

Microgram

Bulletin

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- JUNE 2008 -

- INTELLIGENCE ALERT -

COCAINE CONCEALED IN RAFFIA HANDBAGS IN PORT OF SPAIN, TRINIDAD AND TOBAGO

The Trinidad and Tobago Forensic Science Centre (Port of Spain) recently received four ladies handbags, each crafted from string-wrapped hollow plastic tubing that contained white powders, suspected cocaine (see Photo 1). The exhibits were seized by Organised Crime Narcotics and Firearms Bureau (OCNFB) personnel at an express mail handling facility in Port of Spain, and were destined for Madrid, Spain (no further details). Each bag contained approximately 32 meters of hollow plastic tubing, all wrapped in colored synthetic raffia string (several different colors); in each case, approximately 21.5 meters of the tubing contained powders (see Photo 2, next page). Analysis of the removed powders (total net mass 909.3 grams) by color testing (Scotts - positive), GC/FID, GC/MS, and FTIR/ATR confirmed 65, 49, 42, and 47 percent cocaine hydrochloride



Photo 1

in the four handbags, respectively, all adulterated with caffeine and lactose (not quantitated). This was the first such submission to the laboratory.

[Editor's Notes: Two similar seizures were reported in *Microgram Bulletin* in 2006; see: (A) Cocaine in painted wicker baskets at Miami International Airport. *Microgram Bulletin* 2006;39(2):19; and (B) Cocaine in wicker baskets (from Peru) at the George Bush Intercontinental Airport, Houston, Texas. *Microgram Bulletin* 2006;39(6):72.]

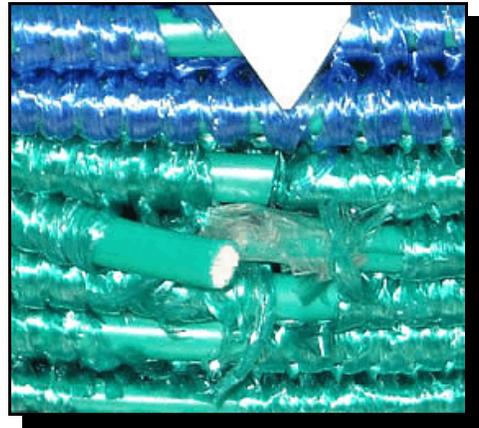


Photo 2

- INTELLIGENCE ALERT -

AROMATHERAPY OIL PACKAGE (ACTUALLY CONTAINING TESTOSTERONE CYPIONATE) IN SACRAMENTO, CALIFORNIA

The Sacramento County District Attorney's Laboratory of Forensic Services (California) recently received four factory-sealed sachets each labelled as "Aromatherapy Oil" and containing approximately 5 milliliters of clear liquid, purported to be an anabolic steroid (see Photo 3). The exhibits were seized at a residence in Sacramento by California Department of Justice Bureau of Firearms personnel, pursuant to a warrant search on firearms charges. During entry, the officers witnessed an individual transferring the contents from one of the sachets into a glass vial by use of a syringe. The individual admitted that the oils in the sachets were steroids that he had purchased over the Internet. Embossed on the edge of each sachet was the code 24100704; investigation indicated that this product is advertised as a "Stealth Injectable," and that the packaging date and contents are embossed in a code on the side of the sachet (in this case, the code corresponded to October 24, 2007, and the last two digits "04" indicated testosterone cypionate). Analysis of a methanolic extract of the oil by GC/MS confirmed testosterone cypionate (not quantitated). This is the first such submission to the laboratory.



Photo 3

[Editor's Note: A similar submission was reported by the Pennsylvania State Police, Bureau of Forensic Services, Harrisburg Regional Laboratory, in the April, 2008 issue of *Microgram Bulletin*. In that case, the "aromatherapy oil" actually contained a mixture of testosterone propionate, cypionate, and decanoate.]

- INTELLIGENCE ALERT -

ECSTASY MIMIC TABLETS (ACTUALLY CONTAINING A PIPERAZINE MIXTURE AND CAFFEINE) IN PASADENA, TEXAS

The Pasadena Texas Regional Crime Laboratory recently received 1,002 round yellow tablets with a raised logo of a star with rounded-off points, suspected Ecstasy (see Photo 4). The exhibits were seized in Pasadena (east-southeast of Houston) by the Pasadena Police (details sensitive). The tablets (total net mass 305.0 grams) were 8.1 millimeters in diameter, 5.6 millimeters thick, and were unusually solid in their construction. Analysis by ferricyanide (slow blue) and GC/MS, however, indicated not MDMA but rather a mixture of 1-benzylpiperazine (BZP), 1-[3-(trifluoromethyl)phenyl]piperazine (TFMPP), 1,4-dibenzylpiperazine, and caffeine (not quantitated but in an approximate 2 : 3.5 : 1 : 20 ratio). The piperazines were not confirmed due to lack of analytical standards. This was the first substantial submission of piperazines, and also the first submission of this logo design, to the laboratory.



Photo 4 (Scale Tick-Marks are 1/8ths Inch Each)

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- INTELLIGENCE ALERT -

LSD BLOTTER ACID MIMICS (ACTUALLY CONTAINING 4-IODO-2,5-DIMETHOXYAMPHETAMINE (DOI) AND 4-CHLORO-2,5-DIMETHOXYAMPHETAMINE (DOC)) IN LANTANA, FLORIDA

The Palm Beach County Sheriff's Office Crime Laboratory Chemistry Section (West Palm Beach, Florida) recently received two different exhibits of blotter paper, suspected LSD (no photos). The exhibits were seized in Lantana (about 5 miles south of Palm Beach) by the Lantana Police (no further details). The first exhibit consisted of one quarter inch square of blotter paper, orange on one side and blank on the other; analysis by Erlich's (negative), GC, and GC/MS indicated not LSD but rather 4-iodo-2,5-dimethoxyamphetamine (DOI). The second exhibit consisted of a rectangular piece of blotter paper, blank on both sides and perforated into three quarter inch squares; analysis (same techniques) indicated not LSD but rather 4-chloro-2,5-dimethoxyamphetamine (DOC). The exhibits were not formally quantitated, but both had a high loading based on their GC chromatograms. This was the first ever submission of DOI in any form, and the third submission of DOC on blotter paper, to the laboratory.

[Editor's Notes: As previously noted, submissions of "blotter acid" actually containing LSD are currently uncommon in the U.S. Most such submissions actually contain either a hallucinogenic tryptamine or phenethylamine. More recently, the hallucinogenic phenethylamines (one of the "2C" or the "DO" compounds) are becoming predominant.]

- INTELLIGENCE ALERT -

HEROIN DISKS SMUGGLED AS “MOON PIES” IN NEW YORK, NEW YORK



Photo 5

The DEA Northeast Laboratory (New York, New York) recently received 24 individually packaged, chocolate “moon pies,” four of which appeared to be genuine, and 20 of which instead contained a chocolate covered, wrapped disk of compressed tan powder, suspected heroin (see Photo 5). The exhibits were seized by DEA Strike Force personnel in New York (origin and seizure details sensitive). The disks (3.0 x 0.25 inches) were successively wrapped in black tape, carbon paper, aluminum foil, and green plastic, then coated with chocolate. Analysis of the compressed powder (total net mass 695.0 grams) by FTIR-ATR, GC/MS, GC/FID, and FT-NMR confirmed 67.8 percent heroin hydrochloride, adulterated with thiamine (salt form undetermined, not quantitated). This was the first such submission to the Northeast Laboratory.

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- INTELLIGENCE ALERT -

COCAINE MIMIC BRICKS (ACTUALLY CONTAINING NICOTINAMIDE) IN DALLAS, TEXAS

The DEA South Central Laboratory (Dallas, Texas) recently received four bricks of compressed off-white powder, suspected cocaine (see Photo 6). The exhibits were seized in Dallas, Texas by agents from the DEA Dallas Field Office (no further details). Each brick was wrapped in clear, black, and green plastic; one brick was marked with a coconut tree logo. Analysis of the powder (total net mass 3.78 kilograms) by GC/FID, FTIR-ATR, and GC/MS, however, indicated not cocaine but rather nicotinamide (not quantitated but high purity based on the IR), cut with a small amount of boric acid and trace dimethylsulfone. The South Central Laboratory has received several submissions of similar nicotinamide bricks over the past few months.



Photo 6 (Actual Color is Off-White)

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- INTELLIGENCE ALERT -

COCAINE SMUGGLED IN COMPOSITE BLOCKS IN MEMPHIS, TENNESSEE

The DEA Southeast Laboratory (Miami, Florida) recently received three separate exhibits containing a total of 23 metallic silver painted blocks, of which 20 contained a wrapped package of white powder, suspected cocaine (see Photo 7). All of the exhibits were seized by U.S. Customs and Border Protection personnel at an express parcel service hub in Memphis, Tennessee (origin not reported), and were submitted to the laboratory after a controlled delivery in North Carolina (location and details sensitive). The blocks were constructed from what appeared to be a mixture of concrete and fiberglass, and were broken open with a hammer and chisel. Three of the blocks were solid throughout, and contained no controlled substances. The packages recovered from the other 20 blocks were each wrapped in brown plastic tape and carbon paper (see Photo 8). Analysis of the powder (total net mass 9.87 kilograms) by color testing (Scotts), GC/FID, GC/MS, and FTIR confirmed 62.8, 60.3, and 66.2 percent cocaine hydrochloride in the three exhibits, respectively, adulterated with diltiazem and caffeine (not quantitated). This is the first such submission to the Southeast Laboratory.



Photo 7



Photo 8

[Editor's Notes: Three similar seizures were reported by the DEA North Central Laboratory in the May, 2008 issue of *Microgram Bulletin*. In those cases, most of the rocks contained cocaine, but two contained heroin. The seizure location in that case was not disclosed (sensitive).]

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- INTELLIGENCE ALERT -

METHAMPHETAMINE PHOSPHATE IN LOS ANGELES, CALIFORNIA

The DEA Southwest Laboratory (Vista, California) recently received a clear zip-lock bag containing five smaller bags of white, crystalline powder and one small bag of yellowish powder, all suspected methamphetamine (no photo). The exhibit was seized by DEA agents pursuant to a consent search of a residence in Los Angeles, California. Separate analyses of the white powders (total net mass 485.8 grams) by GC, GC/MS, LC, and IR confirmed d-methamphetamine hydrochloride/dimethylsulfone mixtures, ranging from trace to 99 percent

methamphetamine. Analysis of the yellowish powder (total net mass 3.0 grams; same techniques), however, indicated 81.5 percent d,l-methamphetamine phosphate, also cut with dimethylsulfone. Methamphetamine phosphate is not commonly seen at the Southwest Laboratory.

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- INTELLIGENCE ALERT -

ECSTASY MIMIC TABLETS (CONTAINING BZP, KETAMINE, TFMPP, DIBENZYLPIPERAZINE, AND CAFFEINE) IN MASSACHUSETTS

The DEA Northeast Laboratory (New York, New York) recently received 12 round, mottled blue tablets with a “Michael Jordan” logo, suspected Ecstasy (see Photo 9). The exhibits were acquired by personnel from the DEA New England Field Division at a locale in Massachusetts (exact location and details sensitive). Analysis of the tablets (total net mass 3.2 grams) by GC/MS, LCMS, GC/FID, and FTIR/ATR, however, indicated not MDMA but rather 1-benzylpiperazine (BZP; 78.7 milligrams per tablet), ketamine, 1-(3-trifluoromethyl-phenyl)piperazine (TFMPP), 1,4-dibenzylpiperazine, and caffeine (only the BZP was quantitated). This is the fifth time within the past year that the Northeast Laboratory has seen BZP. Tablets with the “Michael Jordan” logo have also been previously submitted to the laboratory, but none of the previous tablets with this logo contained BZP.



Photo 9 (Top Scale Tick-Marks are Millimeters; Squares are 2 x 2 Millimeters Each)

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SELECTED REFERENCES

[The Selected References section is 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. Bukowski EJ, Monti JA. **FTIR-ATR spectroscopy for identification of illicit drugs seized from clandestine laboratories.** *American Laboratory* 2007;39(20):16-19. [Editor’s Notes: A review. Contact: Shimadzu Scientific Instruments, Columbia, MD 21046.]
2. Kauppila TJ, Arvola V, Haapala M, Pol J, Aalberg L, Saarela V, Franssila S, Kotiaho T, Kostianen R. **Direct analysis of illicit drugs by desorption atmospheric pressure photoionization.** *Rapid Communications in Mass Spectrometry* 2008;22(7):979-985. [Editor’s Notes: A feasibility study. MDMA, amphetamine, phenazepam, and buprenorphine were

detected in tablets; LSD and Bromo-Dragonfly in blotter paper; and THC and cannabinal in cannabis. Contact: Division of Pharmaceutical Chemistry, Faculty of Pharmacy, University of Helsinki FI-00014, Finland.]

3. Li Q, Xu H-k, Song Z-h, Li Q. **Analysis of organic impurity profiling of illicit methamphetamine hydrochloride crystal by GC-MS.** Fenxi Ceshi Xuebao 2007;26(3):310-314. [Editor's Notes: Used 8 characteristic impurities to determine several synthetic routes. This article is written in Chinese. Contact: Animal Science College, Nanjing Agricultural University, Nanjing, Peop. Rep. China 210095.]
4. Weyermann C, Marquis R, Delaporte C, Esseiva P, Lock E, Aalberg L, Bozenko JS Jr., Dieckmann S, Dujourdy L, Zrcek F. **Drug intelligence based on MDMA tablets data.** Forensic Science International 2008;177(1):11-16. [Editor's Notes: The main objectives of the "Collaborative Harmonisation of Methods for Profiling of Amphetamine Type Stimulants" (CHAMP) project included the harmonisation of MDMA profiling methods and the creation of a common database for drug intelligence purposes. In the preliminary stages of this project, the participating laboratories analyzed the physical characteristics, the chemical composition, and the organic impurities of MDMA tablets, using previously harmonised methods. The aim of this work was to apply statistical treatments to the recorded data in order to evaluate their potential. The first part of this article deals with organic impurities data, while the second part focuses on the potential of the physical characteristics. The statistical methods allowed differentiation of samples from different batches, and determination of links between samples. Contact: Institut de Police Scientifique, University of Lausanne, Batiment de Chimie, Lausanne-Dorigny CH-1015, Switz.]
5. Zhang Y. **Optimization of determination method for components and impurities of illicit drugs by GC-MS.** Zhongguo Yaowu Lanyong Fangzhi Zazhi 2007;13(1):19-21. [Editor's Notes: Parameters that were studied included injector temperatures, carrier gas flow rates, initial temperatures, temperature programming rates, final temperatures, and holding periods. This article is written in Chinese. Contact: Ningbo Institute of Microcirculation and Henbane, Ningbo 315010, Peop. Rep. China.]

Additional References of Possible Interest:

1. Balogh MP. **Techniques for structure elucidation of unknowns: Finding substitute active pharmaceutical ingredients in counterfeit medicines.** LC-GC Europe 2008;21(2):84-95. [Editor's Notes: A conversational overview. Contact: LC-MS Technology Development, Waters Corp., Milford, MA (zip code not provided).]
2. Clark D, Pysik A. **The analysis of pharmaceutical substances and formulated products by vibrational spectroscopy.** Applications of Vibrational Spectroscopy in Pharmaceutical Research and Development 2007:213-238. [Editor's Notes: A review. Contact: Pfizer Global R+D, Sandwich, UK.]
3. Gheorghe A, van Nuijs A, Pecceu B, Bervoets L, Jorens PG, Blust R, Neels H, Covaci A. **Analysis of cocaine and its principal metabolites in waste and surface water using solid-phase extraction and liquid chromatography-ion trap tandem mass spectrometry.** Analytical and Bioanalytical Chemistry 2008;391(4):1309-19. [Editor's Notes: Presents a validated method using SPE and LC-MS/MS for the determination of cocaine, benzoylecgonine, and ecgonine methyl ester in waste and surface water. The method was applied to a set of

samples collected in Belgium. Contact: Toxicological Centre, University of Antwerp, Universiteitsplein 1, 2610 Antwerp, Belgium.]

4. Hidvegi E, Hideg Zs, Somogyi GP. **Different reactivities of amphetamines with N-methyl-bis(trifluoroacetamide) in heated gas chromatographic injectors.** Pharmazie 2008;63(3):233-234. [Editor's Notes: Analysis by GC/MS. Focus is toxicological. Contact: National Institute of Forensic Toxicology, Budapest, Hung.]
5. Melton L. **Courtroom chemistry.** Chemistry World 2007;4(11):58-61. [Editor's Notes: A review. Contact: London, UK (no further addressing information was provided).]
6. Meng P-J. **Analysis of gamma-hydroxybutyric acid using gas chromatography/mass spectrometry after pentafluorobenzyl derivatization.** Fenxi Huaxue 2008;36(1):61-65. [Editor's Notes: Derivatization was done with pentafluorobenzyl bromide. Focus is toxicological, but detection of GHB in beverages is also detailed. This article is written in Chinese. Contact: Chinese People's Public Security University, Beijing, Peop. Rep. China 100038.]

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SCIENTIFIC MEETINGS

Title: Fall 2008 SAFS Meeting (First Posting)
Sponsoring Organization: Southern Association of Forensic Scientists
Inclusive Dates: September 22-26, 2008
Location: Sam's Town Hotel and Casino (Shreveport, LA)
Contact Information: Randall Robillard (318/227-2889 or rrobillard-at-nlcl.org)
Website: www.southernforensic.org

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Title: 18th Annual CLIC Meeting (First Posting)
Sponsoring Organization: Clandestine Laboratory Investigating Chemists Association
Inclusive Dates: September 2-6, 2008 (Natural Products Workshop only on September 2)
Location: La Mansion del Rio Hotel on the Riverwalk (San Antonio, TX)
Contact Information: P. Smith (p1947s-at-hotmail.com)
Website: None

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