- OCTOBER 2008 -

- INTELLIGENCE ALERT -

BRICKS OF APPARENT BLACK TAR HEROIN OR HASHISH (ACTUALLY CONTAINING SMALL COMPARTMENTS OF COCAINE HYDROCHLORIDE) IN APACHE COUNTY, ARIZONA

The Arizona Department of Public Safety - Northern Regional Crime Laboratory (Flagstaff) recently received two bricks containing a compressed dark material, suspected either heroin or hashish. The exhibits were seized by Arizona Department of Public Safety personnel incidental to a vehicle stop in Apache County (located in northeast Arizona). Each brick (net mass approximately 800 grams each) was successively wrapped in multiple layers of plastic, then in red electrical tape. Upon disassembly, it was found that the dark material was dusted with a white powder, and furthermore that each brick had a small compartment embedded in the middle of the brick that contained a white powder (see Photo 1). Analysis of the white powder in the two compartments (total net mass approximately 24 grams) by color testing (cobalt thiocyanate - positive) and GC/MS indicated cocaine hydrochloride (not quantitated). The dark material did not contain
any controlled substances, and was not further identified. Analysis of the white powder used to
dust the bricks (mass not determined) by FTIR/ATR indicated that it was corn starch. In
followup discussions with the arresting officer, it is suspected that the bricks were intended to be
a rip-off. This was the first such submission to the laboratory.

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- INTELLIGENCE ALERT -

SQUEEZE BOTTLES OF “MASSAGE OIL” ACTUALLY CONTAINING
1,4-BUTANEDIOL IN SISKIYOU COUNTY, CALIFORNIA

The California Department of Justice Bureau of Forensic Services Redding Laboratory recently received 14 four-
ounce squeeze bottles containing varying amounts of a clear viscous liquid, submitted as an unknown/possible
controlled substance (see Photo 2). The exhibits were seized by the Siskiyou County Interagency Narcotics
Task Force pursuant to a traffic stop in Siskiyou County (located in far northern California). The bottles were
labelled as containing “PujaL Massage Emollient,” and listed butylene glycol among the ingredients (butylene
glycol is a generic term that can represent 1,2-, 1,3-, 1,4-, or 2,3- butanediol). Analysis of the liquid (total net
volume approximately 1700 milliliters) by GC/MS and FTIR confirmed 1,4-butanediol (BD; not quantitated).
BD (a “pro-drug” for GHB) is not currently controlled under either federal statutes or California state law. This was the first submission of this type to the laboratory.

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- INTELLIGENCE ALERT -

A MIXED SOLUTION OF METHAMPHETAMINE
AND 1,4-BUTANEDIOL IN PHOENIX, ARIZONA

The Arizona Department of Public Safety Central Regional Crime Laboratory (Phoenix) recently received a multi-exhibit submission that included two plastic bottles containing pink liquids (see Photo 3), suspected GHB. The exhibits were seized in the Phoenix Metropolitan area by Maricopa County Sheriff’s Office personnel (no further details). Both liquids were aqueous and acidic (pH = 4). Analysis of the liquid in the larger bottle (total net volume 61 milliliters) by GC and GC/MS, however, indicated not GHB but rather a 1 : 2 mixture of methamphetamine and 1,4-butanediol (BD) (not quantitated). Analysis of the liquid in the smaller bottle (total net volume 31 milliliters) by the
same techniques identified BD only. The cause of the pink coloration was not identified. This is the first ever submission of a mixture of methamphetamine and BD to the laboratory.

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- INTELLIGENCE BRIEF -

BLOTTER ACID IN WILDWOOD CITY, NEW JERSEY

The Cape May County Prosecutor’s Office Forensic Laboratory (Cape May Court House, New Jersey) recently received 20 small pieces of blank white blotter paper (total net mass 0.137 grams), each either rectangular or square in shape, wrapped in aluminum foil, suspected LSD “blotter acid” (no photos). The exhibits were seized in Wildwood City (Cape May County) by the Wildwood City Police, incidental to a noise complaint. Analysis of methanolic extracts by color testing (Ehrlich’s - purple (positive)) and GC/MS confirmed LSD (not quantitated, but a moderate to high loading based on the TIC). This was the first submission of LSD (in any form) to the laboratory in at least five years.

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- INTELLIGENCE BRIEF -

HASHISH IN PHOENIX, ARIZONA

The Phoenix (Arizona) Police Department Laboratory Services Bureau recently received five cucumber-shaped packages containing a soft brown material with an odor of brown sugar / coffee, suspected hashish (see Photos 4 and 5). The exhibits (total gross mass 5.1 kilograms) were included in 134 packages (total gross mass approximately 1300 kilograms) that were seized by the Phoenix Police, incidental to a vehicle stop. Each of the five packages was successively wrapped in a reflective mylar, multiple layers of plastic, foil, and grease. Analysis by microscopy (cystolith hairs observed) and modified Duquenois-Levine (positive), and GC/MS of chloroform extracts confirmed THC and related cannabinoids (not quantitated, but a significant percentage of THC based on the TIC). The other 129 packages contained marijuana. This was the largest ever submission of hashish to the laboratory.

Photo 4

Photo 5
- INTELLIGENCE BRIEF -

LARGE SEIZURE OF STEROIDS IN OKLAHOMA CITY, OKLAHOMA

The Oklahoma State Bureau of Investigation, Forensic Science Center (Edmond) recently received a multi-exhibit submission of various tablets, capsules, liquids, and powders, all suspected steroids (see Photos 6 and 7). The exhibits were seized in Oklahoma City by personnel from the Oklahoma County Sheriff's Office and the U.S. Food and Drug Administration, pursuant to an arrest on a fugitive warrant. The suspect was reformulating bulk steroids for sale. All items were analyzed by GC and GC/MS (quantitations were not performed). Among the items seized were:

A) 42 vials containing liquids and one foil bag containing 250 grams of white powder, all identified as containing stanozolol.
B) 45 dropper bottles containing liquids, identified as containing methandrostenolone.
C) 12 multi-dose vials containing liquids, two plastic bowls each containing approximately 1 liter of yellow liquid, and two bottles containing a combined 450 milliliters of yellow liquid, all identified as containing testosterone enanthate.
D) Seven multi-dose vials each containing approximately 10 milliliters of liquid, and one plastic bag containing 79 grams of a white powder, all identified as containing testosterone propionate.
E) 10 multi-dose vials each containing approximately 10 milliliters of liquid, identified as containing testosterone cypionate.
F) One plastic bag containing 20 grams of white powder, identified as containing testosterone isocaproate.
G) One vial containing 9 milliliters of a liquid, identified as a mixture of trenbolone acetate, drostanolone propionate, testosterone enanthate, testosterone cypionate, and nandrolone decanoate.

Photo 6

Photo 7
H) 127 clear capsules containing white powder, and one plastic bag containing 45 grams of 
white powder, all identified as containing oxandrolone.
I) One plastic bag containing 5 grams of white powder, identified as drostanolone propionate.
J) 28 vials with varying amounts of liquids, one foil bag labelled “Glukoza, 1 kg” containing a 
moist off-white substance, and a plastic bowl containing approximately 800 milliliters of 
a liquid, all identified as containing nandrolone decanoate.
K) Three vials each containing 12 milliliters of liquid, identified as a mixture of testosterone 
propionate, testosterone isocaproate, and testosterone enanthate.
L) Two vials containing 10 milliliters of a white solid/liquid, identified as a mixture of 
methandrostenolone, testosterone, and testosterone propionate.

In addition, one vial containing a blue liquid was identified as containing sildenafil. Five white 
tablets were identified as containing terbinafine. Two vials containing a yellow liquid, one vial 
containing a clear liquid, one plastic bottle containing approximately 260 milliliters of a liquid, 
and 82 white tablets were all identified as containing tamoxifen. Forty vials with labeling 
similar to already identified items were not tested. One manila envelope labeled “HGH #54,” 
containing 10 multi-dose vials, each containing a white substance, were not identified. Three 
vials each containing a liquid, 151 white tablets, one plastic bottle containing approximately 260 
milliliters of a liquid, and one plastic bottle containing approximately 800 milliliters of a yellow 
liquid, contained no controlled substances. This was the largest ever submission of this type to 
the laboratory.

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- INTELLIGENCE ALERT -

BLACK TAR HEROIN BRICKS IN BARSTOW, CALIFORNIA

The DEA Southwest Laboratory (Vista, California) recently received two bricks of 
dark brown material, suspected heroin (see Photo 8). The exhibits were seized 
by a San Bernardino County Sheriff’s Deputy, incidental to a traffic stop in 
Barstow, California. Each brick was 
successively wrapped in a knotted white 
plastic bag, multiple layers of tan tape, 
carbon paper, duct tape, blue grease, and 
a clear plastic bag. Analysis of the 
material (total net mass 3,622 grams) 
using color tests, salt tests, GC/FID, 
GC/MS, IR, and LC (with UV detection) 
confirmed 69.9% heroin hydrochloride. The uniform density and shape of the bricks was 
noteworthy, and suggested that the heroin was in a semi-liquid form when molded (possibly 
while still hot from its preparation). The Southwest Laboratory routinely receives cocaine 
hydrochloride bricks, and has previously received bricks of methamphetamine and (rarely) 
heroin; however, this is the first submission of black tar heroin bricks.
- INTELLIGENCE ALERT -

HEROIN SMUGGLED IN A PSEUDO-OPERATIONAL FLAT-SCREEN TELEVISION AT MIAMI INTERNATIONAL AIRPORT

The DEA Southeast Laboratory (Miami, Florida) recently received a 32-inch flat screen television (TV) that contained a layer of 31 small tan and off-white packages behind the screen, each containing a tan or off-white powder that field-tested positive for heroin (see Photo 9). The TV was seized by Customs and Border Patrol officers from a passenger arriving at Miami International Airport from Columbia. When plugged in and turned on, the TV would power up but gave no picture. Upon disassembly at the laboratory, it was found that a number of internal components had been removed in order to create adequate space for the packages. Analysis of the powder (total net mass 2,078 grams) by FTIR, GC/MS, GC/FID, and NMR confirmed 93.3% heroin hydrochloride. This is the first such submission to the Southeast Laboratory.

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- INTELLIGENCE ALERT -

HEROIN SMUGGLED IN FAKE KIDNEY BEANS IN EL PASO, TEXAS

The DEA South Central Laboratory (Dallas, Texas) recently received a submission of approximately 4972 fake “kidney beans” (total net mass 3,210 grams), all containing a fine tan powder, suspected heroin (see Photo 10). The “beans” were actually small plastic packets that had been painted to resemble kidney beans (see Photo 11). A few genuine beans (of a much
lighter color) were mixed in with the fakes (see the light brown beans in Photo 11, previous page). The exhibits were seized by DEA Special Agents in El Paso, Texas (no further details). Analysis of the powder by FTIR-ATR, GC/MS, and GC/FID confirmed 90.3% heroin hydrochloride. This was the first such submission to the South Central Laboratory.

[Editor’s Notes: A similar submission was reported by the DEA Northeast Laboratory; see: Heroin in simulated red beans at JFK airport. Microgram Bulletin 2004;37(8):139. The beans in the above case are, however, considerably more realistic in appearance, and represent a significant increase in manufacturing sophistication.]

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- INTELLIGENCE ALERT -

HEROIN SMUGGLED IN PSEUDO-OPERATIONAL PERFUME SPRAY DISPENSERS IN NEW YORK CITY

The DEA Northeast Laboratory (New York, New York) recently received four pump-spray perfume dispensers that each contained rings of compressed brown material, suspected heroin (see Photo 12). The exhibits were seized in New York City by personnel from the DEA New York Field Division (no further details). The spray pumps worked (and dispensed perfume), and there was no visual indications that the containers had been tampered with or modified. However, upon disassembly, it was found that each can contained a small, internal spray bottle filled with perfume, surrounded by several round rings of the compressed brown material (see Photo 13). Analysis of the material (total net mass 1,209 grams) by GC/MS, GC/FID, and FTIR/ATR confirmed 93.5% heroin hydrochloride. The Northeast Laboratory routinely receives heroin concealed in consumer products, but this was the first submission of this particular smuggling technique.
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. Dujourdy L, Besacier F. Headspace profiling of cocaine samples for intelligence purposes. Forensic Science International 2008;179(2-3):111-22. [Editor’s Notes: A method for determination of 18 residual solvents in illicit cocaine hydrochloride using SHS-GC is described for profiling and sample comparisons. The interpretation of the results in distinguishing geographical origins is also presented. Contact: Institut National de Police Scientifique, Laboratoire de Police Scientifique de Lyon, 31 Avenue Franklin Roosevelt, Ecullly 69134, Fr.]


3. Hill LA, Lenehan CE, Francis PS, Adcock JL, Gange ME, Pfeffer FM, Barnett NW. A screening test for heroin based on sequential injection analysis with dual-reagent chemiluminescence detection. Talanta 2008;76(3):674-9. [Editor’s Notes: Utilizes a sequential injection procedure with dual-reagent chemiluminescence detection for screening drug seizures for heroin. The chemiluminescence reagents (acidic potassium permanganate and tris(2,2’-bipyridine)ruthenium(III)) were aspirated from either side of a sample aliquot that was large enough to prevent interdispersion of the reagent zones - therefore, 2 different chemical reactions could be performed simultaneously. The presence of heroin was indicated by a strong response with the tris(2,2’-bipyridine)ruthenium(III) reagent, and was confirmed by an increase in the response with the permanganate reagent when the sample was treated with sodium hydroxide to hydrolyze the heroin to morphine. Contact: School of Life and Environmental Sciences, Deakin University, Geelong, Vic, 3217 Australia.]


5. Inoue H, Kuwayama K, Iwata YT, Kanamori T, Tsujikawa K, Miyaguchi H. Simple and simultaneous detection of methamphetamine and dimethyl sulfone in crystalline methamphetamine seizures by fast gas chromatography. Forensic Toxicology 2008;26(1):19-22. [Editor’s Notes: Diphenylmethane was used as an internal standard. Use of a narrow-bore capillary column gave fast and complete separation of the 3 compounds within 1.3 minutes. Contact: National Research Institute of Police Science 6-3-1 Kashiwanoha, Kashiwa 277-0882, Japan.]

6. Kanai K, Takekawa K, Kumamoto T, Ishikawa T, Ohmori T. Simultaneous analysis of six phenethylamine-type designer drugs by TLC, LC-MS, and GC-MS. Forensic Toxicology
2008;26(1):6-12. [Editor’s Notes: Extensive data are presented for analyses of 2,5-dimethoxyphenethylamine (2C-H), 2,5-dimethoxyamphetamine (2,5-DMA), 4-bromo-2,5-dimethoxyphenethylamine (2C-B), 4-bromo-2,5-dimethoxyamphetamine (DOB), 4-iodo-2,5-dimethoxyphenethylamine (2C-I), and 4-iodo-2,5-dimethoxyamphetamine (DOI), including 1H-NMR, IR, LC, GC, TLC (with 7 different solvent systems), EI-MS (underivatized and following trifluoroacetyl derivatization), LC/MS, and GC/MS. Contact: Forensic Science Laboratory, Yamanashi Prefectural Police HQ, Yamanashi, Japan.]

7. Kudo K, Ishida T, Ikeda N. Development of a systematic screening procedure for abused drugs without using standard compounds by gas chromatography/mass spectrometry. Journal of the Mass Spectrometry Society of Japan 2008;56(3):123-30. [Editor’s Notes: The procedure uses GC/MS with retention time locking. 55 drugs, including various amphetamine, piperazine, tryptamine and phenethylamine derivatives, opiates, and benzodiazepines, were selected as target compds. The focus is toxicological. This article is written in Japanese. Contact: Department of Forensic Pathology and Sciences, Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan.]

8. Lee JS, Park YH, Rhee JS, Jeong JI, Lim MA, Chung HS. Planting conditions of Korean cannabis derived from stable isotope ratio and tetrahydrocannabinol contents. Yakhak Hoechi 2008;52(3):172-5. [Editor’s Notes: Stable isotope ratio of carbon and nitrogen and THC contents were measured on 37 Korean cannabis and 10 commercial grade marijuana seized in Korea. This article is written in Korean. (Note: The abstract is unclear - “cannabis” and “commercial grade marijuana” appear to actually mean wild-growing versus illicitly cultivated.) Contact: Department of Forensic Science, National Institute of Scientific Investigation, Seoul 158-707, S. Korea.]


10. Lopes de Oliveira G, Voloch MH, Szulman GB, Negrini Neto O, Yonamine M. Cannabinoid contents in cannabis products seized in Sao Paulo, Brazil, 2006 - 2007. Forensic Toxicology 2008;26(1):31-5. [Editor’s Notes: 55 samples were analyzed by GC/FID, using diazepam as an internal standard. Contact: Centro de Exames, Analises e Pesquisas, Instituto de Criminalistica, Sao Paulo, Brazil.]


14. Wu JJ. In situ test for determining whether items of real or personal property have been exposed to the manuf. of illegal drugs. (Patent) Chemical Abstracts 2008:855517.

Additional References of Possible Interest:


2. Hadef Y, Kaloustian J, Nicolay A, Portugal H. Thermal stability evaluation of doping compounds before GC-MS analysis by DSC. Journal of Thermal Analysis and Calorimetry 2008;93(2):553-60. [Editor’s Notes: The thermal stability of 17 “doping” compounds (anabolic steroids and other related substances) were tested by DSC, for their potential GC/MS analysis either under free form or following TMS derivatization. Under optimized conditions, all 17 compounds could be analyzed in the same GC/MS run. Contact: Laboratoire de Chimie Analytique, Departement de Pharmacie, Faculte de Medecine, Universite Badji Mokhtar, Annaba, Algerie 23000, Fr.]

3. Li Y-z, Min S-g, Liu X. Applications of near-infrared spectroscopy to analysis of traditional Chinese herbal medicine. Guangpuxue Yu Guangpu Fenxi 2008;28(7):1549-53. [Editor’s Notes: Introduces the principles and methods of NIR spectroscopy, and reviews its application for analyses of traditional Chinese herbal medicines. This article is written in Chinese. Contact: College of Science, China Agricultural University, Beijing 100094, Peop. Rep. China.]

4. O’Neil AJ, Jee RD, Lee G, Charvill A, Moffat AC. Use of a portable near infrared spectrometer for the authentication of tablets and the detection of counterfeit versions. Journal of Near Infrared Spectroscopy 2008;16(3):327-33. [Editor’s Notes: A portable NIR transmittance spectrometer was evaluated for analyses of authentic and counterfeit Cialis and Levitra tablets. The spectra were adequate to both enable tablet authentication and to group counterfeits by origin. Contact: Centre for Pharmaceutical Analysis, The School of Pharmacy, University of London, London WC1N 1AX, UK.]

5. Ojanpera I. Mushroom toxins. Handbook of Analytical Separations 2008;6(Forensic Science):391-9. [Editor’s Notes: A review. Contact: Department of Forensic Medicine, University of Helsinki, FI-00014 Finland.]

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!


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The next offering of journals and textbooks will be in the January 2009 issue of Microgram Bulletin.

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THE DEA FY 2009 STATE AND LOCAL FORENSIC CHEMISTS SEMINAR SCHEDULE

The FY 2009 schedule for the State and Local Forensic Chemists Seminar is as follows:

November 3-7, 2008
March 2-6, 2009
June 1-5, 2009
September 14-18, 2009

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 Hyatt Place Dulles North 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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