for Guns—Anon., *The American Rifleman*, 101:34-6 (August, 1953). A description of the facilities at the new H. P. White Laboratory at Bel Air, Maryland.

Research on Chemical Erasures on Documents—Doctor Charles Sannie and Jacques Pinel, *Revue de criminologie et de police technique*, 4 (4): 283-94, (1950). The research described in this article involves the accurate measurement of the resistance to the passage of an electrical current through the paper measured under conditions of 100% relative humidity. The study includes a large number of measurements of the resistance and its variation found in normal papers and in those subjected to various chemical treatments such as might be used in chemically removed writing. The apparatus used is described in some detail, as well as the results of the extensive research. The authors point out that this technique will sometimes demonstrate that a chemical erasure has occurred when ultraviolet light and other methods of examination fail; however, the technique is not refined sufficiently to indicate, at the present, defusion and age of ink or to enable one to read an erased text. (Submitted by Roger S. Greene.)

Determination of Barbiturates—Leo R. Goldbaum, *Analytical Chemistry*, 24 (10): 1604-07 (Oct., 1952). An ultraviolet spectrophotometric method for specific identification and quantitative determination of micro quantities of barbiturates is described. Identification and determinations are based on the optical density differences of barbiturates in alkaline solution and at pH 10.5. Wave length readings are taken over the range 305 μ to 225 μ . When barbiturates are present the Optical Density ratio between the alkaline and buffered solutions decreases from a positive value at 260 μ to a negative value at 250 μ with a maximum negative difference at 240 μ . Quantitative estimates are based on the OD at 260 μ . Interfering substances in biological material and other drugs do not show the shift in absorption on changing from alkaline to acid solution. (Submitted by John F. Williams, Technical Laboratory, Missouri State Highway Patrol.)

New Tests for Identification of Cocaine—Tetsutaro Naumi, *Analytical Chemistry*, 24 (12): 13A-15A (Dec., 1952). Tetsutaro Naumi of the Far East Criminal Investigation Laboratory, Tokyo, Japan, describes a new semimicro analytical test for the identification of cocaine and like substances. One or two mg. of sample is placed in a white porcelain evaporating dish and 0.5 ml. Marquis' reagent is added. Watch for color and heat on steam bath for from 10 to 30 minutes. Transfer to test tube, and examine under ultraviolet light. An orange yellow fluorescence is claimed for cocaine and tropacocaine. Benzoic acid, benzaldehyde, and benzoïn also give similar colors. (Submitted by John F. Williams.)

Review of Analytical Chemistry—*Analytical Chemistry*, 25 (1): 2-74 (Jan., 1953). The review of Analytical Chemistry in the January, 1953, issue of *Analytical Chemistry* lists notes under several headings which are of interest to the police laboratory. References under Clinical Chemistry, Food, and Pesticides would be of particular interest. (Submitted by John F. Williams.)

The Analysis of "General Unknowns" in Toxicology—M. Feldstein-N. C. Klendshoj, *The Analyst*, 78:43-7 (Jan., 1953). A six group separation is used

to look for the "general unknown." Volatiles, acid-chloroform soluble non-volatiles, sodium hydroxide-HCCl₃ soluble non-volatiles, NH₄OH-HCCl₃-isopropyl alc sol. non-volatiles, heavy metals, anions. A continuous liquid-liquid extractor and an all glass distillation apparatus are shown. The procedure is a modified "Stas-Otto." Four portions are analyzed simultaneously, and all preliminary work can be done in one day. As necessary, quantitative analyses are performed on reserve portions kept in deep freeze.

Walther P-38 Pistol—E. J. Hoffschmidt, *The American Rifleman*, 101:32-3 (August, 1953). A brief history of this weapon and illustrated instructions on disassemble.

Modern Firearms Investigation—Jac Weller and F. J. Jury, *The American Rifleman*, 101:24-6, 68-70 (August, 1953). A general discussion of firearms identification.

What Types of Training or Educational Opportunities Are Essential to Provide Police Officers with the Knowledge and Skill Expected of Them?—F. M. Kreml, *Traffic Digest and Review*, 6-10 (April, 1953). The general education, departmental in-service training, outside specialized training, and pre-service training needed by police officers for the proper fulfillment of their jobs are discussed. Ways of meeting these requirements are given. It is stressed that the field of specialized training for the police administrator has been neglected in most police departments. Pre-service training might be undertaken in the form of a cadet system working toward the eventual requirement of a two-year college diploma for police employment.

Arithmetical Codification of "Special Patterns"—Ernst Steinwender, *Fingerprint Magazine*, 12:15-19 (June, 1953). A scheme for subdividing the small lettered groups in a Henry system ten fingerprint file.

A New Subdivision for Single Finger Prints—James Brown, *Fingerprint Magazine*, 12:3-4 (June, 1953). An extension of single fingerprint classifications by the location of core and delta by a special reticule.

Chiroscopy—F. Santamaria Beltran, *The International Criminal Police Review*, Eighth Year, No. 69, 184-91 (June-July, 1953). The classification of palmprints from scenes of crime.

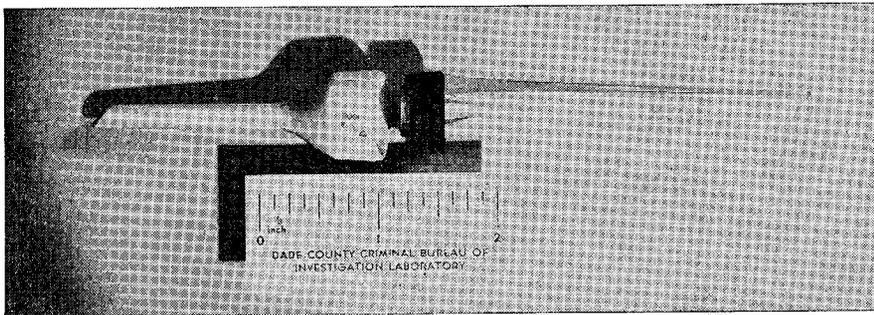
Infra-Red Photoscopy—Rene Lechat, *International Criminal Police Review*, Eighth Year, No. 69, 170-9 (June-July, 1953). Visual examination of specimens in the laboratory and at the crime scene are possible with infra-red, ultra-violet, white light by using C. V. 147 converter tubes. Electronic circuit and optical systems are discussed.

School Crossing Guards: A Major Police Development—A. M. Davies, Institute of Public Administration, 684 Park Avenue, New York 21, N. Y. An analysis of the growth of school crossing guards. The release of regular police for other assignments and the fine safety record is a major accomplishment of this recent adjunct of the police system.

Trading Good Dollars for Worthless Checks. Shoplifting Racket, Tricks of the Trade—Published by American Stores Company, Public Relations Department. Distributed by Philadelphia Police Department. Pamphlets advising store managers and personnel on tactics of "check artists" and "shoplifters."

Accident Facts, 1953 Edition—Statistical Division of the National Safety Council. A study of accidental death and injury in 1952 in the United States.

A Semi-micro Dust Collector—The removal of small deposits of dust and other dry material without the inclusion of contaminants from a broader area may be accomplished by the use of a semi-micro dust collector. 8mm. glass tubing is drawn down to a 1mm. bore and the large end is flared to the inside diameter of a micro Buechner funnel. The tubing is inserted into a one-



hole rubber stopper fitting the Buechner funnel. A filter paper is cut to fit the funnel, and the assembly is attached to a vacuum pump with vacuum tubing. Areas can be examined and cleaned under a wide field microscope. Dried paint can be loosened and collected from fabrics without the unnecessary inclusion of large quantities of cloth fibers. (Joseph D. Nicol.)

The New Fur Products Labelling Law—Max Bachrach, *The Weekly Underwriter*, 167:792 (Sept. 27, 1952). This new law requires that the fur coat industry must attach a tag to each garment giving the name of the animal that produced the pelt, the country of origin and every coat must have an individual number. Records of the transaction must be kept for three years.

Southern Police Institute Courses—The Winter term will run from January 4 to March 26, 1954 and the Spring term from April 5 to June 25, 1954. Applications may be made to David A. McCandless, Director, Southern Police Institute, University of Louisville, Louisville 8, Ky.

Industrial Security: A Challenge—Lt. Comdr. Edward U. O'Donnell, USNR, *U. S. Naval Institute Proceedings*, 79(9):990-993 (September 1953). The author analyzes the problem of industrial security in a democracy and gives two suggestive methods for checking on the effectiveness of security measures within an industrial organization.

PROFESSIONAL ORGANIZATIONS

American Society of Questioned Document Examiners

The American Society of Questioned Document Examiners held their annual meeting in New Orleans, Louisiana the week of August 10-14. Papers were prepared and presented on various elements of effective testimony and a demonstration of testimony was given by several members. A committee of four senior members commented on and criticized these presentations.

Homicide Investigation Seminar

The Kettering Laboratory, the Department of Preventative Medicine and Industrial Health, College of Medicine, University of Cincinnati, has announced its Annual Seminar for the Investigation of Homicide for police officers to be held October 12-16, 1953. This Seminar is given in cooperation with the Coroner's Office of Hamilton County and the Police Department of the City of Cincinnati. Registration is limited, but is open to police officers and law enforcement personnel interested in this phase of criminal investigation. Applications should be made to Frank P. Cleveland, M. D., of the Kettering Laboratory.

NEW PRODUCTS

EDITOR'S NOTE: It is the purpose of this additional service to the readers of the Journal to call their attention to new products deemed helpful in police fields. The mention of any product in this Journal, however, is not to be construed as a recommendation by the Journal.

X-Ray Spectrograph—The Research and Control Instruments Division of the North American Philips Company, Inc., Mt. Vernon, N. Y., has developed an x-ray spectrograph suitable for qualitative and quantitative elemental analysis of microgram quantities of specimen. The non-destructive aspect of the test will appeal to the police laboratory field.

Fisher Radioactive Reagents—Twenty-five radioactive compounds, 22 organic, and 3 inorganic are available from the Fisher Scientific Company in one microcurie quantities. These might be used to "tag" Detective Dyes and provide further proof of theft. A Geiger counter may be used to detect the presence of the labelling compound.

Vu-Lyte—The Charles Beseler Company, 60 Badger Avenue, Newark 8, N. J., has solved three of the main problems accompanying opaque projection. A vacuum platen holds the copy flat and the passage of air cools the machine. A metallic belt conveyor "Feed-o-matic" feeds new copy in at one side and old copy out at the other. The Pointex projection pointer permits the operator to point out details on the illustrations without leaving the projector. The 13" x 22" x 24" machine weighs 35 lbs. and operates on 115 volts AC. Illumination is provided by a 1000 watt lamp. Copy 10" x 11" can be projected.

Minifon Wire Recorder—The new two pound wire recorder manufactured by Monske and Company of Hanover, Germany, and distributed in America by Allied Radio of Chicago may prove to be just the thing that investigators

have been looking for. The battery operated unit records for 2½ hours and yet measures only 6.6 x 4.2 x 1.3 inches. Accessories include a microphone camouflaged as a wrist watch and a head set for playing back recorded material.

FOREIGN LANGUAGE PERIODICALS AND ARTICLES OF INTEREST IN THE FIELD OF POLICE SCIENCE*

Compiled by
Kurt Schwerin**

Algemeen politieblad van het Koninkrijk der Nederlanden. The Hague. 102d year, no. 5, March 7, 1953.

H. Visscher, *Het resultaat van tactisch en technisch onderzoek bevestigd door bloedgroepbepaling* (The result of tactical and technical investigations on the basis of the determination of blood groups) (p. 83-86).

Annales de médecine legale et de criminologie. Paris. 33d year. no. 2, April/May, 1953.

A. Okrös, *Contribution à l'identification de l'orifice d'entrée et de sortie des blessures par armes à feu* (On the identification of the orifices of wounds caused by fire arms) (p. 83-96).

Deutsche polizei. Hamburg. nos. 5-8, May-August, 1953.

Ernst Steinwender, *50 Jahre daktyloskopie in Deutschland* (50 years of dactyloscopy in Germany) (no. 5, p. 70-74; no. 6, p. 94-98; no. 7, p. 114-117; no. 8, p. 138-142).

Deutsche zeitschrift für die gesamte gerichtliche medizin. Berlin-Göttingen-Heidelberg-Munich. vol. 42, nos. 1-2, 1953 (New listing).

P. Riefel, *Kriminalbiologische untersuchungen im Badischen jugendstrafvollzug* (Crimino-biological investigations in criminal procedure for juveniles in Baden) (no. 1, p. 1-30)—M. Fossel, *Zur bestimmung der verletzungsursache aus dem wundbefund* (The determination of the cause of injuries after examination of the wound) (no. 1, p. 66-70).—H. J. Starek, *Untersuchungen über die verkehrssicherheit alkoholgewohnter kraftfahrer bei blutalkoholwerten um 1.5 g 0/00* (Investigations on the traffic safety of motorists who are alcoholics) (no. 2, p. 155-161).—H. Günther & O. Schmidt, *Die zerstörung des menschlichen gebisses im verlauf der einwirkung hoher temperaturen* (The destruction of human teeth through the impact of high temperatures) (no. 2, p. 180-188).

International criminal police review. Paris. Seventh year, nos. 58-59, May-July; nos. 61-63, Oct.-Dec. 1952. Eighth year, nos. 64-68, Jan.-May, 1953. English edition. (No. 60 listed in no. 4, vol. 43, of this Checklist.)

E. Güven, *The signature* (no. 58, p. 130-36).—Dr. Boehme, *Safety locks* (p. 137-47).—Marcel Le Clère, *The protection of banking documents against forgery* (p. 148-50).—P. Calaber, *Three-finger classification* (p. 151-52).—

*All periodicals listed are available in the Elbert H. Gary Library, Northwestern University School of Law, 357 East Chicago Ave., Chicago.

**Head, Foreign and International Law Sections, Elbert H. Gary Library, Northwestern University School of Law.

- M. Sicot, *The counterfeiting of fashions* (no. 59, p. 162-69).—Albert W. Somerford, *Comparison of writing inks by chromatography* (p. 170-73).—F. Harbitz, *Multiple causes of death* (p. 174-181; reprint from *Nordisk kriminalteknisk tidskrift*, 1946).—M. Sicot, *The International criminal police commission at the seventh session of the UN Narcotics commission* (no. 61, p. 251-52).—V. G. Kantekar, *Dogging the criminal* (p. 253-55).—Jacques David, *An important inquiry in Lyons: A general assault on crime* (p. 256-67).—J. Boon, *The lie-detector* (no. 62, p. 289-93; no. 63, p. 322-28).—*The police and the rehabilitation of offenders* (From the Cuban police force) (no. 63, p. 310-16).—H. J. Anslinger, *The sheriff and narcotic enforcement* (p. 317-21).—U. Sorrentino, *Fingerprints* (p. 329-37).—J. Gomez Fernández, *The classification of foot-prints of new born children* (no. 64, p. 3-12; no. 65, p. 52-62).—A. Goldenberg, *Seelig's criminal typology* (An evaluation of Prof. Seelig's typology from his work *Die typen der kriminellen*, Berlin, 1949) (p. 13-22).—W. F. Hesselink, *The Lans case* (p. 23-32).—J. A. Aldrich and G. T. Davey, *The permanent record of gemstone identification* (no. 65, p. 42-51; reprint from *Journal of Criminal Law, Criminology and Police Science*).—M. Sicot, *Motorised road brigades (The French road police)* (p. 63-66).—M. Sicot, Editor of the International criminal police review, *Reflections and statistics* (no. 66, p. 74-81).
- F. E. Louwage, *Some remarks on police interrogation* (no. 67, p. 114-121).—R. Taupin, *Methods of marking playing cards* (p. 122-128).—R. M. Howe, *Disguised cars in England* (p. 129-130).—G. Isnard, *The scientific examination of works of arts* (no. 68, p. 138-150).—Sir Harold Scott, *Policewomen in Great Britain* (p. 151-154).—João Amoroso Netto, *The crimes of a sexual maniac* (p. 155-160).
- Investigações. São Paulo. Fourth year, no. 41, May, 1952; no. 42, June, 1952. Jose del Picchia Filho, *Método grafoscópico universal* (A universal graphoscopic method) (p. 75-84).—João Amoroso Netto, *A Comissão internacional de policia criminal e a Assembléa de Estocolmo* (The International criminal police commission and its Stockholm Congress) (p. 75-129).
- Kriminalistik. Heidelberg. Seventh year, no. 11/12, June, 1953. L. Heinrichs, *Das wahrheitsserum* (The truth serum) (p. 136-138).
- Die Neue polizei. Munich. Seventh year, no. 1, Jan. 1953. Karl Thoma, *Neue wege der Blutalkoholbestimmung* (New ways for the determination of blood alcohol) (p. 8-9).
- Rassegna di studi penitenziari. Rome. Second year, nos. 4-6, July/Aug. 1952-Nov./Dec. 1952. C. Malfitano, *Importanza dell'elettro-encefalografia in criminologia* (The importance of electro-encephalography in criminology) (no. 4, p. 558-60).—Jean Pinatel, *I problemi attuali della criminologia* (Actual problems of criminology) (no. 5, p. 657-70).—Filippo Saporito, *I plessi criminogeni* (Criminogenic elements) (p. 671-92).—B. Dattilo, *Il sistemá penitenziario degli Stati Uniti d'America* (The penitentiary system of the USA.) (no. 6, p. 823-54).
- Zeitschrift für verkehrssicherheit. Tübingen. Vol. 1, no. 5/6, Oct./Nov. 1952. Arno Brösicke, *Die entwicklung des verkehrs-polizeiwesens in Deutschland* (The development of the traffic police system in Germany) (p. 268-76).