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Microgram Bulletin

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- JANUARY 2006 -

- INTELLIGENCE ALERT -

HOMEMADE ALCOHOLIC MARIJUANA-BASED TOPICAL SOLUTIONS IN CHICAGO, ILLINOIS

The Illinois State Police Forensic Science Center at Chicago (Chicago, Illinois) recently received eighteen bottles, commercially labeled as "Isopropyl Rubbing Alcohol" and "Wintergreen with Methyl Salicylate" isopropyl rubbing alcohol, each containing plant material suspended in a green liquid, suspected to be marijuana in the original alcoholic solutions (see Photo 1). The exhibits were seized by the Chicago Police Department pursuant to a search warrant (circumstances unknown). Each bottle contained approximately 400 grams of combined material (total net mass in all 18 bottles 7122.5 grams). Microscopic

Photo 1
[Note: Labels Intentionally Blurred.]

analysis of the isolated and dried plant material confirmed marijuana morphology; however, the Duquenois-Levine test was inconclusive, probably due to the material's prolonged submersion in the alcoholic solutions (resulting in comprehensive extraction of the cannabinoids). Analysis of a concentrated sample of the liquid by GC/MS confirmed Δ9-tetrahydrocannabinol (THC; not quantitated). This was the first submission of this type to the laboratory. According to the suspect, the exhibits were a homemade topical mixture intended to relieve arthritis pain.

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- INTELLIGENCE ALERT -

OXYCONTIN MIMIC TABLETS (CONTAINING FENTANYL) NEAR ATLANTIC, IOWA

The Douglas County Sheriff's Department Laboratory (Omaha, Nebraska), recently received eleven apparent Oxycontin tablets from the Cass County Sheriff's Department in Atlantic, Iowa (see Photos 2 and 3). The tablets were part of a polydrug and currency seizure made pursuant to a vehicle stop on westbound I-80 near Atlantic (about 40 miles east of Omaha, Nebraska). The tablets (total net mass 1.56 grams) were light green and approximated the physical dimensions, weight, and logo of 80 milligram Oxycontin (oxycodone) tablets. Analysis by GC/MS, however, indicated not oxycodone but rather fentanyl (not quantitated). This is the first ever submission of fentanyl-containing Oxycontin mimic tablets to the laboratory.

Photo 2

Photo 3

[Editor's Notes: The other items seized from the vehicle included dietary supplement tablets, "personal use" quantities of methamphetamine, oxycodone tablets, and hydrocodone tablets, and $370,000 in U.S. currency. Intelligence indicated that the vehicle was traveling from Minneapolis, Minnesota to San Francisco, California, and that the driver was a currency smuggling courier. Additional intelligence enabled the San Francisco Police to obtain a search warrant for the suspect's residence, where they seized additional methamphetamine, additional controlled pharmaceuticals, and marijuana cultivation equipment. A seizure of similar fentanyl-containing Oxycontin mimic tablets was recently made by the New York Police Department (no further details available).]

- INTELLIGENCE ALERT -

FRESH KHAT IN PORTLAND, OREGON

The Oregon State Police Portland Metro Forensic Laboratory (Clackamas, Oregon) recently received two exhibits containing a total of 90 bundles of fresh green leaves and stem bundles, suspected khat (see Photo 4). Each bundle was wrapped in a large leaf and husk-like strips; unraveled bundles each showed three sub-bundles of stems/leaves (see Photo 5). The exhibits were seized by the Portland Police Bureau (circumstances unknown). Because of the possibility of cathinone degradation over time, the evidence was frozen until analyzed. Analysis of extracts of the plant material (total net mass 7.31 kilograms) by GC and GC/MS confirmed cathinone, cathine, and phenylpropanolamine (not quantitated). This was the second submission of khat to the Oregon State Police Laboratory System.

Photo 4

Photo 5

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- INTELLIGENCE ALERT -

2C-I CAPSULES IN MIAMI BEACH, FLORIDA

The Miami-Dade Police Department Crime Laboratory (Miami, Florida) recently received six capsules, each containing a small amount of white crystalline material, suspected methamphetamine (see Photo 6 (scale is in inches)). The exhibits were seized in the Miami Beach South Patrol District by the Miami Beach Police pursuant to an arrest for a hit-and-run traffic accident. Analysis of the powder (total net mass approximately 60 milligrams) by color tests gave a dark green color with the Marquis reagent and a negative result with sodium nitroprusside (both inconsistent for

Photo 6

methamphetamine). Further analysis by GC/MS and FT-IR/ATR indicated not methamphetamine but rather 2,5-dimethoxy-4-iodophenethylamine (commonly known as 2C-I; not quantitated). This was the first ever submission of 2C-I to the laboratory.

[Editor's Notes: 2C-I is more commonly encountered in Ecstasy mimic tablets with an "i" logo (to date, mostly seen in western Europe). For a photo of one such "i" logo tablet, see: "2C-I - A New Amphetamine Type Stimulant Identified in Denmark." Microgram Bulletin 2003;36(5):89.]

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- INTELLIGENCE ALERT -

MDMA MIMIC TABLETS (CONTAINING METHAMPHETAMINE AND PHENCYCLIDINE (PCP)) IN CHICAGO, ILLINOIS

The Cook County Sheriff's Police Department Forensic Laboratory (Maywood, Illinois) recently received two partial tablets with different colors and logos, suspected MDMA (see Photo 7). The tablets were seized by the Cook County Sheriff's Police Department's Narcotics Unit from two European nationals in northwest Chicago (no further details available). One tablet (9 x 4 millimeters) was off-white with a "Mitsubishi" logo, while the other (8 x 3 millimeters) was pink with an "@" logo. Analysis by GC/MS, however, indicated not MDMA but rather a mixture of methamphetamine and phencyclidine (PCP). The controlled substances were not quantitated; however, the approximate ratios were 14:1 and 28:1 methamphetamine to phencyclidine, respectively, based on their Total Ion Chromatograms. This was the first ever submission of Ecstasy mimic tablets containing this particular mixture to the laboratory.

Photo 7

[Editor's Notes: A submission of 882 similar (methamphetamine/phencyclidine/"Mitsubishi" logo) tablets was recently analyzed by the DEA North Central Laboratory (Chicago, Illinois). These tablets were also seized in the Chicago area (further details not available). Ecstasy mimic tablets containing mixtures of methamphetamine and *ketamine* are (thus far) more common that those containing methamphetamine and phencyclidine (PCP).]

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- INTELLIGENCE ALERT -

COCAINE IN AN EYE SHADOW CONTAINER IN BUENOS AIRES, ARGENTINA

Photo 8

The DEA Special Testing and Research Laboratory (Dulles, Virginia) recently received an eye shadow container that contained a plastic baggie containing a white powder, suspected cocaine (see Photo 8 (scale is in inches)). The exhibit was selected from a much larger seizure made from the luggage of a Portuguese National at the Ezeiza Airport in Buenos Aires, Argentina (who was en route to Madrid, Spain). Analysis of the powder (total net mass 7.6 grams) by GC, IR, and GC/MS confirmed 91.4 percent cocaine hydrochloride. This is the first submission of this particular concealment method to the Special Testing and Research Laboratory.

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- INTELLIGENCE ALERT -

UNUSUAL HEROIN CONCEALMENT TECHNIQUE IN ALMA, KANSAS

Photo 9

The DEA North Central Laboratory (Chicago, Illinois) recently received 25 packets, each packaged with plastic wrapping over black electrical tape, suspected cocaine (see Photo 9 (scale is a one foot ruler)). The exhibits were seized by a Kansas Highway Patrol Trooper during a routine traffic stop and subsequent consent search in Alma (located off I-70, about 25 miles west of Topeka). The submission consisted of nine bundles measuring 8 x 4 inches and sixteen bundles measuring 5 x 2.5 inches. Unusually, each bundle was coated with a viscous substance that smelled like camphor/menthol (not further identified). Upon disassembly, each packet contained a brick of compressed tan powder wrapped in multiple layers of tape and cellophane; the nine larger bricks also had impressions of a goat with the word “Capricorn” over the goat impression. Analysis of the

powder (total net mass 12.27 kilograms) by FTIR, GC/MS, and GC, however, indicated not cocaine but rather 89 percent heroin hydrochloride. This is believed to be the first submission of heroin bricks coated with a camphor/menthol odorant to the North Central Laboratory.

[Editor's Note: It is suspected that the camphor/menthol coating was intended to mask the heroin from canine detection.]

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- INTELLIGENCE ALERT -

METHANDROSTENOLONE "BLOTTER PAPER" IN SANTA CLARA, CALIFORNIA

The DEA Western Laboratory (San Francisco, California) recently received two pieces of a cardboard type paper with gridlines marking off 430 squares (each 0.82 x 0.75 centimeters), a suspected steroid (see Photo 10). The exhibits were part of a larger collection of various steroids, and were seized by the Santa Clara Police Department (circumstances not provided). The papers (8.2 x 3. and 5.9 x 3. inches, respectively, total net mass 16.4 grams) did not fluoresce under UV light. Analysis of an alcoholic extract and separately a methylene chloride extract (from saturated sodium bicarbonate) by GC/MS indicated methandrostenolone (not quantitated). This was the first submission of this type to the Western Laboratory.

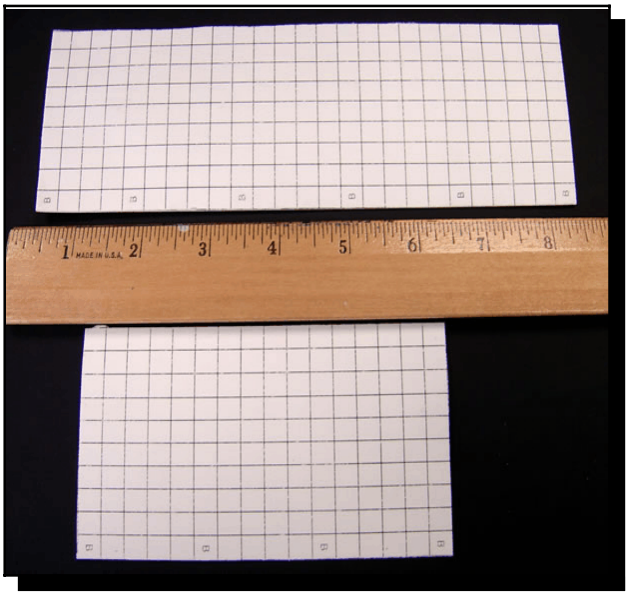

Photo 10

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- INTELLIGENCE BRIEF -

HEROIN ADULTERATED WITH PHENOBARBITAL IN WASHINGTON, DC

The DEA Mid-Atlantic Laboratory (Largo, Maryland) recently received 30 small plastic bags containing a fine off-white powder, suspected heroin. The exhibits were seized by the Metropolitan Police Department of Washington, DC (circumstances not provided). Analysis of the powder (total net mass 2.3 grams) by GC/MS, FTIR and GC confirmed 15 percent heroin hydrochloride, adulterated with a small amount (less than 1 percent) phenobarbital, along with caffeine and quinine. Based on DEA laboratory seizure data, this type of mixture (that is, heroin and phenobarbital) has been submitted about 50 times since 1970. Most of the submissions have been from the Mid-Atlantic region, suggesting a possible common source; however, the relative amounts of heroin and phenobarbital in the seizures has varied widely over the years.

- SAFETY ALERT; FOLLOWUP -

Sir: Concerning the Safety Alert entitled: "Bulk Marijuana in Hazardous Packaging in Chicago, Illinois" published in the November 2005 *Microgram Bulletin*. When I was assigned to the U.S. Army's Technical Escort Unit in 1966, we discovered that the mixing of dry hypochlorite chemicals (pool sanitizing compounds, dry bleach, etc.) with hydrocarbon solvents or other organic chemicals will cause a chemical fire. This fire can be very intense and difficult to extinguish. I saw a similar fire when a liquid soap leaked into a drum of dry bleach at a laundry. All personnel should be aware of the fire hazard from packaging incorporating dry hypochlorite.

John M. Porter
Manager, Drug Analysis Laboratory
Prince George's County Police Department
Landover, Maryland

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SELECTED REFERENCES

[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 service. Patents are reported only by their *Chemical Abstracts* citation number.]

1. Anastos N, Barnett NW, Lewis SW, Gathergood N, Scammells PJ, Sims DN. **Determination of psilocin and psilocybin using flow injection analysis with acidic potassium permanganate and tris(2,2'-bipyridyl)ruthenium(II) chemiluminescence detection, respectively.** Talanta 2005;67(2):354. [Editor's Notes: Includes a synthesis of psilocin. Contact: School of Biological and Chemical Sciences, Deakin University, Geelong, 3217 Australia.]

2. Evans HK. **History of microcrystal tests in forensic science.** Microscope 2005;53(1):3. [Editor's Notes: Presents the title topic. Contact: Sheriff's Department, San Bernardino Co, San Bernardino, CA 92415.]

3. Hopen TJ. **Microchemical tests: Methods and techniques.** Microscope 2005;53(1):5. [Editor's Notes: Focus is on organic and inorganic ions. Contact: Firearms and Explosives, Bureau of Alcohol, Tobacco, and Firearms, Atlanta, GA 30345.]

4. Mali BD, Garad MV. **Thin-layer chromatographic detection of chloral hydrate in an alcoholic beverage.** Journal of Planar Chromatography - Modern TLC 2005;18(105):397. [Editor's Notes: Reaction with orcinol under alkaline conditions produces a yellow spot. Contact: Regional Forensic Science Laboratory, Aurangabad 431 002, India.]

5. Reddy MM, Krishna JG, Sashidhar RB, Varshney KM, Sarin RK. **Evaluation of fatty acids as biochemical markers for source identification of Indian opium.** LC-GC Europe 2005;18(10):541. [Editor's Notes: 124 samples were analyzed. Certain fatty acids were useful as biochemical markers for source determination. Contact: Department of Biochemistry, University College of Science, Osmania University, Hyderabad, India.]

6. Spangenberg B, Seigel A, Kempf J, Weinmann W. **Forensic drug analysis by means of diode-array HPTLC using RF and UV library search.** Journal of Planar Chromatography - Modern TLC 2005;18(105):336. [Editor's Notes: 33 compounds with "benzodiazepine properties" (not further specified in the abstract) were analyzed by the title technique. Contact: University of Applied Sciences Offenburg, Offenburg 77652, Germany.]

7. Yoshimatsu K, Kiuchi F, Shimomura K, Makino Y. **A rapid and reliable solid-phase extraction method for high-performance liquid chromatographic analysis of opium alkaloids from *Papaver* plants.** Chemical and Pharmaceutical Bulletin 2005;53(11):1446. [Editor's Notes: Presents the title technique. Contact: Research Center for Medicinal Plant Resources, National Institute of Biomedical Innovation, 1-2 Hachimandai, Tsukuba, Ibaraki 305-0843, Japan.]

Additional References of Possible Interest:

1. Almirall JR, Umpierrez S, Castro W, Gornushkin I, Winefordner J. **Forensic elemental analysis of materials by laser induced breakdown spectroscopy (LIBS).** Proceedings of SPIE - The International Society for Optical Engineering 2005;5778:657. [Editor's Notes: Presents the title technique, on a variety of substrates (illicit drugs were not mentioned). Contact: Florida International Univ. (no further addressing information was provided).]

2. Dolnik V, Liu S. **Applications of capillary electrophoresis on microchips.** Journal of Separation Science 2005;28(15):1994. [Editor's Notes: A review (143 refs.). Contact: Alcor BioSeparations, Santa Clara, CA (zip code not provided).]

3. Rendle DF. **Advances in chemistry applied to forensic science.** Chemical Society Reviews 2005;34(12):1021. [Editor's Notes: A generic overview. Contact: Scientific Consultant, 9 Wiltshire Drive, Wokingham, UK RG40 1TQ.]

4. Verma RS, Dalela AK, Tripathi RM, Middha D. **Designer drugs.** Journal of Forensic Medicine and Toxicology 2005;22(1):8. [Editor's Notes: An overview. Contact: Central Forensic Science Laboratory, D.F.S., M.H.A. Gov't of India, Chandigarh 160036, India.]

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THE JOURNAL/TEXTBOOK COLLECTION EXCHANGE

The Journal/Textbook Collection Exchange is a service intended to facilitate the transfer of unwanted or surplus journals and textbooks to forensic libraries or other subscribers. At present, this service is offered once a quarter (in January, April, July, and October). The most current items are listed below. The offers are First Come/First Serve (except libraries have preference). There are no charges to the requestor. Provide full mailing address in request. **Important!:** Do not provide an address that irradiates mail!

* British Pharmacopoeia, 2003 - Volumes I - IV, plus the Veterinary Volume (this is the complete collection; hard copies).

* The *Journal of Forensic Sciences*:
2003 - January (#1).
2004 - March (#2), July (#4), and November (#6).
2005 - Entire year (#'s 1-6), plus January (#1), May (#3), July (#4), and November (#6).

* The Merck Index, 11th Edition (this is the "Centennial" Edition).

* Physician's Desk Reference, 48th Edition (1994).

* The *Wall Street Journal*, 1986 - 1994 (microfilm).

* The *Washington Post*, 1978 - 1993 (microfilm, has various gaps).

All subscribers are encouraged to donate surplus or unwanted items/collections. Reference texts and long runs of forensic/analytical journals are of particular interest; however, even single issues are worthwhile. 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 2006 issue of *Microgram Bulletin*.

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THE DEA FY - 2006 STATE AND LOCAL FORENSIC CHEMISTS SEMINAR SCHEDULE

The remaining FY - 2006 schedule for the DEA's State and Local Forensic Chemists Seminar is as follows:

February 6 - 10, 2006
May 8 - 12, 2006
July 10 - 14, 2006
September 11 - 15, 2006

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 #202

Digital Evidence Storage and Preservation

Clay Schilling
Group Supervisor
DEA Digital Evidence Laboratory

Digital evidence storage and preservation is a salient concern for law enforcement agencies. The ever-increasing diversity of digital equipment, and its ever-increasing use, present unusual challenges for law enforcement personnel - not only in the collection and processing of digital evidence, but also in its storage and long-term preservation. Regardless of type or form, the purpose of evidence storage and preservation is to keep the evidence intact, unchanged, and safe from damage or destruction, so that it can be used in a court of law. However, digital evidence poses several unique challenges versus more "classic" forms of forensic evidence.

Because digital evidence covers such a broad range of items and types (e.g., computers, cell phones, digital video, digital audio, etc.), this column will focus only on those issues specific to computers and computer related storage media.

The fragile nature of digital evidence in a computer is deceptive in its initial outward appearance, which has it seemingly well protected inside a metallic hard drive case which is in turn inside the metallic computer case. A trained forensic examiner understands this inherent fragility, and therefore ensures that proper forensic methods are used to preserve the evidence. In contrast, an untrained individual may destroy the evidence by merely turning the computer on. Excessive heat, electromagnets, and destructive Trojan horse programs or viruses are only some of the additional hazards that can permanently destroy computer evidence - possibly in seconds.

Digital evidence stored on computer hard drives can be found at three different levels, two of which are not visible to the average computer user, and must be accessed using forensic tools and methods. Again, an untrained individual attempting to access and extract this information, without using the proper tools and methods, would not only miss possibly relevant information, and could also destroy evidence by inadvertently overwriting or deleting it.

Several evidence preservation methods exist that can be used to prevent the inadvertent changing or destruction of digital evidence. These include the use of write blocking technologies and the creation of forensic copies.

Two types of write blocking methods exist: Software and hardware. If utilized correctly, either method effectively preserves the evidence by preventing the user from writing to or otherwise physically accessing and changing the information on the hard drive. The use of these write-blocking methods, combined with the creation of forensic copies, provides a means to preserve and examine the evidence without the threat of change or destruction.

The creation of a forensic copy is a process in which an exact duplicate of the original evidence is produced using specialized forensic software. The copy is usually saved in the form of multiple "image" files, which when combined within the forensic software tool provides the

forensic examiner with a safe environment in which to analyze the contents of the hard drive without the threat of deleterious change. The validity of the copy is verified using a mathematical algorithm known as a "hash" that creates a unique alphanumeric value, which is compared to the original. If the copy is exact, the alphanumeric values are the same.

With respect to the storage of digital evidence, the first question is: "What type of media should be used?"

There are two principal forms of storage media, optical and magnetic. Each provide their own set of unique capabilities and store data in binary form – zeros and ones. Optical media uses a laser to create and read indentations that are burnt into a reflective metallic surface. This method offers a larger storage capacity, increased stability, and a greater lifespan, versus magnetic media. Optical media includes all the various CD and DVD variations. Magnetic media uses a device called a "read/write head" to create and read magnetic impressions on the surface of the media. This method is inherently less stable, because the media itself is not as durable as optical media, and the recorded information slowly fades due to magnetic hysteresis (this unpreventable phenomenon explains why, for example, a music cassette tape from the 1970's sounds terrible if played today, even if it was stored under pristine conditions over the past 30 years). Magnetic media includes all the various variations of hard drives, floppy disks, or other similar type disks, and digital audio tapes.

As implied above, although both media types offer viable storage solutions, magnetic media is more problematic than optical media. While digital audio tapes provide (in some cases) similar storage capacity, information stability, and storage lifespan as its optical counterparts, it may be difficult to access the information after a number of years, both because of data fading (from magnetic hysteresis) and especially if the tape drive used to create it was replaced by a newer model. [In the latter case, the slightly different alignment of the read/write heads is the issue.] Software is another issue that seems to plague digital audio tapes. In most cases, a proprietary software program was used to create the tapes - and if this software is lost or otherwise unavailable, accessing the information will be difficult. In order to ensure that this issue does not present itself, the original tape drive and software must be retained, and kept in good operational condition. In addition, a larger space is needed to store magnetic media, and environmental conditions in that space must be more carefully controlled.

For these reasons, with the recent introduction of effective forensic CD/DVD archive systems, optical media is fast becoming the preferred choice for most law enforcement agencies for long-term storage of digital evidence. These systems are designed to copy files from one form of media to another, usually a hard drive to a CD or DVD. In addition, the CD or DVD can then be read by nearly any CD or DVD reader on the market. This is a major advantage, and eliminates the need to retain the original CD/DVD burner and software. The space required to store this media is significantly less versus magnetic media, and the environmental requirements are less rigorous. If the storage space is properly protected the media should be stable for many years.

Questions or comments? E-mail: Clayton.D.Schilling -at- usdoj.gov

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? (Full Name)
Where is the laboratory located?
What agency seized the exhibit?
Where was the exhibit seized? (If an obscure locale, give distance and direction from the nearest city)
Were there any special circumstances of the seizure (traffic stop, 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, total net mass, etc.)
Photos (see additional information, below)
What techniques were used to analyze the exhibit?
Actual composition of the exhibit?
Quantitation data? (if not quantitated, provide a qualitative approximation if possible)
Adulterants and diluents? (if identified, especially if unusual)
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.

Requests for *Microgram* and/or *Microgram Bulletin* Archives, 1967 - 2002

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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