- JULY 2007 -

- INTELLIGENCE ALERT -

CLANDESTINE DIMETHYLTRYPTAMINE (DMT) LABORATORY SEIZED IN HOLLYWOOD, CALIFORNIA

The Los Angeles Police Department’s Scientific Investigation Division (SID; Los Angeles) recently received two gallons of an aqueous, dark brown solution, presumed to be a natural product extract containing N,N-dimethyltryptamine (DMT; see Photo 1, Label A), and one liter of a clear solution suspected to be a solution of purified DMT (Label C). The exhibits were recovered from a clandestine laboratory located at a residence in Hollywood, California by the Los Angeles Police and the SID’s Hazardous Chemicals Team. A glove box and filter apparatus (not shown) were also seized. Of note, several of the first responding officers were made ill by chemical odors while securing the laboratory. The dark brown solution was basified with 10 percent ammonium hydroxide, and extracted with chloroform; analysis of the extract by GC/MS confirmed DMT (not quantitated, but estimated to be roughly 5 percent in the original solution). Analysis of the clear solution by GC/MS and color testing (Marquis (brown) and nitroprusside (negative)) confirmed DMT in naphtha (not
quantitated, but again estimated to be roughly 5 percent). The off-white, crystalline powder labelled as “B” shows DMT that was extracted from the dark brown solution and recrystallized from chloroform. The laboratory operator was apparently isolating DMT via naphtha extraction of a natural product, possibly *Mimosa hostilis* root. This is believed to be the first ever DMT clandestine laboratory in Los Angeles.

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- INTELLIGENCE ALERT -

“GANJA BUTTER” IN FAYETTEVILLE, ARKANSAS

The Arkansas State Crime Lab (Little Rock) recently received a multi-exhibit submission including: A) A plastic storage container containing a cloudy brown liquid (430.0 mL) with brown sediment (see Photo 2) and three plastic storage containers containing a bi-layer consisting of a soft green solid (top) and a cloudy brown liquid (bottom), suspected to be a prepared form of marijuana called “ganja butter” (see Photo 3); and B) Five sugar cubes and a white crystalline substance (a crushed sugar cube), all suspected to contain LSD (no photos). The items were seized by the Fayetteville Police pursuant to a warrant search of a local residence (no further details). The suspects in the case provided the arresting officers with a copy of the recipe they used to prepare the “ganja butter.” The cloudy brown liquids had no odor, whereas the green solids had the odor of sour milk. The layers were sampled and tested separately. After acid/base workup, filtration, and extraction with methylene chloride, the extracts were analyzed by GC/MS and TLC. The brown cloudy liquid with sediment was confirmed to contain a small amount of Δ9-tetrahydrocannabinol (THC; not quantitated). All three green solids from the bi-layer exhibits (total net mass 928.7 grams) were also confirmed to contain THC (not quantitated but a moderate loading based on the TIC). However, the liquids from the bi-layer exhibits (total net volume 756.0 milliliters) were found to contain no controlled substances. The green, solid material was not plant material, but rather was the residue of the butter after the cook. This was the first submission of this type to the laboratory. The six sugar samples all fluoresced when viewed under UV light. After acid/base workup and extraction with methylene chloride, analysis by GC/MS and TLC confirmed LSD in five of the six exhibits (not quantitated, but a low concentration based on TIC); one of the cubes had only trace LSD, not confirmed. The laboratory receives LSD sugar cubes roughly once a year.
- INTELLIGENCE ALERT -

VERY LARGE SEIZURE OF ECSTASY TABLETS (INCLUDING FAKEs)
AT THE BLAINE PORT OF ENTRY, WASHINGTON

The DEA Western Laboratory (San Francisco, California) recently received 11 large, heat-sealed evidence envelopes containing a large number of tablets (total net mass approximately 72 kilograms), suspected Ecstasy (see Photo 4; closeups not available). The exhibits had been concealed in a false gas tank of a vehicle entering at the Blaine, Washington Port of Entry, and were seized by Immigration and Customs Enforcement agents. One envelope contained 8,729 green, biconvex tablets with a Batman logo (average mass 256 milligrams), 3,605 pale blue, flat beveled tablets with a dolphin logo (average mass 177 milligrams), and 164 pale blue, flat beveled tablets with a heart logo (average mass 178 milligrams). Analysis of the tablets by GC/MS and Marquis color testing confirmed MDMA in the green tablets (45.7 milligrams per tablet), but indicated no controlled substances in any of the blue tablets. Further analyses of the blue tablets by GC/FID affirmed no controlled substances and no basic or neutral soluble components. The tablets in the other 10 envelopes all contained MDMA. This was one of the largest ever submissions of Ecstasy tablets (but also the first submission in some time of Ecstasy tablet fakes) to the Western Laboratory.

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- INTELLIGENCE ALERT -

HEROIN SMUGGLED IN SANDALS IN MEMPHIS, TENNESSEE

The DEA North Central Laboratory (Chicago, Illinois) recently received one single and one intact pair of women’s sandals, each containing a rectangular package of hard brown material hidden in their heels, suspected heroin (see Photo 5). The exhibits were seized by U.S. Immigration and Customs Enforcement personnel at an express mail hub in Memphis, Tennessee, and were en route from Mexico to Illinois. The sandals displayed no signs of tampering; the packets were wrapped in clear plastic and black carbon paper. Analysis of the brown material (total net mass 528.1 grams) by GC/FID, GC/MS, FTIR, and color tests confirmed 55 percent heroin hydrochloride, along with acetylcodine, acetylmorphine, and papaverine (minor alkaloids not quantitated). This is believed to be the first submission of heroin smuggled in sandals to the North Central Laboratory.

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UNUSUAL COCAINE BRICK IN NEW YORK, NEW YORK

The DEA Northeast Laboratory (New York, New York) recently received a kilogram size brick of compressed brown powder containing small white specs, suspected cocaine (see Photo 6). The brick was seized in New York City by agents from the New York Field Division (details not provided). Analysis of the powder (total net mass 1005 grams) by GC/MS, GC/FID, and FTIR/ATR confirmed 72.3 percent cocaine hydrochloride, adulterated with procaine hydrochloride, hydroxyzine, and diltiazem (adulterants not quantitated). The white specs were not isolated for separate analysis. The brick was somewhat unusual in its coloration, mixture of pharmaceutical adulterants, and presence of white specs. This is the first such submission to the Northeast Laboratory.

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UNUSUAL CLANDESTINE AMPHETAMINE LABORATORY IN GUADALAJARA, MEXICO

The DEA Special Testing and Research Laboratory (Dulles, Virginia) recently received three exhibits from a clandestine amphetamine laboratory in Guadalajara, Mexico (seizure details not provided). One exhibit was an off-white, lumpy powder, while the other two were amber to canary yellow, crystalline powders (see Photo 7). Analysis of the white powder (total net mass 17.5 grams) by GC/MS, FT/NMR, CE/UV, and FT/IR indicated 100 percent d,l-amphetamine hydrochloride. Analysis of the two yellow powders (total net mass 16.3 grams) by the same methods indicated 99 percent 1-phenyl-2-nitropropene. The synthetic route was not determined (there are several published procedures that detail the conversion of the 1-phenyl-2-nitropropene to either phenylacetone or directly to amphetamine). These are the first submissions of these types to the Special Testing and Research Laboratory.
- INTELLIGENCE ALERT -

SHAM COCAINE IN RICHMOND, VIRGINIA

- Packaged as “Room Odorizers” -

The DEA Mid-Atlantic Laboratory (Largo, Maryland) recently received 5 ziplock plastic bags, all labelled as “N St Room Odorizer” and containing white powder and bricks of compressed white powder, all suspected to be sham cocaine (see Photos 8 and 9). The bricks were irregularly shaped and had no logos. The exhibits were confiscated by DEA agents during a traffic stop in Richmond, Virginia, and it is suspected that they were going to be employed as a “drug rip,” because there is a cocaine shortage in the Richmond area. Analysis of the powder by GC, MS, and IR indicated a mixture of benzocaine and lactose in four of the bags (total net mass 4,007 grams), and a mixture of benzocaine, procaine, caffeine, and mannitol in the fifth bag (total net mass 1,027 grams); the various components were not quantitated. The Mid-Atlantic Laboratory has encountered similar mixtures of non-controlled substances packaged as room odorizers in two other cases.

![Photo 8](image1)
![Photo 9](image2)

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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. Abbreviated mailing address information duplicates that provided by the abstracting service. Patents and Proceedings are reported only by their Chemical Abstracts citation number.]

1. Ali MS, Ghor M, Rafiuddin S, Khatri AR. A new hydrophilic interaction liquid chromatographic (HILIC) procedure for the simultaneous determination of pseudoephedrine hydrochloride (PSH), diphenhydramine (DPH), and dextromethorphan hydrobromide (DXH) in cough-cold formulations. Journal of Pharmaceutical and Biomedical Analysis 2007;43(1):158. [Editor’s Notes: Presents the title study. Analyses were completed in less than 15 minutes. Contact: Jamjoon Pharmaceut Co Ltd, Ind Area, POB 6267, Phase 5, Jeddah 21442, Saudi Arabia.]
(d) Andersson K, Lock E, Jalava K, Huizer H, Jonson S, Kaa E, Lopes A, Finnon Y, Poortman-van der Meer A, Sippola E. Development of a harmonised method for the profiling of amphetamines VI. Forensic Science International 2007;169(1):86. [Editor’s Notes: Continued the above study, determining 33 target compounds by GC/MS and peak areas. 26 of these compounds were found to be useful in determining degree of match. Contact: See above.]  

3. Bell SC, Hanes RD. A microfluidic device for presumptive testing of controlled substances. Journal of Forensic Sciences 2007;52(4):884. [Editor’s Notes: Amphetamine, cocaine, methamphetamine, and oxycodone were tested, using the cobalt thiocyanate, Marquis, and Simon color tests, and the platinnic chloride microcrystal test. Contact: Bennett Department of Chemistry, West Virginia University, 217 Clark Hall, Morgantown, WV 26506.]  

4. Bones J, Macka M, Paull B. Evaluation of monolithic and sub 2 μm particle packed columns for the rapid screening for illicit drugs - Application to the determination of drug contamination on Irish Euro banknotes. Analyst 2007;132(3):208. [Editor’s Notes: Presents the title study, using the column in an LC-MS/MS. The analyses were significantly more sensitive versus a previously used GC-MS/MS method. Contact: National Centre for Sensor Research, School for Chemical Sciences, Dublin City University, Dublin, Ire. 9.]  

5. Brettell TA, Butler JM, Almirall JR. Forensic science. Analytical Chemistry 2007;79(12):4365. [Editor’s Notes: A review (the latest in the authors’ biannual review of the field; includes extensive references on controlled substances). Contact: Department of Chemical and Physical Sciences, Cedar Crest College, Allentown, PA 18104.]  


7. Casale JF, Hays PA, Toske SG, Berrier AL. Four new illicit cocaine impurities from the oxidation of crude cocaine base: Formation and characterization of the diastereomeric 2,3-dihydroxy-3-phenylpropionylenegonine methyl esters from cis- and trans- cinnamoylcocaine. Journal of Forensic Sciences 2007;52(4):860. [Editor’s Notes: Cocaine that was oxidized with potassium permanganate under neutral conditions produced the title impurities (which have been recently identified in illicitly produced cocaine). Contact: Special Testing and Research Laboratory, Drug Enforcement Administration, 22624 Dulles Summit Court, Dulles, VA 20166.]
8. Casale J, Lydon J. **Apparent effects of glyphosate on alkaloid production in coca plants grown in Colombia.** Journal of Forensic Sciences 2007;52(3):573. [Editor’s Notes: Presents the title study. Coca leaf from treated plants (that survived) were nearly devoid of cocaine, and also had some new, unusual tropane alkaloids. Contact: Special Testing and Research Laboratory, Drug Enforcement Administration, 22624 Dulles Summit Court, Dulles, VA 20166.]

9. Collins M, Heagney A, Cordaro F, Odgers D, Tarrant G, Stewart S. **Methyl 3-[3',4'- (methylenedioxy)phenyl]-2-methyl glycidate: An Ecstasy precursor seized in Sydney, Australia.** Journal of Forensic Sciences 2007;52(4):898. [Editor’s Notes: A large amount of the title compound was seized, and was found to be easily converted to MDP2P. Analytical data is presented. Contact: National Measurement Institute, Australian Forensic Drug Laboratory, 1 Suakin St., Pymble, Sydney, NSW 2073, Australia.]

10. Diozan D, Baheri T, Pournaghi-Azar MH. **Development of electro solid-phase microextraction and application to methamphetamine analysis.** Chromatographia 2007;65(1-2):45. [Editor’s Notes: Homemade pencil-lead fibers were used, and were found to be “much more selective” than direct SPME with commercially availible polyacrylate fiber. Analyses were done by GC and GC/MS. Contact: Univ Tabriz, Fac Chem, Tabriz, Iran.]


12. Hindson BJ, Francis PS, Purcell SD, Barnett NW. **Determination of opiate alkaloids in process liquors using capillary electrophoresis.** Journal of Pharmaceutical and Biomedical Analysis 2007;43(3):1164. [Editor’s Notes: Presents the title study, using CZE with UV detection for determination of morphine, codeine, oripavine, and thebaine in industrial process liquors. The LOD was 2.5 x 10(-6). Contact: Deakin Univ, Sch Life & Environm Sci, Geelong, Vic 3217, Australia.]

13. Levy R, Zelkowicz A. **Efficiency evaluation of a police operation to fight the drug plague: Distribution unit weight as an objective index.** Journal of Forensic Sciences 2007;52(4):909. [Editor’s Notes: Focused on the average weights of street doses of heroin before, during, and after an extended counter-drug effort in an Israeli city. Contact: Analytical Chemistry Laboratory, Division of Identification and Forensic Science (DIFS), National Police Headquarters, Jerusalem, Israel.]

14. McLeod V, Ketcham G. **The safety guys: Introduction to clandestine drug laboratories - A serious health and safety concern.** Forensic Magazine 2007;4(3):48. [Editor’s Notes: An overview. Contact. No address information was provided; email: thesafetyguys - at-forensicmag.com]

15. Nguyen XT, Hoang MH, Do DN, Tran vS. **Establishment of the method for analysis of solvent residue in heroin samples to track the origin.** Tap Chi Duoc Hoc 2007;47(2):34. [Editor’s Notes: Presents the title analyses, using Headspace-GC. 11 solvents were detected. This article is written in Vietnamese. Contact: Inst. of Forensic Science, Vietnam (no further addressing information was provided).]

16. Shibuya EK, Sarkis JES, Negrini-Neto O, Ometto JPHB. **Multivariate classification based on chemical and stable isotopic profiles in sourcing the origin of marijuana samples seized in**
Brazili. Journal of the Brazilian Chemical Society 2007;18(1):205. [Editor’s Notes: Marijuana from the main production regions in Brazil were differentiated based on their elemental compositions, as determined by HR-ICP-MS. The results compared favorably with a similar study based on stable isotope (C and N) analyses. Contact: Laboratorio de Caracterizacao Quimica e Isotopica, Centro de Quimica e Meio Ambiente, Instituto de Pesquisas Energeticas e Nucleares, IPEN/CNEN-SP, 05508-970 Sao Paulo, Brazil.]

17. Thigpen AL, DeRuiter J, Clark CR. GC-MS studies on the regioisomeric 2,3- and 3,4-methylenedioxyphenethylamines related to MDEA, MDMMA, and MBDB. Journal of Chromatographic Science 2007;45(5):229. [Editor’s Notes: Presents the synthesis, gas chromatography, and gas chromatography - mass spectra of MDEA, MDMMA, MBDB, and their 2,3- positional isomers. Contact: Department of Pharmacal Sciences, School of Pharmacy, Auburn University, Auburn, AL 36849.]

18. van Deursen MM, Lock ERA, Poort-van der Meer AJ. Organic impurity profiling of 3,4-methylenedioxymethamphetamine (MDMA) tablets seized in the Netherlands. Science & Justice 2006;46(3):135. [Editor’s Notes: A “new method” was used for impurity profiling of 82 tablets from presumed unrelated large seizures (no details provided in the abstract). The discrimination power of the method was assessed by GC/MS analysis. Several new impurities were detected and identified. Contact: Netherlands Forensic Institute, The Hague 2490AA, Neth.]


20. Verheyden K, Le Bizec B, Courtheyn D, Mortier V, Vandewiele M, Gillis W, Vanthemsche P, De Brabander HF, Noppe H. Mass spectrometric detection of and similarities between 1-androgens. Analytica Chimica Acta 2007;586(1-2):57. [Editor’s Notes: 1-Testosterone, 1-androstene-3β,17β-diol and several other “new” anabolic steroids (not specified in the abstract) were analyzed with GC/MS and LC-MS/MS. The abstract implies analysis of marketed samples and seizures, not of biological matrices. Contact: Faculty of Veterinary Medicine, Department of Veterinary Public Health and Food Safety, Laboratory of Chemical Analysis, Ghent University, B-9820 Merelbeke, Belg.]


22. Willis RC. Noninvasive testing for counterfeit drugs. Analytical Chemistry 2007;79(5):1773. [Editor’s Notes: A brief overview of Spatially Offset Raman Spectroscopy (SORS). Contact: No contact information was provided.]

23. Zhang LL, Chen Y, Lin M, Fan GR, Zhao WQ, Wu YT. Fast CE determination of d-amphetamine and diphenhydramine in quick-acting anti-motion capsules. Chromatographia 2007;65(5-6):305. [Editor’s Notes: Presents the title study, using CZE. Analyses were
completed in less than 2 minutes. The substrates appeared to be biological fluids, not the actual capsules (the abstract is not clear). Contact: Shanghai Inst Drug Control, 615 Liuzhou Rd, Shanghai 200233, Peoples R China.

**Additional References of Possible Interest:**


2. Forrester MB. *Adderall abuse in Texas, 1998 - 2004.* Journal of Toxicology and Environmental Health, Part A 2007;70(7):658. [Editor’s Notes: A survey, based on telephone calls to Poison Control Centers. Contact: Texas Department of State Health Services, Austin, TX (zip code not provided).]

3. Gayton-Ely M, Shakleya DM, Bell SC. *Application of a pyroprobe to simulate smoking and metabolic degradation of abused drugs through analytical pyrolysis.* Journal of Forensic Sciences 2007;52(2):473. [Editor’s Notes: Presents the title study, on cocaine and methamphetamine. Analyses of the pyrolytic products was done by GC/MS. In additional experiments, several common diluents were added to the cocaine or methamphetamine and the mixtures pyrolyzed. Contact: Bennett Department of Chemistry, West Virginia University, Morgantown, WV 26506.]


5. Kindcade K. *An ‘old’ technique finds new life in the nano world.* Laser Focus World 2006;42(10):109. [Editor’s Notes: An overview of forensic applications of Surface Enhanced Raman Scattering (SERS); illicit drugs are mentioned in the abstract. Contact: Eng (no further addressing information was provided).]

6. Phipps M, Petricevic S. *The tendency of individuals to transfer DNA to handled items.* Forensic Science International 2007;168(2-3):162. [Editor’s Notes: Investigates the factors that influence DNA transfers, including differing “shedding abilities.” Contact: Forensic Biology Group, The Institute of Environmental Science and Research Limited, Mt Albert Science Centre, Private Bag, Auckland 92-021, N.Z.]

7. Seifulla RD, Rozhkovoa EA, Rodchenko GM, Apolonova SA, Kulikova EV. *Doping in sports.* Eksperimental’naya I Klinicheskaya Farmakologiya 2006;69(6):68. [Editor’s Notes: An overview and review. This article is written in Russian. Contact: Laboratory of Clinical Pharmacology and Antidoping Monitoring, Moscow Scientific - Practical Center of Sport Medicine, Moscow 107120, Russia.]


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**THE JOURNAL/TEXTBOOK COLLECTION EXCHANGE**

The Journal/Textbook Collection Exchange is a service intended to facilitate the transfer of unwanted journals and textbooks to forensic libraries or other Microgram subscribers. At present, this service is offered once a quarter (in January, April, July, and October). The current donations 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!

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* Journal of Clinical Pharmacology; 2004 (all); 16 mm film.

* Journal of Drug Issues, Volumes 20 - 26; 16 mm film.

* Journal of Toxicology - Clinical Toxicology, 1995 and 1996 (all); 35 mm film.

* Lancet; Issues 9095-9120 (Jan. - June 1998) and Issues 9172-9196 (July - Dec. 1999); 16 mm film.


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 October 2007 issue of Microgram Bulletin.

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**THE DEA FY 2007 AND FY 2008 STATE AND LOCAL FORENSIC CHEMISTS SEMINAR SCHEDULE**

The remaining FY 2007 schedule for the DEA’s State and Local Forensic Chemists Seminar is as follows:

September 10 - 14, 2007

The FY 2008 schedule is as follows:

November 26 - 30, 2007
March 10 - 14, 2008

[Continued Next Page.]
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. 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. (See: http://www.dea.gov/programs/forensicsci/microgram/mg0804/aug04.pdf) Completed applications should be mailed to the Special Testing and Research Laboratory (Attention: J. Head) at: 22624 Dulles Summit Court, Dulles, VA 20166. For additional information, call 703/668-3349.

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SCIENTIFIC MEETINGS

1. Title: CLIC 17th Annual Technical Training Seminar (Second Posting)
Sponsoring Organization: Clandestine Laboratory Investigating Chemists Association
Inclusive Dates: September 4 - 8, 2007
Location: Flamingo Hotel, Las Vegas, NV ($112/night plus tax)
Contact Information: Patty Dougherty (pdougherty -at- stlouisco.com; 314/615-5366) or Roger Ely (roger.ely -at- sbcglobal.net; 925/787-6795)
Website: None

Additional Details:

September 4th: Hallucinogenic Tryptamine and Phenethylamine Analogs Workshop
Cost: Members $100; Non-Members $125
Note: Limited to law enforcement personnel only

September 5th - 8th: Seminar
Cost: Members $300; Non-Members $350

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2. Title: 33rd Annual NEAFS Meeting (Second Bimonthly Posting)
Sponsoring Organization: Northeastern Association of Forensic Sciences
Inclusive Dates: October 31 - November 3, 2007
Location: Sagamore Resort (Bolton Landing, New York)
Contact Information: Adrian S. Krawczeniuk (Adrian.S.Krawczeniuk -at- usdoj.gov; 212/620-4923)
Website: www.neafs.org

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[Computer Corner will return in a future issue of Microgram Bulletin.]