U.S. Department of Justice
Drug Enforcement Administration

www.dea.gov

Microgram Bulletin

Published by:
The Drug Enforcement Administration
Office of Forensic Sciences
Washington, DC 20537

The U.S. Attorney General has determined that the publication of this periodical is necessary in the transaction of the public business required by the Department of Justice. Information, instructions, and disclaimers are published in the January issues.

VOL. XXXVIII, NO. 1 JANUARY 2005

- INTELLIGENCE ALERT -

VERY LARGE SEIZURE OF DRIED KHAT IN BALTIMORE, MARYLAND

The DEA Mid-Atlantic Laboratory (Largo, Maryland) recently received 187 boxes of plant material, suspected khat (origin not reported). The exhibit was seized in the Baltimore, Maryland area by U.S. Customs agents following a controlled delivery. Each box contained two packets of dried, semi-shredded green leaves packaged in plastic bags, which were concealed inside a thick layer of shredded brownish-green plant material (not identified) further contained in another plastic bag (see Photo 1, next page; displayed oversize to show detail). Each packet weighed an average of 5.6 kilograms, and was about 2.2 feet long by 1.5 feet in diameter. The green leafy material had a strong, nauseating odor, while the brownish-green plant material used to conceal it had an odor similar to basil or oregano. The total net mass of the combined plant material was approximately 2,400 pounds, while the total net mass of the suspected khat was 1,054 kilograms.

Khat is generally shipped cold and moist (usually in coolers, and often wrapped in wet paper and/or banana leaves) to slow the breakdown of cathinone (a Schedule I controlled substance, and a potent amphetamine-type stimulant) to cathine ((S)-norpseudoephedrine, a Schedule IV controlled substance with only mild stimulant effects). In this case, the exhibit was not fresh or kept cold, and is believed to have been dried or freeze-dried as an alternate means to preserve the cathinone. Analysis of extracts by GC and GC/MS indicated both cathinone and cathine,

Photo 1

confirming khat (not quantitated). The brownish-green plant material used to conceal the khat contained no controlled substances. The Mid-Atlantic Laboratory has previously received fresh khat; however, this was the laboratory's first encounter with dried or freeze-dried khat.

[Editor's Notes: This appears to be the largest seizure of khat ever reported to *Microgram Bulletin*. A previous seizure of dried khat (also referred to as "Graba") made in the Kansas City, Missouri area was reported in the April 2004 issue of *Microgram Bulletin*. A review of various Internet sources indicates that dried khat was only infrequently encountered in the U.S. or Europe prior to 2004. This latest seizure suggests that this form is becoming more mainstream.]

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- INTELLIGENCE ALERT -

COCAINE CONTAINING DILTIAZEM ON THE WEST COAST

The DEA Western Laboratory (San Francisco, California) recently received five separate suspected cocaine submissions containing an unknown diluent/adulterant. Three of the exhibits

were submitted as cocaine hydrochloride, while the other two were submitted as cocaine base. The samples originated from three separate cases in three different cities, including San Francisco, California, Fairbanks, Alaska, and Spokane, Washington, and were seized in September and October, 2004.

Analysis by FTIR and GC/MS confirmed cocaine hydrochloride in four of the five samples and cocaine base in one. However, the GC/MS also indicated an additional compound eluting after cocaine. It had a base peak of 58, a molecular ion peak of 414, and a number of other major fragment ions, including *m/z* = 71, 121, and 150 . A review of reference texts confirmed that the adulterant was diltiazem, a calcium-channel blocker and vasodilator used to treat high blood pressure and control chest pain. The average quantitation in the five exhibits was about 10 percent relative to the cocaine. These were the Western Laboratory's first encounters with diltiazem in any form.

[Editor's Notes: The identification of cocaine adulterated with diltiazem was first reported in the August 2004 issue of *Microgram Bulletin*. It is unknown whether diltiazem has any synergistic effect with cocaine, or is being added in a hopeful attempt to ameliorate some of the negative consequences of cocaine use, or is merely an adulterant of convenience; however, the latter explanation appears most likely. Since the above submissions, the Western Laboratory has received one additional sample of cocaine containing diltiazem, which was seized in Salt Lake City, Utah.]

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- INTELLIGENCE ALERT -

SUSPECTED PSILOCYBE MUSHROOM SPORES IN DETROIT, MICHIGAN

The DEA North Central Laboratory (Chicago, Illinois) recently received three glass vials containing a clear solution, suspected Psilocybe mushroom spores in water. The exhibits were originally contained in three syringes, and were purchased in Detroit, Michigan by agents from the DEA Detroit Division (details withheld in accordance with *Microgram* policy). The total net weight and volume of the samples was 35.9 grams (40.0 milliliters).

A growth cycle was initiated for all three samples in order to determine whether or not Psilocybe mushrooms could be produced. A standard underground procedure was used (obtained from an Internet site; details withheld in accordance with *Microgram* policy). Mycelium growth was observed after about 3 weeks; however, only two small mushrooms grew (which were harvested after 78 days). Analysis of methanolic extracts of the two mushrooms by GC/MS indicated no controlled substances, suggesting that the mushrooms were not Psilocybe mushrooms. It is unclear whether the sale was a scam, or if the solution was contaminated during the transfer from the syringes to the vials, or if there was some other unknown problem with the solution or cultivation procedures. This is the first time that a mushroom grow has been performed at the North Central Laboratory.

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- INTELLIGENCE ALERT -

VERY LARGE MARIJUANA GROW OPERATION SEIZED IN MERCED COUNTY, CALIFORNIA

[From the NDIC *Narcotics Digest Weekly* 2004;3(50):1
Unclassified, Reprinted with Permission.]

On November 3, 2004, the Fresno Bureau of Narcotic Enforcement (BNE) and California Methamphetamine Strategy (CALMS) team in a joint operation with the Drug Enforcement Administration (DEA), U.S. Forest Service, and the U.S. Bureau of Land Management culminated a 2-year investigation into U.S.-based members of the Pulido drug trafficking organization (DTO). During the investigation officers discovered that the DTO members were operating large cannabis grow sites on Forest Service lands in Central California. The head of this Pulido cell relied on the marijuana produced in California to supply his distributors; however, when the marijuana supply was depleted, he obtained Mexican marijuana from members of the Pulido DTO in Mexico.

Law enforcement officers served 18 search warrants and 12 arrest warrants on November 3 in Fresno, Merced, and Riverside Counties, which resulted in the arrests of 58 individuals connected with the Pulido DTO. One of the search warrants was executed at a suspected stash location in rural Merced County. This stash location was a fortified 10-acre ranch with a guard shack outside the front entrance. Upon arriving at the ranch, law enforcement officers observed 43 individuals fleeing from a large barn. A U.S. Department of Justice (DOJ) Aviation Unit helicopter was used to direct the individuals into a corner of the pasture where law enforcement officers were able to apprehend all but three who were able to escape. A subsequent search of the barn indicated that the 43 individuals were "part of an assembly line" and were drying and processing high-grade (sinsemilla) marijuana (see Photo 2, next page; displayed oversize to show detail). From their search of the barn, officers seized 3,640 pounds of marijuana, which was transported from the site in a 40-foot tractor-trailer. Officers also seized a loaded Uzi submachine gun as well as other guns and a ballistic vest from inside the guard shack; five additional firearms were seized from other areas of the ranch.

While members of the Pulido DTO were involved primarily in marijuana production and distribution, they also distributed powdered and crack cocaine and crystal methamphetamine from Southern California to Oregon. The DTO was the primary source of supply for many criminal groups and gangs in California. During the 2-year investigation, officers seized a total of 4,570 pounds of processed marijuana, 19,000 cannabis plants, 1.2 pounds of powdered methamphetamine, 1.1 pounds of crystal methamphetamine, 9 kilograms of powdered cocaine, 60 grams of crack cocaine, 19 weapons (3 of which were identified as having been stolen), 2 vehicles, and $28,491.

NDIC Comment: Demand for high-grade marijuana has been increasing in the United States, and some Mexican DTOs responding to that demand may be providing more of a higher potency variety of the product. Historically, Mexican DTOs smuggled commercial-grade marijuana, which typically contained 2 to 5 percent THC (delta-9-tetrahydrocannabinol), to California from

Photo 2

Mexico. However, several years ago DTOs began producing high-grade marijuana, which often contains 10 to 20 percent THC, from cannabis cultivated on Forest Service lands in Northern and Central California. The Pulido DTO, in particular, hired Mexican nationals to tend the outdoor cannabis grow sites in California. These workers lived "in the fields" and pulled the male plants from the crop before the female plants were pollinated. The unpollinated female cannabis plants and resulting buds were used to produce high-grade marijuana.

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- INTELLIGENCE ALERT -

35 MILLION CHINA-PRODUCED PSEUDOEPHEDRINE TABLETS SEIZED FROM CARGO AT PORT OF LONG BEACH, CALIFORNIA

[From the NDIC *Narcotics Digest Weekly* 2004;3(50):3
Unclassified, Reprinted with Permission.]

On November 11, 2004, U.S. Immigration and Customs Enforcement (ICE) agents seized 35 million China-produced pseudoephedrine tablets from a shipment of containerized cargo at the Port of Long Beach. Each of the 700 cases seized contained 100 bottles; each bottle contained

500 tablets. The cases were labeled with a brand name and tablet count; however, the bottles were not labeled. The tablets were shipped from China through the Port of Long Beach and destined for a fictitious company at a false address in Manzanillo, Mexico. In a possible attempt to conceal the cases of pseudoephedrine, they were stacked behind 40 cases of vitamin C. DEA agents and California BNE officers also participated in this investigation.

NDIC Comment: Successful law enforcement efforts targeting pseudoephedrine combined with tighter regulatory controls on the drug have greatly restricted the availability of bulk quantities of pseudoephedrine in Canada and the United States. Mexican DTOs and criminal groups that operate methamphetamine super labs had obtained bulk quantities of pseudoephedrine primarily from those two countries. Because bulk quantities of pseudoephedrine are no longer readily available in Canada or the United States, DTOs and criminal groups increasingly purchase pseudoephedrine from alternate sources of supply in Asia, particularly Japan, Taiwan, and Hong Kong. DTOs and criminal groups commonly smuggle Asia-produced pseudoephedrine in containerized cargo into the Port of Long Beach, which together with the Port of Los Angeles is the second busiest maritime port complex in the world. They then transport the drug overland to super labs in the United States and Mexico.

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- INTELLIGENCE ALERT -

CRYSTAL METHAMPHETAMINE LABORATORY SEIZURES INCREASE FIVEFOLD IN HAWAII

[From the NDIC *Narcotics Digest Weekly* 2004;3(50):3
Unclassified, Reprinted with Permission.]

Since January 1, 2004, Hawaii law enforcement officers have seized a record number of crystal methamphetamine laboratories - 30 - a fivefold increase from 2003, when 6 laboratories were seized. Most of the crystal methamphetamine laboratories seized this year were small labs used to convert powdered methamphetamine to crystal methamphetamine. In the past crystal methamphetamine produced in large-scale methamphetamine laboratories in California, Mexico, and Asia was transported to Hawaii from the continental United States on board commercial ships, which generally are not subject to inspection at the points of embarkation or debarkation.

NDIC Comment: Crystal methamphetamine is the form most commonly abused in Hawaii and, since the late 1990s, demand for the drug has increased steadily due in part to its addictive nature. By purchasing less expensive powdered methamphetamine from Mexican DTOs and converting the powder to crystal in Hawaii, local DTOs can increase their profits considerably. Therefore, the number of conversion laboratories in the state most likely will increase significantly in the future. Conversion laboratories are easy to conceal because they are small and can be set up in a storage room, closet, bathroom, or even in the trunk of a car or a cardboard box. Although the vapors from the solvents used in the conversion process are extremely volatile and noxious, the smell emitted can dissipate quickly if the process is completed outdoors or in an area with adequate ventilation. The cost to clean up one conversion laboratory ranges

from $2,000 to $10,000, depending on its size. If the number of laboratory seizures continues to increase, the cleanup costs alone will place a severe burden on Hawaii's taxpayers.

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- INTELLIGENCE BRIEF -

LARGEST METHAMPHETAMINE LABORATORY IN BAY COUNTY, FLORIDA HISTORY SEIZED

[From the NDIC *Narcotics Digest Weekly* 2004;3(49):3
Unclassified, Reprinted with Permission.]

On October 20, 2004, Bay County Sheriff's Office Methamphetamine Drug Unit (MAD) officers seized an operational methamphetamine laboratory - the largest in the county's history - 17.4 liters of methamphetamine oil, and arrested the laboratory operators after one accidentally dialed 9-1-1. When a sheriff's deputy responded to the inadvertent 9-1-1 call made from a house located in a residential neighborhood in Callaway, a man and woman met him outside and tried to assure him that they had made the call by mistake. While conversing with the couple, the deputy noticed a strong chemical smell coming from the house and called the MAD Unit, whose officers confirmed the chemical odor as one consistent with a methamphetamine laboratory. That confirmation and information gathered from tips regarding narcotic activity at the residence enabled MAD officers to obtain a warrant to search the three-bedroom house. Once inside the house, MAD officers discovered a red phosphorus methamphetamine laboratory believed to have been in operation less than 2 months. Officers described the residence as a "giant meth lab" and reported that every room in the house was being used for various stages of methamphetamine production. A 44-year-old Caucasian male and 43-year-old Caucasian female were charged with methamphetamine trafficking (over 200 grams) as well as 12 felonies, which included weapons charges. Officers reported that the 17.4 liters (4.6 gallons) of methamphetamine oil seized at this laboratory would have yielded approximately 12.2 kilograms (26.9 pounds) of powdered methamphetamine.

NDIC Comment: In response to the methamphetamine threat posed to Bay County, the sheriff's office initiated the MAD Unit in October 2003. This multiagency task force expects to reduce the number of methamphetamine producers in the county by fostering cooperation between citizens, law enforcement, and health care providers. Since the inception of the MAD Unit, the number of methamphetamine laboratories seized in the county has increased, while distribution and abuse of the drug have decreased. As of November 11, 2004, 96 methamphetamine laboratories have been seized in Bay County [in 2004]; 77 laboratories were seized in 2003, 30 in 2002, and 17 in 2001.

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SELECTED REFERENCES

[Notes: Selected references are a compilation of recent publications of presumed interest to forensic chemists. Unless otherwise stated, all listed citations are published in English. Listed mailing address information (which is sometimes cryptic or incomplete) exactly duplicates that provided by the abstracting services. Starting January 2005, patents will be reported only by their *Chemical Abstracts* citation number.]

1. Aalberg L, DeRuiter J, Sippola E, Clark CR. **Gas chromatographic optimization study on the side chain and ring regioisomers of methylenedioxymethamphetamine.** Journal of Chromatographic Science 2004;42(6):293. [Editor's Notes: Includes the analysis of 10 isomeric compounds (not specified in the abstract). Contact: Department of Pharmaceutical Sciences, School of Pharmacy, Auburn University, Auburn, AL 36849.]

2. Adamowicz P, Zuba D, Kala M. **Ketamine: A new substance on the Polish drug market.** Z Zagadnien Nauk Sadowych 2004;56:26. [Editor's Notes: Presents a case analyzed by the laboratory, along with some background concerning the title subject. Contact: Institute of Forensic Research, Krakow, Pol.]

3. Avula B, Khan IA. **Separation and determination of ephedrine enantiomers and synephrine by high performance capillary electrophoresis in dietary supplements.** Chromatographia 2004;59(1-2):71. [Editor's Notes: The title study was applied to E. Sinica and various dietary supplement products. The enantiomers of norephedrine, norpseudoephedrine, ephedrine, pseudoephedrine, N-methylephedrine, and N-methylpseudoephedrine were separated. Contact: Univ Mississippi, Sch Pharm, Natl Ctr Nat Prod Res, Res Inst Pharmaceut Sci, University, MS 38677.]

4. Butler D, Guilbault GG. **Analytical techniques for ecstasy.** Analytical Letters 2004;37(10):2003. [Editor's Notes: A review, including current analytical methods. Contact: Natl Univ Ireland, Univ Coll Cork, Dept Chem, Cork, Ireland.]

5. Choi YH, Kim HK, Hazekamp A, Erkelens C, Lefeber AWM, Verpoorte R. **Metabolomic differentiation of Cannabis sativa cultivars using 1H NMR spectroscopy and principal component analysis.** Journal of Natural Products 2004;67:953. [Editor's Notes: Cultivars could be differentiated by measurement of *delta*-9-tetrahydrocannabinolic acid and cannabidiolic acid. Contact: Division of Pharmacognosy, Section Metabolomics, Institute of Biology, Leiden University, P.O. Box 9502, 2300 RA Leiden, The Netherlands.]

6. Galli V, Barbas C. **High performance liquid chromatographic analysis of dextromethorphan, guaifenesin and benzoate in a cough syrup for stability testing.** Journal of Chromatography A 2004;1048(2):207. [Editor's Notes: Includes forced degradation analyses. Contact: Univ Sao Paulo, CEU, Fac CC Expt & Salud, Secc Quim Analyt, Urbanizac Monteprincipe, Madrid 28668, Spain.]

7. Hazekamp A, Simons R, Peltenburg-Looman A, Sengers M, van Zweden R, Verpoorte R. **Preparative isolation of cannabinoids from Cannabis sativa by centrifugal partition chromatography.** Journal of Liquid Chromatography & Related Technologies 2004;27(15):2421. [Editor's Notes: Seven major cannabinoids were isolated in large scale and better than 90 percent purity. Contact: Leiden Univ, Inst Biol, Div Pharmacognosy, Einsteinweg 55, NL-2300 RA Leiden, Netherlands.]

8. Ishibashi H. **Analysis of stable isotope ratio of carbon and nitrogen, as a powerful tool to identify smuggling routes of illegal drugs.** Kagaku to Kogyo 2004;57(9):964. [Editor's Notes: A review of the title topic, including discussion of application to methamphetamine and MDMA. This article is written in Japanese. Contact: Moji Customs, Japan (no further addressing information was provided).]

9. Karetnikov MD, Meleshko EA, Yakovlev GV. **Detection, identification, and localization of organic substances, including explosive and narcotic substances, using pulsed fast neutrons.** Chemical Abstracts 2004:894555.

10. Karpiesiuk W, Lehner AF, Hughes CG, Tobin T. **Preparation and chromatographic characterization of tetrahydrogestrinone, a new "designer" anabolic steroid.** Chromatographia 2004;60(5-6):359. [Editor's Notes: The synthesis of THG from gestrinone is reported. Contact: Univ Kentucky, Dept Vet Sci, Maxwell H Gluck Equine Res Ctr, Lexington, KY 40546.]

11. Kawase K, Ogawa Y, Watanabe Y. **Component pattern analysis of chemicals using multispectral THz-imaging system.** Proceedings of SPIE - The International Society for Optical Engineering. 2004;5354:63. [Editor's Notes: A minor review of the title topic. Includes discussion of the application of the technique for the detection of methamphetamine and MDMA concealed in envelopes. Contact: RIKEN, 2-1 Hirosawa, Wako, Japan 351-0198.]

12. Kochana J, Wilamowski J, Parczewski A. **TLC profiling of impurities of 1-(3,4-methylene-dioxyphenyl)-2-nitropropene, an intermediate in MDMA synthesis. Influence of sample preparation methods and conditions.** Journal of Liquid Chromatography & Related Techniques 2004;27(15):2463. [Editor's Notes: Presents the title study. Contact: Jagiellonian Univ, Fac Chem, Dept Analyt Chem, Ingardena 3, PL-30060 Krakow, Poland.]

13. Laks S, Pelander A, Vuori E, Ali-Toippa E, Sippola E, Ojanpera I. **Analysis of street drugs in seized material without primary reference standards.** Analytical Chemistry 2004;76(24):7375. [Editor's Notes: Uses a combination of LC-Time-of-Flight-MS and LC-Chemiluminescence Nitrogen Detection on 21 samples (different drugs). The results were found to be reasonable, with variances from established methods ranging from 4 to 21 percent, and only one apparent false positive. Contact: Department of Forensic Medicine, University of Helsinki, P.O. Box 40, FIN-00014 Helsinki, Fnland.]

14. Moldvai I, Temesvari-Major E, Incze M, Szentirmay K, Gacs-Baitz E, Szantay C. **Enantioefficient synthesis of alpha-ergocryptine: First direct synthesis of (+)-lysergic acid.** Journal of Organic Chemistry 2004;69(18):5993. [Editor's Notes: Presents the title synthesis. Contact: Hungarian Acad Sci, Inst Biomol Chem, Chem Res Ctr, POB 17, H-1525 Budapest, Hungary.]

15. Ohyama K, Wada M, Ohba Y, Fujishita O, Nakashima K, Kuroda N. **Rapid separation of barbiturates and benzodiazepines by capillary electrochromatography with 3-(1,8-naththalimido)propyl-modified silyl silica gel.** Biomedical Chromatography 2004;18(6):396. [Editor's Notes: Barbiturates: Barbital, phenobarbital, secobarbital, thiopental; benzodiazepines: Nitrazepam, diazepam, triazolam. Contact: Nagasaki Univ, Course Pharmaceut Sci, Grad Sch Biomed Sci, 1-12 Bunkyo Machi, Nagasaki 8528521, Japan.]

16. Pan ZW, Chen XG, Hu ZD. **Continuous capillary electrophoresis with flow injection and its application for determination of ephedrine and pseudoepedrine in Chinese medicinal preparations.** Biomedical Chromatography 2004;18(8):581. [Editor's Notes: Presents the title technique, and its application to five medicinal preparations. Contact: Lanzhou Univ, Dept Chem, Lanzhou 730000, Peoples R China.]

17. Radi AE, Bekhiet G, Wahdan T. **Electrochemical study of Zolpidem at glassy carbon electrode and its determination in a tablet dosage form by differential pulse voltametry.** Chemical & Pharmaceutical Bulletin 2004;52(9):1063. [Editor's Notes: Presents the title study. Contact: Mansoura Univ, Fac Sci Dumyat, Dept Chem, Dumyat 34517, Egypt.]

18. Rothweil M. Bader HJ. **Drug analysis: Rapid tests for the analysis of "classical" narcotics.** Praxis der Naturwissenschaften, Chemie in der Schule 2004;53(5):23. [Editor's Notes: A minor review of the title subject, directed towards high school and college teachers. This article is written in German. Contact: Institut fuer Didaktik der Chemie, Universitaet Frankfurt, 60439 Frankfurt, Germany.]

19. Schulz H, Branska M, Quilitzsch R, Schutze W. **Determination of alkaloids in capsules, milk and ethanolic extracts of poppy (Papaver somniferum L.) by ATR-FT-IR and FT-Raman spectroscopy.** Analyst 2004;129(10):917. [Editor's Notes: Enables analysis without special preparation, and the ATR technique requires very little sample. Fluorescence effects in the Raman analysis were negligible. Contact: Fed Ctr Breeding Res Cultivated Plants BAZ, Inst Plant Anal, Neuer Weg 22-23, D-06484 Quedlinburg, Germany.]

20. Smetkova M, Ondra P, Lemr K. **HPLC-MS and CE-MS with atomospheric pressure ionization in analysis of morphine and related compounds.** Chemicke Listy 2004;98(6):336. [Editor's Notes: A review and discussion of the title subject. Abstract is not clear whether the focus is forensic or toxicological (the latter appears more likely). This article is written in Czech. Contact: Department of Analytical Chemistry, Faculty of Science, Palacky University, Olomouc, Czech Rep.]

21. Wall DB, Finch JW, Cohen SA. **Quantitation of codeine by desorption/ionization on silicon time-of-flight mass spectrometry and comparisons with liquid chromatography/mass spectrometry.** Rapid Communications in Mass Spectrometry 2004;18:1403. [Editor's Notes: Presents the title analysis, including analyses of standards and a liquid pharmaceutical preparation. Contact: Waters Corporation, Milford, MA 01757.]

22. Wille SMR, Lambert WEE. **Phenmetrazine or ephedrine? - Fooled by library search.** Journal of Chromatography A 2004;1045(1-2):259. [Editor's Notes: Ephedrine reacted with formaldehyde in solvents to give a compound with a mass spectrum that is similar to phenmetrazine (compound not identified in the abstract). Contact: State Univ Ghent, Toxicol Lab, Harelbekestr 72, B-9000 Ghent, Belgium.]

23. Zvilichovsky G, Gbar-Haj-Yahia I. **Birch reduction of (-)-ephedrine formation of a new, versatile intermediate for organic synthesis.** Journal of Organic Chemistry 2004;69(16):5490. [Editor's Notes: The Li/NH3 reduction of (-)-ephedrine gave S-1-(1,4-cyclohexadien-1-yl)-methyl-2-propanamine. Contact: Hebrew Univ Jerusalem, Dept Organ Chem, IL-91904 Jerusalem, Israel.]

Additional References of Possible Interest:

1. de Boer D, Bosman I. **A new trend in drugs-of-abuse; the 2C-series of phenethylamine designer drugs.** Pharmacy World & Science 2004;26(2):110. [Editor's Notes: A mini-review of a 3-year survey of unusual designer drugs (tablets) obtained at Dutch "smartshops". Primary drugs included 2C-B, 2C-T-2, and 2C-T-7. Includes social commentary and recommendations. Contact: Laboratorio de Analises de Dopagem e Bioquimica, Instituto Nacional do Desporto, Lisbon, Port. 1600-190.]

2. Hoang TH, Cuerrier D, McClintock S, Di Maso M. **Computer-assisted method development and optimisation in high-performance liquid chromatography.** Journal of Chromatography A 2003;991:281. [Editor's Notes: Uses DryLab simulation software. Contact: Dept. Of Pharmaceutical Research and Development, Merck Frosst Canada & Co., P.O. Box 1005, Pointe Claire-Dorval, Quebec H9R 4P8, Canada.]

3. Kratzsch C, Tenberken O, Peters FT, Weber AA, Kraemer T, Maurer HH. **Screening, library-assisted identification and validated quantification of 23 benzodiazepines, flumazenil, zaleplone, zolpidem, and zopiclone in plasma by liquid chromatography/mass spectrometry with atmospheric pressure chemical ionization.** Journal of Mass Spectrometry 2004;39(8):856. [Editor's Notes: The focus is toxicological. Contact: Univ Saarland, Inst Expt & Clin Pharmacol & Toxicol, Dept Expt & Clin Toxicol, D-64421 Homburg, Germany.]

4. Lambert W. **Pitfalls in LC-MS(-MS) Analysis.** Toxichem und Krimtech 2004;71(2):64. [Editor's Notes: Language not specified in the abstract (may be in German). Presents the title review. Appears to be a re-publication of the article by the same author and title in *Bulletin TIAFT* 2004;28(6):439. Contact: Laboratorium voor Toxicologie, Universiteit Gent, Harelbekestraat 72, B-9000 Gent, Belgium.]

5. Lipscher J. **Chemistry and Crime - Criminalistics in chemistry teaching: An overview.** Praxis der Naturwissenschaften, Chemie in der Schule 2004;53(5):2. [Editor's Notes: An overview and review of the title subject; includes a review of analytical techniques. This article is written in German. Contact: Kantonsschule Baden, CH-5400 Baden, Switzerland.]

6. Tidgewell, Harding WW, Schmidt M, Holden KG, Murry DJ, Prisinzano TE. **A facile method for preparation of deuterium labeled salvinorin A: Synthesis of [2,2,2-H-2(3)]-salvinorin A.** Bioorganic & Medicinal Chemistry Letters 2004;14(20):5099. [Editor's Notes: For use as an internal standard in LC/MS analyses of biological fluids. Contact: Univ Iowa, Coll Pharm, Div Med & Nat Prod Chem, Iowa City, IA 52242.]

7. Van Thuyne W, Delbeke FT. **Validation of a GC-MS screening method for anabolizing agents in solid nutritional supplements.** Biomedical Chromatography 2004;18(3):155. [Editor's Notes: Presents the title study, including analyses of testosterone, nandralone, stanazolol, metandienone, and various prohormones. Contact: Doping Control Laboratory, Ghent University, B-9820 Merelbeke, Belg.]

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THE JOURNAL/TEXTBOOK COLLECTION EXCHANGE

There were no offerings of journals or textbooks made over the past quarter.

Subscribers are encouraged to donate surplus or unwanted items or collections; if interested, please consult the *Microgram* website or contact the *Microgram* Editor for further instructions.

The next offering of journals and textbooks will be in the April 2005 issue of *Microgram Bulletin*.

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THE DEA FY - 2005 STATE AND LOCAL FORENSIC CHEMISTS SEMINAR SCHEDULE

The remaining FY - 2005 schedule for the DEA's State and Local Forensic Chemists Seminar is as follows:

May 9 - 13, 2005
July 11 - 15, 2005
September 19 - 23, 2005

Note that the school is open only to forensic chemists working for law enforcement agencies, and is intended for chemists who have completed their agency's internal training program and have also been working on the bench for at least one year. There is no tuition charge for this course. The course is held at the AmeriSuites Hotel in Sterling, Virginia (near the Washington/Dulles International Airport). A copy of the application form is reproduced on the last page of the August 2004 issue of *Microgram Bulletin*. Completed applications should be mailed to the Special Testing and Research Laboratory (Attention: Pam Smith or Jennifer Kerlavage) at: 22624 Dulles Summit Court, Dulles, VA 20166. For additional information, call 703/668-3337.

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Computer Corner #190

Digital Evidence Worksheet Design

by Michael J. Phelan
DEA Digital Evidence Laboratory

One of the cornerstones of all forensic examinations is a well documented description of the evidence and a list of the key examination processes that were used to recover information. The DEA Digital Evidence Laboratory has utilized worksheets for nearly a decade as its principal means to accomplish these tasks. Recently, the Laboratory finalized the third iterations of its various worksheets. These latest versions accurately record the sequential evidence handling and processing steps currently utilized at the Laboratory. The worksheets provide a formal structure to ensure that descriptive information is uniformly collected and that the examination processes are thoroughly documented. Laboratory management conducts a technical review on 100 percent of its worksheets and case notes to ensure that all required information is properly recorded.

A worksheet can document a wide array of examination information, including: 1) Evidence Description; 2) Evidence Receipt and Handling; 3) Evidence Duplication and Verification; 4) Examination Techniques Used; 5) Examination Tools Used; 6) Anti-Virus Software Scan Results; 7) Evidence Archive Information; 8) Customer Information and Scope of Examination Request; and 9) a Legal Search Document Review.

Wide variations in worksheets are common. Regardless of form, however, an agency's records management, evidence handling, and quality assurance policies should be accurately reflected in its worksheets.

Examination worksheets can be quite complex to design because there can be a great variety of evidence submissions and possible evidence handling combinations. For example, larger digital evidence laboratories (or programs) can have multiple examiners working on the same case (or even portions of the same exhibit). It is important that the worksheet accurately document what each examiner did as part of the examination process.

DEA has had three iterations of its worksheets. The initial work sheet (Version 1) was a one page document that described the evidence, listed the total amount of storage capacity searched, and recorded significant events (passwords, computer viruses, etc.). It mainly served as an information database to answer management questions. The next version of the worksheets (Version 2) consisted of multiple forms that described the case, the evidence, the imaging/duplication process, and the examination tools and processes that were used. These were the first effort to comprehensively document the entire examination process. The latest iteration of the worksheets (Version 3) improved Version 2 by updating the examination milestones to both reflect several key ASCLD/LAB requirements and better accommodate multiple examiners working on the same case or same exhibit. Examples of ASCLD/LAB requirements include: 1) Use of controls prior to imaging or examination; 2) Verification that the examination platform and media were prepared prior to imaging or examination; 3) Annotations in the instrument log books; and 4) Use of hard drive write blocking. In addition, all Version 3 worksheets include a line for the technical reviewer(s) to initial (required) as well as a line to indicate who placed the worksheet in the examination case file folder.

Other additions to the Version 3 worksheets include: 1) An evidence repackaging report to document efforts to prevent deleterious change to digital evidence submissions that are improperly packaged; and 2) A form used on-site to document evidence as part of the technical collection process. These latter forms are only used when the situation warrants.

Included are copies of the Version 3 worksheets currently utilized by DEA's Digital Evidence Laboratory [Editor's Note: The forms have been reproduced at about 90 percent original in order to fit the size limitations of *Microgram Bulletin*.]. DEA has found that a comprehensive, structured worksheet aids in ensuring consistency and thoroughness of analysis. However, worksheets alone do not completely satisfy the documentation of the evidence examination process, because findings and their associated storage location information and meta-data (time/date stamp and file ownership rights) must also be documented. Such information is often highly variable, and is therefore most easily documented in the examiner's chronological examination notes.

Comments or Questions?
E-mail: Michael.J.Phelan -at-usdoj.gov

Attachments:

A) Case Examination Worksheet

B) Case Examination Worksheet; Continuation 1

C) Case Examination Worksheet; Continuation 2

D) Exhibit Worksheet

E) Examination Tools Worksheet

F) On-Site Summary Worksheet

G) Exhibit Repackaging Report

U.S. Department of Justice
Drug Enforcement Administration
Digital Evidence Laboratory (SFL9)

Case Examination Worksheet

Case Number: _____ Submitting Office: _____

Case Agent: _____ Agent Phone #: _____

Case Management Plan

Tasks / Exhibit # →	1	2	3	4	5	6	7	8	9	10
Case Folder					Initials					
• Organized case file										
• Reviewed case related documentation										
• Coordinated with case agent (obtained scope, keywords, and priorities)										
• Completed case work sheets										
• Documented examination (case notes)										
• Prepared DEA-6 Report of Examination										
Evidence Handling										
• Inspected seals upon receipt										
• Reviewed DEA-12 / verified return										
• Verified / documented exhibits / sub-exhibits										
• Recorded laboratory number										
• Marked items with examiner markings										
• Prepared "return" DEA-12										
• Returned original evidence to vault										
• Sealed duplicate evidence (archive copy)										
• Returned duplicate evidence to archive										
Imaging										
• Prepared storage media										
• Prepared forensic platform										
• Performed control prior to imaging										
• Annotated instrument log book										
• Utilized write-blocking										
• Obtained acquisition/verification report (hash report)										
• Created duplicate copy of images (archive copy)										
• Restored/verified archive & produced report (hash report)										
Examination										
• Reviewed case related documentation										
• Prepared forensic platform										
• Performed control prior to examination										
• Identified software used										

Placed in Case Folder By: _____ Date: _____

Page ___ of ___ Version: 3.1

DEA, Digital Evidence Lab (SFL9)

Case Examination Worksheet (cont.)

Case #: _____

	1	2	3	4	5	6	7	8	9	10
• Completed Anti-Virus scan										
• Obtained CMOS / VM information										
• Obtained registry information (owner info, shutdown time, etc)										
• Identified users / logins / passwords										
• Identified Internet access mode (dialup, DSL, cable)										
• Obtained file listing w/ properties (timeline) (last modified/accessed/created dates and times, & hash values)										
• Performed negative hash										
• Analyzed file signatures (non-matching)										
• Conducted keyword search										
• List email addresses										
• Examined email and chat files										
• Examined voicemail and text messages (cell phones, pagers, PDAs, etc)										
• Examined cell phone call history (outgoing, incoming, & missed calls)										
• Examined contact/address books										
• Examined Internet files										
• Examined document and spreadsheet files (all types)										
• Examined financial data										
• Examined image and audio files										
• Examined compressed and link files										
• Examined unallocated/slack file space										
• Examined swap/page files										
• Examined deleted files and folders										
• Identified encryption & Steganography (files and software)										
• Cracked passwords										

Case Review

Exhibit #	Tech Review		Admin Review		Comments
	Initials	Date	Initials	Date	

Placed in Case Folder By: _____ Date: _____

Page ___ of ___

Version: 3.1

DEA, Digital Evidence Lab (SFL9)

Case Examination Worksheet (cont.)

Case #: _____

Evidence submitted

Exhibit #	Laboratory #	Stride #	Qty	Type of exhibit(s)

Sub-exhibits identified ☐ NONE

Sub-exhibit #	Qty	Type of exhibit(s)	Location

Placed in Case Folder By: _____ Date: _____

Page ___ of ___

Version: 3.1

DEA, Digital Evidence Lab (SFL9) **Exhibit _____ Worksheet**

Case #: _____ On-Site Location: _____

Description of Computer ☐ NOT AVAILABLE / APPLICABLE			Initials _____
Type	Manufacturer	Model	Serial Number
Inventory:			
Condition:			

CMOS/BIOS Information ☐ NOT AVAILABLE / APPLICABLE	Initials _____
System Date/Time: _____	Current Date/Time: _____

Description of Media			Initials _____	
Media	Manufacturer	Model	Serial Number or ESN	Capacity
Condition				

Imaging Information ☐ NOT AVAILABLE / APPLICABLE			Action By: _____	
Type Image	Program / Version / Mode	Platform Used / DEA #	Verified Method	Date
Write Block Method				
File Name:				
Report Location:				

Archiving Information ☐ NOT AVAILABLE / APPLICABLE			Action By: _____		
Program / Version	Media Used	Qty	Verified Method	Heat Seal #	Date
Report Location:					

Restoring Information ☐ NOT AVAILABLE / APPLICABLE			Action By: _____		
Program / Version	Media	Qty	Verified Method	Heat Seal #	Date
Report Location:					

NOTES: _____

Image Reviewer: _____ Date: _____ Placed in Case Folder By: _____ Date: _____

Case Reviewer: _____ Date: _____

Page ___ of ___ Version: 3.1

DEA, Digital Evidence Lab (SFL9)

Examination Tools Worksheet

Case #: _____ Exhibit #: _____

Base Examination Software ☐ NOT AVAILABLE / APPLICABLE Initials _____

☐ EnCase Version: _____
☐ ILook Version: _____
☐ Other _____

Supplemental Examination Tools ☐ NOT AVAILABLE / APPLICABLE Initials: _____

Tool (Software / Firmware) / Version	Purpose

Computer Virus Detection ☐ NOT AVAILABLE / APPLICABLE Initials: _____

Software Used: _____ Signature Date: _____

Checked ☐ Original ☐ Working Copy ☐ Findings CD ☐ Other Files (ID in Remarks)

No Virus Detected: ☐

Virus Detected: _____

Action Taken: _____

Remarks: _____

Reviewer: _____ Date: _____ Placed in Case Folder By: _____ Date: _____

Page ___ of ___

Version: 3.0

DEA, Digital Evidence Lab (SFL9)

On-site Summary Worksheet

Case Number: _____ Supported Office: _____

Case Agent: _____ Agent Phone #: _____

Dates: _____ On-Site Address: _____

_____

Supporting Examiners:

_____

_____

_____

Total # computers present: _____

# of drives imaged: Physical Image: _____ Logical Image _____ Logical Copy _____

# of DEA drives submitted for evidence collection: _____

Other items submitted for evidence collection: _____

_____

_____

Remarks: _____

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Reviewer: _____ Date: _____ Placed in Case Folder By: _____ Date: _____

Page ___ of ___

Version: 3.0

U.S. Department of Justice
Drug Enforcement Administration
Digital Evidence Laboratory (SFL9)

Exhibit Repackaging Report

Case #: _____ Exhibit #: _____ Lab #: _____

Date of Receipt at Vault: _____ Evidence Technician/Supervisor's Initials: _____

Observed Concerns at Intake (Condition):

- CDs or DVDs not packaged in protection sleeve or jewel case. _____
- External Hard Drive not packaged with shock resistant material (Such as Bubble wrap, Styrofoam, Plastic Shipping Case.) _____
- Computer case containing internal component not secured. _____
- Evidence not under seal. _____
- Other: _____
- Condition: _____

Evidence Technician notified Laboratory Manager:

- Notification to: _____
- Date of Notification: _____

Directed Action:

- Forwarded to Imaging Team on: _____ or
- Evidence Technician repackaged evidence.
  Name: _____ Date: _____

Notes: _____

Reviewer: _____ Date: _____ Placed in Case Folder By: _____ Date: _____

Page ___ of ___ Version: 3.0

Information and Instructions for *Microgram Bulletin*

[Editor's Preface: The following information and instructions are derived from the *Microgram* website < http://www.dea.gov/programs/forensicsci/microgram/index.html >, and are provided here for the convenience of those subscribers who do not have access to the Internet.]

General Information

Microgram Bulletin is a monthly newsletter published by the U.S. Drug Enforcement Administration's Office of Forensic Sciences, and is primarily intended to assist and serve forensic scientists concerned with the detection and analyses of suspected controlled substances for forensic/law enforcement purposes.

Subscriptions to Microgram Bulletin

Microgram Bulletin is unclassified (as of the January 2003 issues), and is published on the DEA public access website (see the above URL). **Private citizens should use the website to access *Microgram Bulletin*.** Professional scientific and law enforcement personnel may either use the website or request a subscription. Subscriptions are available electronically and in hard copy. Electronic subscriptions require Internet access. The publications themselves will not be sent electronically to any subscriber; rather, an email notification of the pertinent URL will be sent to the subscriber when the respective issue is posted on the website (see additional information on email notifications, below). Requests for hard copies are strongly discouraged, and should be limited to those offices that do not have access to the Internet, require hard copies for their libraries, or have some other valid reason (Note: "For my personal collection" is not considered to be a valid reason). Requests for hard copies should indicate the number of copies required (maximum of two allowed per office), and should also include formal justification. Note that due to publication delays beyond the control of the Office of Forensic Sciences, hard copies will arrive from 30 to 180 days after electronic posting.

Requests to be added to the subscription list should be submitted via email to the *Microgram* Editor at: microgram_editor@mailsnare.net If email submission is not possible, requests should be mailed to: *Microgram* Editor, Drug Enforcement Administration, Office of Forensic Sciences, 2401 Jefferson Davis Highway, Alexandria, VA 22301. All requests to be added to the *Microgram* mailing list should include the following **Standard Contact Information**:

* The Full Name and Mailing Address of Submitting Laboratory or Office;

* The Full Name, Title (Laboratory Director, Assistant Special Agent in Charge, Librarian, etc.), Phone Number, FAX Number, and Preferred email Address of the Submitting Individual (Note that subscriptions are mailed to titles, not names, in order to avoid subscription problems arising from future personnel changes);

* If available, the generic email address for the Submitting Laboratory or Office;

* If a generic email address is not available, **one** private email address for an individual who is likely to be a long-term employee, who has a stable email address, and who will be responsible for forwarding *Microgram* information to all of the other employees in the requestor's Office (Note that only one email address per Office will be honored);

* If requesting hard copy mailings, the number of copies requested (two max), and justification.

Requests to be removed from the *Microgram* subscription list, or to change an existing subscription, should also be sent to the *Microgram* Editor. Such requests should included all of the pertinent standard contact information detailed above, and also should provide the email and/or hard mail address currently being utilized for the requestor's subscription.

Note that, due to mailing delays and/or publication timeframes, subscription requests/changes may take as long as 90 days to implement.

Email Notifications (Additional Comments)
As noted above, electronic subscriptions are email based. The email provides a notification of the *Microgram* URL when a new issue is posted, and additional information as appropriate. Note that *Microgram* notices will NEVER include any attachments, or any hyperlink other than the *Microgram* URL. This is important, because the microgram_editor@mailsnare.net address is routinely hijacked and used to send spam, very commonly including malicious attachments. For this reason, all subscribers are urged to have current Anti-Viral, Anti-Spyware, and Firewall programs in operation.

Costs
Subscriptions to *Microgram* are free.

Submissions to *Microgram Bulletin*
Microgram Bulletin includes Intelligence Alerts, Safety Alerts, Intelligence Briefs, Selected Intelligence Briefs, Selected Literature References, Meeting Announcements, Employment Opportunities, pertinent sections from the Code of Federal Regulations, Columns of topical importance, and similar material of interest to the counter-drug community. Explanatory details for most of the above types of submission are detailed below, and typical examples are provided in most issues of *Microgram Bulletin*.

All submissions must be in English. Because *Microgram Bulletin* is unclassified, **case sensitive information should not be submitted!** All submissions should, whenever possible, be submitted electronically, as straight email or as an IBM® PC-compatible Corel WordPerfect® or Microsoft Word® attachment, to: microgram_editor@mailsnare.net *Current* versions of Corel WordPerfect® or Microsoft Word® (defined as having release dates less than 5 years old) should be utilized. If email submission is not possible, submissions may be mailed to: *Microgram* Editor, Drug Enforcement Administration, Office of Forensic Sciences, 2401 Jefferson Davis Highway, Alexandria, VA 22301. Hard copy mailings should be accompanied by an electronic version on a 3 ½ inch IBM® PC-compatible diskette. **Note that diskettes should be mailed in an irradiation-proof protective sleeve, and the mailing envelope should be marked: "Warning - Contains Electronic Media - Do Not Irradiate"**. Note also that mailed submissions may be subject to lengthy handling delays beyond the control of the Office of Forensic Sciences, and electronic media sent through the mail may be destroyed en route by sanitizing procedures, despite protective measures and written warnings. All submissions should include the following **Contact Information:** The Full Name and Address of Submitting Laboratory or Office, and the Full Name, Phone Number, FAX Number, and Preferred email Address of the Submitting Individual.

Intelligence Briefs are concise synopses of the physical and chemical characteristics of novel and/or interesting exhibits submitted to law enforcement laboratories involved in the detection and analyses of suspected controlled substances for forensic/law enforcement purposes. They should include descriptive details adhering to (as appropriate) the following outline:

What laboratory did the analysis?
Where is the laboratory located?
What agency seized the exhibit?
Where was the exhibit seized?
Were there any special circumstances of the seizure (unusual smuggling technique, etc.)
What controlled substance was suspected upon submission?
Detailed physical description (appearance, dimensions, logos, odor, packaging, etc.)
Quantities (numbers of tablets, packages or bricks, average mass, net mass, etc.)
Photos (jpeg images preferred)
What techniques were used to analyze the exhibit?
Actual identity of the exhibit?
Quantitation data? (if approximate, so state)
Adulterants and diluents? (if identified)
First seizure of this type? (if not, provide brief details of previous examples)
Editorial comments? (if any)
Literature references? (If any)

In order to avoid confusion, if uncommon controlled substances are identified, the description should use the full chemical name(s) of the identified substances (if desired, acronyms or street terminology (e.g., "Foxy-Methoxy", "Nexus", or "STP") can be included in parentheses after the full chemical name).

Photographs should be provided as ATTACHMENTS, not as embedded images in documents. Jpeg images are preferred. Photographs should be of reasonable size - 250 KB or less per photograph. Unless the scale is obvious (which is uncommon), photographs of subject exhibit(s) should include either a metric ruled scale or a coin or bill (U.S. currency) to place the exhibit's size in context.

Intelligence Alerts and Safety Alerts are urgent communiques to the *Microgram Bulletin* readership which give notice of a specific forensic/drug-related enforcement and/or safety issue. In addition to the descriptive details listed under "Intelligence Briefs" above, they should include a concise synopsis of the issue, recommendations (if any), pertinent literature citations (if any are known), and a mechanism for providing feedback (if appropriate).

Selected Intelligence Briefs are reprinted (with permission) unclassified intelligence briefs of presumed interest to the *Microgram Bulletin* readership that have been previously published in restricted or non-restricted publications or websites that are also dedicated to the detection and analyses of suspected controlled substances for forensic/law enforcement purposes. Selected Intelligence Briefs must be unclassified, and should be a minimum of 1 page and a maximum of 10 pages in length (single spaced at 11 pitch Times New Roman font, including photos, tables, charts, etc.) All *Microgram Bulletin* subscribers are invited to submit such material, which must include the author's and publisher's contact information.

Selected Literature References is a monthly compilation of reference citations of presumed interest to the *Microgram Bulletin* readership, derived from approximately 2500 scientific periodicals. The focus of the Selected Literature References is the detection and analysis of suspected controlled substances for forensic/law enforcement purposes. References from clinical and toxicological journals are included only if the material is considered to be of high interest to forensic chemists (for example, contains the mass spectra of an unusual substance that is not known to be published elsewhere). Note that citations from obscure periodicals may be missed, and all *Microgram Bulletin* subscribers are invited to submit citations of interest if they do not appear in *Microgram Bulletin* within three months of their publication. Citations should include a summary sentence and the primary author's contact information.

Meeting Announcements is a monthly compilation of upcoming meetings of presumed interest to the *Microgram Bulletin* readership. **In general, only meetings which are dedicated to forensic chemistry/forensic drug analysis or include a subsection so dedicated will be publicized in *Microgram Bulletin*.** Meeting Announcements should include the Formal Title, Sponsoring Organization, Inclusive Dates, Location (City, State, and specific locale), Meeting Registration Costs and Deadline, Recommended Hotel Registration Costs and Deadline (include details on special rates where available), and Contact Individual's Name, Phone Number, and email Address. If available, the URL for the meeting website should also be included in the Announcement. Meeting Announcements will be posted for a maximum of three consecutive months, or (alternately) three times every other month over a five month period, but not past the registration deadline.

Employment Opportunities is a monthly compilation of job announcements of presumed interest to the *Microgram Bulletin* readership. **In general, only jobs with a forensic chemistry/forensic drug analysis focus for Federal, State, or Local Crime Laboratories or Offices will be publicized in *Microgram Bulletin*.** Exceptions may be requested and will be considered on a case-by-case basis. Employment Opportunity announcements should include the Formal Title of the Organization, Formal Title of the Laboratory or Office, Position Title, Laboratory or Office Location (City and State), Salary Range, Opening and Closing Dates, Duties, General Requirements, Specialized Requirements (if any), Application Procedures, and the Contact Individual's Name, Phone Number, email Address, and Mailing Address. If available, the URL for the agency's website, and (if available) the specific URL for the job posting should also be included in the Announcement. Employment Opportunities will be posted for a maximum of 3 consecutive months, but not past the application deadline.

The Journal/Textbook Collection Exchange

If any subscriber is interested in donating any forensic or analytical chemistry journal and/or textbook collection to a fellow subscriber or library, *Microgram Bulletin* is willing to list the offered materials and the associated contact information in a future issue (currently January, April, July, and October). The general format should follow the example in the January 2003 issue, and should be sent via email to the *Microgram* Editor at: microgram_editor@mailsnare.net Only items for donation (not for sale) will be considered for publication, and donations to libraries should adhere to journal restrictions and/or time limits (if any) on such offers.

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All issues of *Microgram* (November 1967 - March 2002) and the first nine issues of its successor *Microgram Bulletin* (April - December, 2002) were and continue to be **Law Enforcement Restricted** publications, and are therefore (permanently) unavailable to the general public. [Note that this restriction includes requests made under the Freedom of Information (FOI) Act.]

Past issues or individual sections of issues (e.g., specific articles) are available to law enforcement affiliated offices and laboratories. Requests from such offices and laboratories **must be made on official letterhead** and mailed to:

Deputy Assistant Administrator
Office of Forensic Sciences
Drug Enforcement Administration
2401 Jefferson Davis Highway
Alexandria, VA 22301

Note that requests made via email will not be honored.

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3) **WARNING!:** Due to the often lengthy time delays between the actual dates of seizures and their subsequent reporting in *Microgram Bulletin*, and also because of the often wide variety of seizure types with superficially similar physical attributes, published material cannot be utilized to visually identify controlled substances currently circulating in clandestine markets. **The United States Department of Justice and the Drug Enforcement Administration assume no liability for the use or misuse of the information published in *Microgram Bulletin*.**