

MICROGRAM

Laboratory Operations Division
Office Of Science And Drug Abuse Prevention

BUREAU OF NARCOTICS & DANGEROUS DRUGS / U.S. DEPARTMENT OF JUSTICE / WASHINGTON, D.C. 20537

Vol. IV, No. 9

October, 1971

A "hype" outfit (hypodermic syringe) concealed on the end of a "hippie" bead chain was reported by the St. Louis Police Laboratory. This outfit had a rubber bulb fitted on the end of the bead chain. On twisting this bulb off, a needle and a glass tubing adapter were revealed. These items could be fitted together into a syringe not over two inches long.

Marihuana in scuba diving gear was also reported by the St. Louis Police Laboratory. This consisted of an air tank that had been partially filled with well manicured marihuana. After air pressure had been applied, the desired amount of marihuana could be obtained simply by tilting the tank and opening the valve.

Marihuana in a new and unusual form is reported by the U.S. Customs Laboratory, San Diego, California. The marihuana is in the same crude state as that found in the regular "kilo bricks" but is in the form of "tortilla discs", measuring 6 - 6 1/2 inches in diameter and 2 1/2 - 3 inches thick. The discs weigh approximately 800 grams, are wrapped in blue butcher paper and over-wrapped in polyethylene bags.

Diazepam is reported as often being carried by some drug abusers as an antidote for bad LSD trips. Ten to thirty milligrams, administered orally, is said to eliminate the effects of a "bummer" (bad trip) within half an hour.

"Man-made rocks" are reported as a new conveyance for illicit drugs. These "rocks", usually a resinous material with sand and small stones embedded to give them a natural look, have hollow centers into which tablets, capsules, etc. may be inserted.

"Aerosol spray sniffing" is still reported to be a deadly drug abuse problem. Youngsters spray aerosol products -- hair spray, deodorant, household cleaners and others into paper bags or balloons and then inhale them to achieve the effects; reportedly a strange kind of "high". According to the Food and Drug Administration, an average of four deaths per month are currently being reported.

Analytical methods in **Microgram** do not have official status. Use of funds for printing this publication approved by the Bureau of the Budget, April 8, 1969. **CAUTION:** Use of this publication is restricted to forensic scientists serving law enforcement agencies.

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LSD in a commercially made product has been reported by the BNDD Laboratory in New York. The LSD was found on very small pieces of plastic inserted in commercially produced capsules of an OTC drug. It appeared that the capsules had been opened, the plastic piece containing LSD inserted, then recapped. Each piece of plastic contained an average of 52.1 micrograms of LSD. These pieces of plastic are small enough to be overlooked (approximately 1/16 of an inch diameter) if care is not taken in examining the capsules contents.

Lidocaine being represented as cocaine has been reported by several law enforcement agencies throughout the nation. On occasion, lactose is also present as a diluent.

Certain private groups have recently attempted to obtain information on drug abuse by inferring that they are affiliated with or are part of the Federal Government. The inference is implied by the name(s) under which they are operating. The requests are made to Federal, State or other enforcement groups (either police or crime laboratories) for drug abuse information.

Bags of cocaine base, cocaine HCl and magnesium sulfate, 2%, 60% and 38% respectively, are still being reported from the West Coast. If you encounter any mixtures with the above percentages, please pass the information on to us.

Heroin HCl (92%) and salicylic acid (2%) are being found in combination as a buff-colored powder. This mixture is being found in .5 kilogram quantities, and is packaged in paper or plastic bags.

Unusual compounds/combinations. The excipients of a powder containing LSD seized in Duluth, Minnesota, were identified as whole wheat flour, cotton seed flour, sucrose, dextrose, and potato starch. We believe this mixture to be a commercial baking mix. An exhibit of alleged heroin was found to be a mixture of benzoic acid, boric acid, talc, magnesium carbonate, potato starch, and quinine sulfate.

An exhibit of tablets, reported to be an opium addiction medicinal cure, was found to contain trace amounts of cannaboids along with unidentified plant materials.

A sample of "liquid hashish" was found to contain 4% tetrahydrocannabinol (THC). It appeared to be an extract of hashish. A sample of "liquid THC" was analyzed and found to contain 23.9% THC (by wt.) and fragments of marihuana.

Region IV Crime Laboratory, Seminole County Sheriff's Department, Sanford, Florida, reports that the following items have been appearing in their area:

- (1) Phencyclidine appearing in unmarked capsules similar to 10 mg. Librium, drug sold as THC.

- (2) Phencyclidine appearing in unmarked yellow capsules, similar to pentobarbital capsules, drug sold as THC.
- (3) Phencyclidine appearing in unmarked pink capsules, similar to 1/4 grain Nembu-donna capsules, drug sold as THC.
- (4) Phencyclidine appearing in orange capsules similar to secobarbital, drug sold as THC.
- (5) Crushed Morning Glory seeds in clear, pink, red, blue, and white #1 capsules, sold as "organic mescaline".
- (6) LSD mixed with chocolate, sugar and coffee mate, sold as "organic mescaline".
- (7) LSD mixed with gelatin, sold as THC.
- (8) Sinequan (doxepin HCl) being sold as cocaine. Drug gives positive field test for cocaine, but is easily identified in the laboratory.
- (9) Crude raw cocaine, about the color of brown sugar, cut with procaine, having from 1.75% to 3.00% cocaine base present. Present street cost \$550.00 per oz.
- (10) LSD appearing as red, grey, pink, blue and black spots on all types of paper. This drug is also being found in the following tablets:
 - a) Blue, flat, round, with sharp edges 3mm X 5mm dia.
Street name "blue moons"
 - b) Pale, light green, flat, round with sharp edges 4.1mm X 8.1mm dia.
Street name "green mesc."
 - c) Very light purple, flat, round, with sharp edges 2.9mm X 8.1 mm dia.
Street name "purple haze"
 - d) Red-pink, flat, round, with sharp edges 3.4mm X 6.5mm dia.
Street name "pink passion"
 - e) Deep violet, flat, round, with sharp edges 2.1mm X 5mm dia.
Street name, unknown
 - f) Light orange, flat, round, with sharp edges 2.0mm X 4.9mm dia.
Street name "orange sunshine"
 - g) Charcoal grey, flat, round with sharp edges 3.0mm X 5mm dia.
Street name "Black Beauties"
 - h) White, flat, round, sharp edges 3mm X 5mm dia.
Street name, unknown
 - i) Medium brown, flat, round, sharp edges 3.1mm X 6.5mm dia.
Street name, unknown

- j) White, biconvex, round, sharp edges 4.2mm dia. X 2.5mm
Street name, unknown
- k) White, biconvex, round, sharp edges 6.6mm dia. X 3.5mm
Street name, unknown
- l) Light blue, biconvex, round, sharp edges 7.5mm dia. 3.5 mm
Street name, unknown
- m) Red-brown, biconvex, round, sharp edges 7.5mm dia. 4.mm
Street name, sold as "THC"
- n) Block, biconvex, round, sharp edges, 5mm dia. X 3mm
Street name "Black Bombers"
- o) Light yellow, biconvex, round, sharp edges 6.5mm dia. X 3.5mm
Street name, unknown
- p) Light tan, biconvex (very crude) round rolled edges, 5.5mm
dia. X 4.5mm
Street name, unknown
- q) Red-pink, flat-convex, round sharp edges 6.5mm dia. X 3mm

A REMINDER

MICROGRAM is sent free-of-charge to laboratories serving law enforcement agencies. These include police department laboratories, medical examiner's laboratories, state drug investigative agency laboratories and federal law enforcement laboratories. We will send Microgram to other laboratories doing drug analyses for a local law enforcement agency, if the local Chief of Police, Sheriff or other agency head requests it for the laboratory and assumes responsibility for use of the material. We have recently become concerned that we have had requests from persons who have seen Microgram, but apparently have doubtful need to do so. We would not like to restrict Microgram further because of indiscretion on the part of a few readers. Microgram is an investigative tool which will help you. If some of the information falls into the wrong hands, and attempts have been made to obtain it by spurious organizations, your job (both in the laboratory and in court) will be made more difficult.

Therefore, we again ask that you restrict the circulation of Microgram to the personnel of your own laboratories or to others only on a need-to-know basis.

Sixth International Meeting of Forensic Sciences, Belfast, will be held from September 21st to 26th at the Queen's University, Belfast, Northern Ireland. There will be sections on:

Biology	Pathology
Chemistry	Psychiatry
Toxicology	Dentistry
Jurisprudence	Questioned Documents

A social program will include receptions, entertainments and visits to the countryside. A special program will be arranged for ladies accompanying delegates. Inexpensive, but comfortable mixed accommodations for both individuals and families can be provided by the University. There are also hotels in the locality for those who prefer them.

For those who would like to receive further information, write to:

The Secretariat
Sixth International Meeting
of Forensic Sciences
Institute of Pathology
Grosvenor Road
Belfast, BT12 6BL
Northern Ireland

California Association of Criminalists, semi-annual seminar, April 27-29, 1972, Pierpont Inn, Ventura, California. For further information, contact Forrest Letterly, Ventura County Sheriff's Office, 501 Poli Street, Ventura, California 93001.

BNDD Forensic Chemists Seminars for the coming fiscal year are tentatively planned as follows:

January 31 - February 4, 1972
April 3 - 7, 1972
June 12 - 16, 1972

All sessions will be held at the BNDD National Training Institute, Washington, D. C. For more information and application forms, write to:

Assistant Director for Training
National Training Institute
Special Training Division
Bureau of Narcotics & Dangerous Drugs
1405 Eye Street, N. W.
Washington, D. C. 20537

Annual Meeting of the American Academy of Forensic Sciences, Atlanta, Georgia, March 1 - 4, 1972. Contact:

Secretary James Weston, M. D.
44 Medical Drive
Salt Lake City, Utah 84113

or

General Program Chairman
Michael M. Baden, M. D.
Office of the Chief Medical Examiner
520 First Avenue
New York, New York 10016
(Tele. 212-684-1600)

Preliminary program lists a plenary session Thursday, March 2, 1972 with F. Lee Bailey speaking on "The Adversary System: Role of the Forensic Scientist." Friday, March 3, there will be a combined section meeting at which a mock trial will be presented. The trial will present an assassination case, using testimony on documents, serology, fibers, wounds, firearms and fingerprint examinations. Criminalistics Section Program Chairman Edward Whittaker has proposed papers on serology, scanning electron microscope use on auto paints, the identification of mescaline from peyote buttons, analysis of Mexican heroin by GC/IR, the content of heroin street purchases, liquid-liquid chromatographic separation of drugs and a forensic chemist training program, among others.

MICROGRAM is published to disseminate information on dangerous drugs and their analysis. It is of concern that we have not had more comment from readers. We not only wish items of interest, handy laboratory hints and analytical methods to publish, we want feedback on what has been published. None of the methods of analysis are official, and most have not been corroborated. Therefore, if a method does or does not work well (in your hands), we would like to know. The result of feedback to Microgram will be better information for all.

BNDD LABORATORY NOTES



DATE

NO. 19

DRUG TYPE

METHODOLOGY

THE BLOTTER PAPER TECHNIQUE FOR IR

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OBJECTIVE

To expand the use of the blotter paper technique as a timesaving device.

BACKGROUND

The blotter paper technique is fairly well known, but not generally used due to the lack of equipment available from suppliers of IR accessories.

APPARATUS

Infrared spectrophotometer, Hydraulic press, two steel blocks, blotter paper.

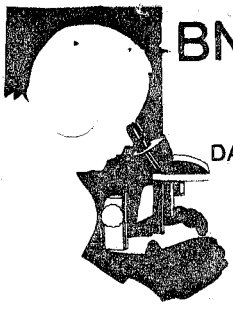
PROCEDURE

A card 2 by 3 inches is cut from blotter paper and a slit 3 by 20 mm cut in the center. The card is placed onto a polished steel block and a mound of KBr-sample mixture placed in the slit in an amount sufficient that a second steel block placed on top will not quite fit flat. With too little KBr, the window formed will not be clear; too much will cause the window to buckle and break. The mound should extend above the surface of the card, but no KBr should be on the card itself. Momentary pressure of 15,000 pounds per square inch should form a clear window in the card. For the best results, the card should be dried in a 100° oven or the IR beam for 10 minutes and then re-pressed before the spectrum is made. Although the technique works with two flat plates, it is more convenient to have the apparatus at least 2 1/2 inches high for easy placement and removal from the press. Chrome plated steel roller bearings obtained at a local surplus store have been found to be excellent for the purpose. Steel blocks can be cut, polished, and plated at a metal working shop for about fifteen dollars. Although less convenient, steel plates or blocks covered with aluminum foil may be used. The cards may be saved by storing desiccated in the bottom half of a microscope slide tray. Very small samples can be run using a card having a 1 by 5 mm slit, or even smaller by using a beam condenser.

RESULTS AND DISCUSSION

The blotter paper technique has been used by the Bureau of Narcotics Laboratory in San Francisco to the virtual exclusion of any other method for solid KBr spectra during the past two years (about 4000 spectra). We now have the cards pre-cut and centers punched commercially at a cost of a half cent each after the initial \$75 for the die. Law enforcement laboratories wishing to try this technique may obtain a sample of the prepunched cards by writing to the author.

BNDD LABORATORY NOTES



DATE September 27, 1971

NO. 21

DRUG TYPE

METHODOLOGY

REMOVAL OF STEARIC ACID FROM DRUG PREPARATIONS BY COLUMN CHROMATOGRAPHY

by:

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Stearic acid is often found in both commercially and illicitly manufactured drug preparations. Its solubility in ether and chloroform allows stearic acid to elute from chromatographic columns with the compounds attempting to be isolated. Stearic acid has been encountered in this laboratory in combination with LSD, STP, barbiturates, etc. The following procedure allows the removal of stearic acid without the necessity of extraction procedures, and is most useful when the clean-up procedure calls for the use of column chromatography, such as the PCP-LSD procedure of Goldston and Miller (1).

Detection of Stearic Acid: Place a few milligrams of powdered sample in a spot plate depression; add one or two drops of (1) Benzene; (2) saturated solution of Rhodamine B in Benzene; and (3) 1% Aqueous Uranium Nitrate. View under long wave UV light. An intense orange fluorescence strongly indicates the presence of stearic acid, or other long chain fatty acid.

Removal of Stearic Acid: Pack 4 to 5 grams of powdered Barium Hydroxide in a chromatographic column. Over this packing place a Celite 545 bed containing the drug-stearic acid sample. Elute the drug with ether, chloroform, or other solvent. The stearic acid precipitates as the insoluble barium stearate, which forms as a pale yellow band at the top of the Barium Hydroxide bed. PCP, LSD, STP, barbiturates, etc. elute as free bases, free of stearic acid.

REFERENCES:

(1) MICROGRAM, Vol. IV, No. 6, July, 1971.



BNDD LABORATORY NOTES

DATE September 30, 1971

NO. 22

DRUG TYPE Narcotic

METHODOLOGY IR and Gas Chromatography

QUALITATIVE AND QUANTITATIVE ANALYSIS OF METHADONE IN NEW LILLY DOSE FORM U53 TABLETS

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The new Lilly dose form of methadone HCl contains coloring and flavoring agents, which interfere with many of the common extraction procedures. The following procedures gave highly satisfactory results.

Qualitative

Place an amount of ground tablet material (approx. 1/2 tablet) in a filter paper and pass 50 to 75ml ethyl ether through, discarding the ether. Pass 50ml CHCl_3 through, collecting the filtrate in a beaker. Evaporate to dryness and dissolve residue in a small amount of MeOH. Add just enough Darco G60 charcoal to decolorize the solution and filter. Evaporate to dryness, dry @ 105° for 10-15 minutes and run the IR spectrum in KBr.

Quantitative

Make a MeOH solution of the sample to contain approximately 1mg methadone HCl/ml. Analyse by gas chromatography:

	6 ft 1% SE-30 on Gas Chrom Q - 200°] 50ml/min.
or	6 ft 3% OV-17 on Gas Chrom Q - 240°	

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