

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.

- OCTOBER 2007 -

- INTELLIGENCE ALERT -

ECSTASY MIMIC TABLET (CONTAINING BENZYLPIPERAZINE (BZP), METHAMPHETAMINE, AND CAFFEINE) IN SIKESTON, MISSOURI

The Missouri State Highway Patrol Troop E Laboratory (Cape Girardeau) recently received one round, green tablet with a poorly defined logo, suspected “Ecstasy” (see Photo 1). The tablet was seized in Sikeston, Missouri by the Sikeston Department of Public Safety (details sensitive; Sikeston is about 150 south of St. Louis). The tablet was 9 millimeters in diameter by 3 millimeters thick, and weighed 290 milligrams. Analysis by color testing (Marquis and Methedrine) and GC/MS, however, indicated not MDMA but rather benzylpiperazine (BZP), methamphetamine, and caffeine in an approximate 300:6:85 ratio (based on the TIC; not formally quantitated). This was the first submission of BZP in any form to the laboratory.



Photo 1 - Scale in 1/16ths Inch

[Editor’s Notes: The logo may be four “playing card”-type diamonds arranged in a diamond pattern. Informal inquiries suggest that this is a new logo, not previously reported in either

Europe or the U.S. The weight of the tablet (290 milligrams) is rather high for the tablet dimensions (9 x 3 millimeters), but was confirmed by a second weighing, suggesting that it was very highly compressed.]

* * * * *

- INTELLIGENCE ALERT -

HEROIN SMUGGLED IN A VARIETY OF CANDIES IN QUEENS (NEW YORK)

The DEA Northeast Laboratory (New York, New York) recently received a multi-part submission of apparent candies, including 82 lollipops, 25 chocolate bars, and 86 caramel squares, all actually containing a compressed brown powder, suspected heroin (see Photos 2 - 4). The exhibits were seized in Queens by agents from the DEA New York Field Division, pursuant to a consent search. Analysis of the powders by color testing (Marquis), GC/MS, GC/FID, and FTIR/ATR confirmed heroin hydrochloride, as follows:

Lollipops (Total net mass 1283 grams): 70 percent heroin hydrochloride, trace cocaine, and aminopyrine (Average length, including the “pop,” was 1.3 inches; average “pop” diameter was 0.4 inch).

Bars (Total net mass 436.9 grams): 65 percent heroin hydrochloride and caffeine (Average dimensions were 2.6 x 1.0 x 0.5 inches).

Squares (Total net mass 468.8 grams): 66 percent heroin hydrochloride and caffeine (Average dimensions were 0.7 x 0.5 x 0.5 inches).

The Northeast Laboratory routinely receives heroin in apparent candies; however, this is the first time a variety of candies was used to transport heroin.



Photo 2



Photo 3



Photo 4

- INTELLIGENCE ALERT -

**COCAINE SMUGGLED IN LAMINATED RECIPE SHEETS
(FROM PERU) IN FT. LAUDERDALE, FLORIDA**

The DEA Southeast Laboratory (Miami, Florida) recently received 20 laminated sheets of cooking recipes, each containing a white powder between the laminated sheets, suspected cocaine (see Photo 5). The sheets were being shipped in an express mail package from Costa Rica that had originated in Peru, and were seized by Immigration and Customs Enforcement (ICE) personnel at the Ft. Lauderdale Airport. The sheets were approximately 13.5 x 9.5 inches, and were uniformly thin (the powder was finely ground and very evenly distributed). The interior was further lined with a film-like plastic wrap. Analysis of the powder (total net mass 649.6 grams) by color test (Scott's - positive), GC/FID, GC/MS, and FTIR/ATR confirmed 89.7 percent cocaine hydrochloride. This submission was of interest for the unusual concealment technique, not previously seen at the Southeast Laboratory.



Photo 5 - Color is not true (the powder actually is white).

* * * * *

- INTELLIGENCE ALERT -

4-CHLORO-2,5-DIMETHOXYAMPHETAMINE (DOC) IN SANTE FE, NEW MEXICO

The DEA South Central Laboratory (Dallas, Texas) recently received a small bottle of breath freshening solution containing less than a drop of odorless liquid, suspected to be a solution of LSD (see Photo 6). The bottle was acquired from a cooperating individual by the Federal Bureau of Investigation (FBI)/Santa Fe Office (no further details). Analysis of the liquid residue using GC/MS, however, indicated not LSD but rather 4-chloro-2,5-dimethoxyamphetamine (DOC). The solution was not quantitated, but the loading was low based on the TIC. DOC is not federally controlled; however, it is an analog of 4-bromo-2,5-dimethoxyamphetamine (DOB), which is a Schedule I controlled substance (hallucinogen). The South Central Laboratory has previously received exhibits of DOC.



Photo 6

* * * * *

- INTELLIGENCE ALERT -

**BRICKS OF COCAINE HEAVILY ADULTERATED WITH CREATINE
IN FALLBROOK, CALIFORNIA**

The DEA Southwest Laboratory (Vista, California) recently received four bricks of compressed, off-white powder, each embossed with a “7” logo, suspected cocaine (see Photo 7). The exhibits were seized by the San Diego County Sheriff’s Department pursuant to a traffic stop on Interstate 15 in Fallbrook, California (approximately 60 miles north of San Diego). Each brick was approximately 9 x 6 x 1.5 inches, and was wrapped in vacuum seal plastic bags, tan tape, and clear plastic. Analysis of the powder (total net mass 4101 grams) by color testing (Scott’s - positive), FTIR, GC/MSD, and HPLC confirmed 13.7 percent cocaine hydrochloride, very heavily adulterated with creatine monohydrate; trace lidocaine was also identified. The creatine was not formally quantitated but was estimated to be approximately 80 percent. This is the first submission of cocaine/creatine bricks to the Southwest Laboratory.

[Editor’s Notes: A search of the *Microgram* archives indicates only one similar case; see: Cocaine with creatine. *Microgram* 2000;33(12):330. In this case (reported by the New York State Police Mid-Hudson Regional Crime Laboratory (Newburgh)), the creatine and cocaine were a heterogeneous mix of white and yellow powders in a plastic bag. The analytical data for creatine has been reported; see: Churchill KT. Creatine - An analytical profile. *Microgram* 2000;33(8):223. Note that both of the above issues (CY 2000) are Law Enforcement Restricted.]



Photo 7 (Ruler is 6 Inch)

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. Ko BJ, Suh SI, Suh YJ, In MK, Kim SH. **The impurity characteristics of methamphetamine synthesized by Emde and Nagai method.** *Forensic Science International* 2007;170(2-3):142. [Editor's Notes: 52 samples were analyzed, and characterized based on 5 impurities, resulting in 4 different groups. Contact: Supreme Prosecutor's Office, 706, Banporo, Drug Signature Analysis Center, Seochogu, Seoul 137-730, S. Korea.]
2. Koper C, van den Boom C, Wiarda W, Schrader M, de Joode P, van der Peijl G, Bolck A. **Elemental analysis of 3,4-methylenedioxyamphetamine (MDMA): A tool to determine the synthesis method and trace links.** *Forensic Science International* 2007;171(2-3):171. [Editor's Notes: 57 powders from clandestine laboratories and 97 tablets from large (>500 tablets) seizures were analyzed by ICP-MS and ICP-AES. The production method was determined for 89 of the 97 tablets (the results for the powders was not reported in the abstract). Contact: Netherlands Forensic Institute, P.O. Box 24044, The Hague 2490 AA, Neth.]
3. Kuwayama K, Inoue H, Kanamori T, Tsujikawa K, Miyaguchi H, Iwata Y, Kamo N, Kishi T. **Contribution of thermal desorption and liquid-liquid extraction for identification and profiling of impurities in methamphetamine by gas chromatography - mass spectrometry.** *Forensic Science International* 2007;171(1):9. [Editor's Notes: Analyses were done with GC/MS. 9 different batches were analyzed. Contact: National Research Institute of Police Science, 6-3-1, Kashiwanoha, Kashiwa, Chiba 277-0882, Japan.]
4. Lingford-Hughes A, Daglish M. **Drugs of abuse.** *Fundamentals of Clinical Psychopharmacology* (3rd Edition) 2006:111. [Editor's Notes: A review. Contact: Psychopharmacology Unit, University of Bristol, Bristol, UK.]
5. Matsuda K, Fukuzawa T, Ishii Y, Yamada H. **Color reaction of 3,4-methylenedioxyamphetamines with chromotropic acid: Its improvement and application to the screening of seized tablets.** *Forensic Toxicology* 2007;25(1):37. [Editor's Notes: For screening of MDA and MDMA in tablets. Contact: Graduate School of Pharmaceutical Sciences, Kyushu University 3-1-1 Maidashi, Higashi-ku, Fukuoka 812-8582, Japan.]

Additional References of Possible Interest:

1. Charlton MDB, Netti CM, Zoorob ME, Perney NMB, Baumberg JJ. **Organising light on the nano-scale: Surface plasmon engineering for repeatable SERS sensing and applications for trace analyte detection.** *ECS Transactions* 2006;3(11):79. [Editor's Notes: Presents the title technique. Stated applications include trace level detection of illicit drugs. Contact: Mesophotonics Ltd, Southampton, UK SO167NP.]
2. Clelland BL. **Forensic applications of Raman microspectroscopy, capillary electrophoresis, chromatography, and mass spectrometry for the analysis of textile fibers, dyes, illicit drugs, and anticoagulant rodenticides.** (Thesis) *Dissertation Abstracts International*, B 2007;67(9):5041.

3. Cotte-Rodriguez I, Mulligan CC, Cooks RG. **Non-proximate detection of small and large molecules by desorption electrospray ionization and desorption atmospheric pressure chemical ionization mass spectrometry: Instrumentation and applications in forensics, chemistry, and biology.** *Analytical Chemistry* 2007;79(18):7069. [Editor's Notes: Ambient surfaces are examined at distances up to 3 meters from the instrument, without any sample prep. Stated applications include trace level detection of cocaine, heroin, and methamphetamine. LODs were in the low nanogram range. Contact: Department of Chemistry, Purdue University, West Lafayette, IN 47907.]
4. Ebejer KA, Lloyd GR, Brereton RG, Carter JF, Sleeman R. **Factors influencing the contamination of UK banknotes with drugs of abuse.** *Forensic Science International* 2007;171(2-3):165. [Editor's Notes: Banknotes from 8 different regions were analyzed for cocaine, heroin, MDMA, and THC (analytical method(s) not specified in the abstract). The results are discussed. Contact: Building 20F, Golf Course Lane, Mass Spec Analytical Ltd, P.O. Box 77, Filton, Bristol BS99 7AR.]
5. Miller GM, Stripp R. **A study of western pharmaceuticals contained within samples of Chinese herbal/patent medicines collected from New York City's Chinatown.** *Legal Medicine* 2007;9(5):258. [Editor's Notes: 90 representative samples were analyzed by TLC, GC/MS, and HPLC. The identified pharmaceuticals did not include illicit substances. Contact: Dept. of Science, John Jay College of Criminal Justice, 445 West 59th Street, NY, NY 10019.]
6. Petraco N, Ed. **Color Atlas and Manual of Microscopy for Criminalists, Chemists, and Conservators.** CRC Press: Boca Raton, FL (2004).
7. Zipf EC. **Emission detector for the remote detection of explosives and illegal drugs.** (Patent) *Chemical Abstracts* 2007:874282.

* * * * *

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. Please provide a full mailing address in the request. **Important!:** Do not provide an address that irradiates mail!

* Inaba and Cohen. *Uppers, Downers, All Arounders*. 5th Edition (2004). [2 Copies Available.]

* *Journal of Forensic Sciences*:

1980 - July (#3)

1991 - January (#1), March (#2), May (#3), July (#4), November (#6)

1992 - All

1993 - All, plus an extra copy of January (#1)

1994 - March (#2), May (#3), July (#4)

2003 - January (#1)

2004 - March (#2), July (#4), and November (#6)

2005 - All, plus extra copies of May (#3) and July (#4)

* *Physician's Desk Reference*, 58th Edition (2004).

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 January 2008 issue of *Microgram Bulletin*.

* * * * *

THE DEA FY 2008 STATE AND LOCAL FORENSIC CHEMISTS SEMINAR SCHEDULE

The FY 2008 schedule for the DEA's State and Local Forensic Chemists Seminar is as follows:

November 26 - 30, 2007

March 10 - 14, 2008

May 5 - 9, 2008

September 8 - 12, 2008

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.

* * * * *

EMPLOYMENT OPPORTUNITIES

Position: **Assistant Drug Chemist and Forensic Drug Chemist** (2 positions).

Location: Hudson County Prosecutor's Office, Forensic Laboratory, Jersey City, NJ.

Salary: Commensurate with Experience.

Application Deadline: Open until Filled.

Duties and responsibilities: The successful candidate will independently carry out examinations of suspected controlled dangerous substances submitted by various law enforcement agencies in connection with criminal investigations and prosecutions using chemical and instrumental analyses. Responsibilities include: Utilize GC/MS and FTIR instruments; interpret chromatographic data; carry out wet chemical analyses; perform peer review of case files; maintain essential laboratory equipment, instruments, records and files; prepare certified laboratory reports; testify in federal, state and municipal courts; and perform other related duties as assigned. The applicant must have the ability to communicate well and work closely with laboratory, legal and administrative personnel; have a working knowledge of computer software, databases and word processing; and have knowledge of Quality Control/Assurance principles.

Qualifications: A minimum of a B.S. degree in forensic science or chemistry or a physical science with at least twenty-four (24) semester hours in chemistry. The ideal candidate will have a minimum of one-year experience analyzing controlled substances.

(Continued Next Page)

Contact: DLT. Roger Forsthoff, Director
HCPO Forensic Laboratory
[rforsthoff -at- hcpo.org](mailto:rforsthoff-at-hcpo.org) (201/915-1309)

* * * * *

Microgram Mailing Address Change

Effective October 12, 2007 the address for “hard” mailings to the *Microgram* Editor is:

DEA Headquarters
Attn: Office of Forensic Sciences/Microgram Editor
8701 Morrissette Drive
Springfield, VA 22152

* * * * *

* * * * *