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Police Science Technical Abstracts and Notes

POLICE SCIENCE TECHNICAL ABSTRACTS AND NOTES

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The Criminogenic Action of Cannabis (Marihuana) and Narcotics—M. Andrade, *U. N. Bulletin on Narcotics, 16* (4): 23–8 (October–December, 1964). The author can find no evidence to classify cannabis as a narcotic. Usually the personality maladjustment precedes the use of marihuana. He believes that handling a user as a narcotic problem rather than as a psychiatric one only worsens the problem. (JDN)

Recent Advances in the Chemical Research of Cannabis—L. Grlic, *U. N. Bulletin on Narcotics, 16* (4): 29–38 (October–December, 1964). A review of the literature on separation of components of marihuana resin. The Beam, Ghamravy, and Duquenois-Negm tests when all positive permit a high probability determination of cannabis. (JDN)

Fingerprint Photography, "Painting" with Specular Reflection—F. V. Woodward, *The Police Journal, 36* (10): 491–3 (October, 1963). Fingerprints on round objects can be photographed by painting the surface with light using the minimum diaphragm opening. (JDN)

Larceny of Poultry—S. S. Kind, R. A. Outteridge, and E. A. Kilner, *The Police Journal, 36* (10): 481–5 (October, 1963). The examination of the contents of the gizzards of stolen poultry, comparing this with control specimens, may serve to identify the source of poultry. (JDN)

Shoe Impressions in Snow—R. D. Ostler, *The Police Journal, 36* (11): 532–5 (November, 1963). The author outlines a simple procedure, using a cooled plaster of Paris mix, for casting impressions in snow. (JDN)

Mobile Criminals and Organized Crime—J. King, *The Police Journal, 38* (1): 17–27 (January, 1965). Author suggests that offenses committed using a car should carry heavier sentences than offenses without a car. The interchange of investigators between districts would prevent criminals operating unknown in another area. He advocates the use of employment of criminals to compensate the victim. King emphasizes that successful prevention and detection of crime requires information developed at the local level. For this purpose, the departure of the "beat" patrolman must be compensated for by the addition of C. I. D. men with local contacts. King deplores the flood of memoir type publications and other releases depicting, in detail, successful police methods. (JDN)

A Major Case Squad for Metropolitan Areas—C. M. Kelley, *F.B.I. Bulletin, 33* (8): 3–6, 29 (August, 1964). Organization and training of Metro squad in Kansas City, Missouri area. (JDN)

.22 Firing Pin Impression File—S. O. Berg, *Identification News, 14* (9): 4– (September, 1964). A discussion of the mode of classifying .22 firing pin impressions. (JDN)

Death from Chlorpromazine Poisoning—A. Fatteh, *Journal of Forensic Medicine, 11* (3): 120–4 (July–September, 1964). The anatomical and histological findings in the death of a 67 year old woman by chlorpromazine are reported. The toxicological analysis is given. (JDN)

Acute Parathion Poisoning—A. Vercruyne and P. Deslypere, *Journal of Forensic Medicine, 11* (3): 107–19 (July–September, 1964). Symptomatology

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and analytical methods are related to several cases. Thin-layer chromatography and quantitative determination of cholinesterase inhibition are the most reliable methods for anatomical material. (JDN)

Burning Time—Candles—W. H. Hopper, *Police, 8* (6): 16–6 (July–August, 1965). Experiments with candles indicated that burning times might range from ten minutes per inch to 4–5 hours per inch, depending upon the type of candle. Further, candles can be arranged in series to extend burning time. (JDN)

Science vs. the Law—D. T. Dragel, *Analytical Chemistry, 37* (3): 27A–32A (March, 1965). A discussion of the problems and place of chemistry in the law courts today. (JDN)

Indicators in Automatic Pistols—V. Krcma and L. Olson, *The American Rifleman, 112* (8): 48–50 (August, 1964). Those weapons which have cocking and loading indicators are discussed. Use of this observation will indicate the condition of the weapon before a chambered cartridge is disturbed or fired. (JDN)

Whitney .22 Automatic Pistol—J. M. Triggs, *The American Rifleman, 112* (8): 56–7 (August, 1964). Parts legend and disassembly procedure. (JDN)

Reciprocity Failure: A Characteristic—D. B. Eisendeath, Jr., *Popular Photography, 56* (1): 10, 12, 32 (January, 1965). Gives a table of exposure and filter corrections for color film available today (1965) when exposures exceed $\frac{1}{10}$ second. (JDN)

Suicide, by Hanging—Erstaunliche Aktionsfähigkeit nach Erhängungsveranch mit Reiszen des Strickes—W. Holczabek, *Archiv f. Kriminologie, 134* (1 & 2): 6–11 (July–August, 1964). The subject placed a slip knotted rope around his neck, climbed a tree, fastened the rope around a limb, and jumped down. The fall broke the rope leaving a loop tightly fastened around his neck. The subject left a trail of footprints in the snow to a place 160 meters away where the body was found. (JDN)

Blood Stains, Species of—Menschenblutnachweis mittels Phytopraecipitin—W. Haferland, *Archiv f. Kriminologie, 134* (1 & 2): 12–16 (July–August, 1964). Human blood stains can be identified by smears of a reaction between the stain and an extract of Bryophyllum. Saline extracts of ripe buds of Bryophyllum diagremontianum were used in an agar plate diffusion method. (JDN)

Drowning, Diatoms and—Zur Frage der Sicherheit des Diatomeen-Nachweises beim Ertrinkungstod—U. Janitzki, *Archiv. f. Kriminologie, 134* (1 & 2): 24–5 (July–August, 1964). After a series of experiments, the author concluded that although diatoms exist in air, their presence in the body is still an important indication of drowning. (JDN)

The Role of Alcohol in Fatal Traffic "Accidents"—H. E. Campbell, *Traffic Digest, 65* (3): 24–6, 36–7 (March, 1965). An analysis of accident statistics shows that at least 60% of fatal traffic accidents involves a drinking driver. A lower level must be accepted by legislatures and cultural patterns must be established that will place a sober driver at the wheel. More attention must be given to the role of the chronic alcoholic. "The United States must meet the drinking-driver problem in a rational, non-sentimental, civilized manner." (JDN)

Handwriting of the Blind—Irby Todd, *Identification News, 15* (1): 4–9 (January, 1965). The writing of the blind can be separated into those who learned to write and then became blind and those who learned to write while blind. The discussion is general and indicates that the writing of the blind can be identified. Occasionally, mechanical aids are used to maintain spacing. (JDN)

Gas Chromatography—F. M. Kerr, *RCMP Quarterly, 29* (2): 85–94 (October, 1963). A general discussion of the application of gas chromatography to arson investigation. The author cautions against direct comparison between the chromatograms of fresh standards and exposed specimens. The standards should be "conditioned." (JDN)

Rapid Determination of Lead in Urine by Ion Exchange—Donald T. Forman and James E. Garvin, *Clinical Chemistry, 11* (1): 1–9 (January, 1965). A method for determination of urinary lead was developed in which this element is removed from urine by means of a chelating agent, eluted, and determined by modified dithizone method. This was developed for routine screening

of employees in the lead industry, however it seems to be adaptable to routine toxicology procedures or screening and is time saving since it eliminates wet ashing. The urine sample is adjusted to the correct pH and passed through a ion-exchange column of Dowex A-1 Chelating Resin. The eluate is then reacted with a buffered dithizione reagent and extracted from the alkaline buffer with carbon tetrachloride which is centrifuged and read on the spectrophotometer at 510 millimicrons. A standard curve is then prepared for quantitative determinations. Interference by calcium and magnesium appeared to be excluded from this procedure; however, the method as it stands cannot be considered to exclude bismuth and thallium. (JDC)

A Simple Rapid Method for Paper Chromophotography of Barbiturates—William J. Waddell, *Clinical Chemistry, 11* (1): 37–39, (January, 1965). Biological fluids buffered to pH of 6 are extracted with ethyl ether. A measured part of the ether is then impinged to dryness and the residue spotted on an alkali treated and dried Whatman No. 2 paper, which is then exposed to descending chromatography with chloroform saturated with water. The barbiturate can be located by viewing with a mercury lamp, or it may also be eluted into an alkaline buffer and ultraviolet spectra determined. In instances of suspected barbiturate intoxication, two ml of serum, oxalated plasma, urine, or gastric contents is suggested to be used. (JDC)

A Micro Method for Serum Cholinesterase—Phil J. Garry and Joseph I. Routh, *Clinical Chemistry, 11* (2): 91–96 (February, 1965). The cholinesterase acts on acetylthiocholine to release thiocholine, which reacts with 5:5-dithiobis (2-nitrobenzoic acid) to produce a yellow color. The activity is measured after incubation for three minutes at 37 degrees. The difference in absorbance between blank and test sample is then measured at 412 millimicrons. The author states that this method is well suited for use in the routine clinical chemistry laboratory since it requires minimum equipment, specimen, pipetting, and time. It could also be used for screening suspected subjects of poisoning by organic phosphates or exposure to organic phosphate insecticides. (JDC)

Simultaneous Determination of Barbiturates and Salicylates by Ultraviolet Spectrophotometry—Solveig Bjerre and C. J. Porter, *Clinical Chemistry, 11* (2): 137–154 (February, 1965). The barbiturates and salicylates are extracted from organic material into a chloroform phase, and then the chloroform phase is re-extracted into an alkaline aqueous phase. While barbiturates have no absorbance above 280 millicrons and extracted normal serum has insignificant absorbance, salicylate has a maximal absorbance peak of 296 millimicrons which is proportional to concentration. The barbiturate concentration can be calculated from absorbance differences between pH 10 and pH 2, pH 13 and pH 2, pH 13 and pH 10, at wave lengths 239 millimicrons, 253 millimicrons, and 259 millimicrons. As the UV absorption of some barbiturates but not of salicylate are changed during alkaline treatment, a partial differential of barbiturates based on the rate of alkaline hydrolysis is made possible. The error involved in barbiturate determinations performed when salicylate is present is discussed along with interference from other drugs. (JDC)

The Analysis of Biological Materials by Atomic-Absorption Spectroscopy—J. B. Willis, *Clinical Chemistry, 11* (2): 251–258, (February, 1965). Discussed in this paper is the theory of the method, instruments, and instrumentation available, scope and limitations of the method, calibration and measurement techniques. Also, the author states the clinical applications of the atomic absorption method, which falls in three main fields: (1) Determination of the principal metal constituents of body fluids, (2) Determination of trace quantities of heavy metals in body fluids, (3) Determination of metals whether present as major or trace constituents, in tissues in general. In the first two applications, the atomic-absorption technique can normally be used without prior ashing of the material, though in a third, ashing is required. (JDC)

Recent Developments in X-Ray Spectrometry as Applied to Clinical Chemistry—Samuel Natelson, *Clinical Chemistry, 11* (2): 290–308 (February, 1965). This paper adds to the other articles written by this author on allied subjects and the use of X-ray Spectroscopy on other occasions. Described is the principal as applied and some methods for preparing samples to be inserted into the X-ray field. Also, the simultaneous assay of a group of elements along with instrumentation available giving some merits and limitations of certain ones. (JDC)

Identification of Barbiturates in Blood by Paper Chromotrophy—Eugene Fastlich, Bernard Searle, and Bernard Davidow, *Clinical Chemistry, 11* (3): 436–440 (March, 1965). Blood or serum is extracted with buffered chloroform, then the chloroform is back extracted with basic solution which is again adjusted to proper pH with a buffer and extracted with chloroform which is then evaporated. The residue is then taken up in ethyl alcohol and added to 8 × 8 sheets of Whatman No. 1 paper. The Rf values and ratios of 8 standard barbiturates are given and compared with the values obtained from patients suspected of having taken barbiturate overdoses. (JDC)

Police Problems in the Use of Police Dogs—James W. Osterberg and Walter B. Ziel, *Law and Order, 13* (2): 36 (February, 1965). This is a one page comment on the question, Are Dogs Useful in Crowd Control? The article comments on the use of police dogs as compared to other crowd control methods such as baton, high pressure water, riot gun, and the 38 service weapon. (JDC)

A New Information Retrieval System—John Vogeler, *Law and Order, 13* (3): 32 (March, 1965). This short article describes the Waco, Texas, Police Department's adaptation of the Royal McBee Keydex Information Retrieval as used in industrial applications which they converted to police needs. The system has been developed to use in the MO files. It is expected to play a role in determining suspects from both physical description and method of operation. (JDC)

Power Files Relieve Record Burden—Robert E. Bradley, *Law and Order, 13* (3): 48–49 (March, 1965). Described is the recently installed Diebold Power File at the Boston Police Department Central Records Bureau. The author describes how the use of these power files has freed personnel for other vital police work. (JDC)

The Polygraph: An Invaluable Judicial Aid—Roger A. Pfaff, *American Bar Association Journal, 50:* 1130–33 (December 1964). The author, the Presiding Judge of the Consolidated Domestic Relations and Conciliation Court of the Superior Court of Los Angeles County, discusses the value of the polygraph in civil cases pointing out that its use in this type of work is limited for the most part to Chicago and Los Angeles. In addition to describing its method of use in legal proceedings, the author points out the need for competent, licensed operators. (OH)

New Developments in Instant Photography—*International Criminal Police Review*, No. 181: 241–35 (October 1964). An illustrated discussion of Polaroid Land Cameras and recent new developments. Information is given on the automatic camera with film pack operation and on the Polaroid color film and infrared film. (OH)

Demonstration of Human Identity by the Combined Use of the Photographic, Anthropometrical, and Descriptive Methods—G. Chevet and P. F. Ceccaldi, *International Criminal Police Review*, No. 182: 266–71 (November, 1964). The authors discuss the use of photographs and particularly superimposing over skulls and mutilated bodies to achieve identification. The article is illustrated with typical cases. (OH)

An Unforeseen Aspect of Fraud—Guillermo del Castillo G., *International Criminal Police Review*, No. 184: 27–8 (January, 1965). Describes activities of criminals in obtaining funds fraudulently from Mexican banks. These individuals recovered carbon copies of banking records including signatures of depositors which had been discarded by depositors and proceeded to commit forgeries against accounts with this information and forged signatures. (OH).

La Guardia Civil—*International Criminal Police Review*, No. 184: 2–13. A description of the civil guard of the Spanish police force setting forth its historical background, functioning and activities, organization, personnel and equipment, and internal social services. (OH)