

# Microgram

## *Bulletin*

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- MARCH 2007 -

- INTELLIGENCE ALERT -

### METHAMPHETAMINE IN COTTON BALLS IN JOHNSON COUNTY, KANSAS

The Johnson County Sheriff's Office Criminalistics Laboratory (Mission, Kansas) has recently received multiple submissions of small, irregularly shaped cotton balls impregnated with a white, crystalline powder, suspected methamphetamine (see Photo 1). The exhibits were obtained as a result of multiple, independent enforcement actions in various jurisdictions in Johnson County (which includes the southern suburbs of Kansas City). One recent polydrug seizure included two plastic bags containing a total net mass of 1.44 grams of these cotton balls. Analysis of the powder by GC/MS indicated a mixture of methamphetamine and dimethylsulfone, similar to typical methamphetamine exhibits recently submitted to the laboratory. The exhibits were not quantitated, but the methamphetamine to dimethylsulfone ratios in the two bags were 1:1 and



Photo 1

2:3, respectively, based on their TIC's. The laboratory has previously seen these cotton balls, but only after having being used; in such cases, the balls were co-submitted with a spoon-like device, and the balls and spoons contained only residues. These were the first submissions of the pre-packaged, unused balls.

[Editor's Notes: According to the analyst, the exact manner in which the cotton balls are being used is unknown. The cotton balls may act as a crude filter, or perhaps are just a convenient support matrix that is visually innocuous.]

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**- INTELLIGENCE ALERT -**

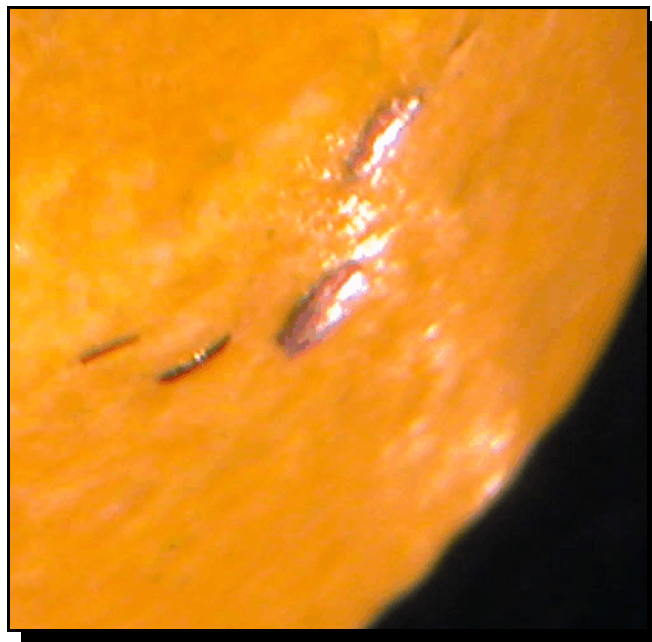
**ECSTASY TABLETS WITH GLITTER IN BIRMINGHAM, ALABAMA**

The Hoover Regional Laboratory of the Alabama Department of Forensic Sciences recently received 10 apparent Ecstasy tablets containing glitter, suspected MDMA (see Photos 2 and 3). The tablets were seized by the Birmingham Police Department (no further details). The seizure included 5 green and 5 yellow tablets (total net mass 2.74 grams); both types were 9 millimeters in diameter by 5 millimeters thick, and had a "waving man" logo. Analysis by color testing, GC/MS, FTIR/ATR, and microcrystal test indicated MDMA, nicotinamide (not confirmed), trace MDP2P, and trace methamphetamine. The exhibits were not quantitated, but the ratio of MDMA to nicotinamide was 37:2 based on the TIC. This is the first submission of Ecstasy tablets with glitter (and also of this logo type) to the laboratory.

[Editor's Notes: This also appears to be the first ever report of Ecstasy tablets containing glitter to *Microgram*; however, a similar submission was recently reported by the Maryland State Police-Forensic Sciences Division in Pikesville. The addition of glitter would appear to be a marketing tactic. It is unknown what health effects, if any, the presence of glitter would have on users who ingest these tablets.]



**Photo 2**



**Photo 3**

**- INTELLIGENCE ALERT -**

**CAPSULES CONTAINING HEROIN AND ALPRAZOLAM  
NEAR SAVAGE, MARYLAND**

The Howard County Forensic Chemist working out of the Maryland State Police-Forensic Sciences Division (Pikesville) recently received a polydrug submission that included two clear plastic capsules (total net mass 0.7 grams) containing an off-white, tannish powder, suspected heroin (see Photo 4). The exhibits were seized by the Howard County Police Department pursuant to a traffic stop near Savage (located just off of I-95 between Washington, DC and Baltimore, Maryland). Analysis of the powder by color testing and GC/MS indicated a mixture of acetaminophen, caffeine, heroin, and alprazolam. The exhibit was not quantitated, but the ratio of heroin to alprazolam was approximately 2:3, based on the TIC. This was the first known submission of capsules containing a mixture of heroin and alprazolam to the laboratory.



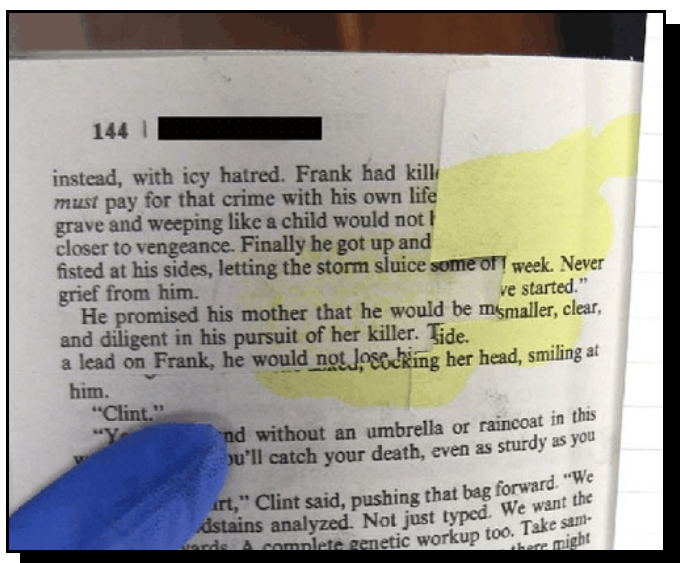
**Photo 4**

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**- INTELLIGENCE ALERT -**

**PAPERBACK NOVEL LACED WITH METHAMPHETAMINE AT THE  
WASHINGTON COUNTY JAIL, FAYETTEVILLE, ARKANSAS**

The Arkansas State Crime Laboratory (Little Rock) recently received a paperback novel that had apparent yellow highlighter stains on several pages, that field-tested positive for methamphetamine (see Photo 5). The exhibit was seized by the Washington County Sheriff's Office from an individual who was visiting the Washington County Jail (located in Fayetteville). Analysis of a methanolic extract of the most heavily stained pages by color testing, TLC, and GC/MS confirmed methamphetamine (not quantitated, but a high loading based on TIC). This is the first seizure of this type submitted to the laboratory.



**Photo 5**



**- INTELLIGENCE ALERT -**

**SODAS MIXED WITH COUGH SYRUP  
(CONTAINING CODEINE AND PROMETHAZINE)  
IN MOBILE, ALABAMA**

The Alabama Department of Forensic Sciences, Mobile Laboratory, has recently received numerous submissions of plastic soda bottles containing either a pink or purple liquid, suspected to contain codeine (see Photo 6). These solutions are locally known as “Sip-Sip” and “Lean,” and have been seized by several law enforcement agencies in the Mobile area, including the Prichard Police Department, Mobile Police Department, and the Mobile County Sheriff’s Office. Following acid/base workup, analysis of chloroform extracts by GC/MS indicated a mixture of codeine and promethazine (not formally quantitated, but both present in only low concentrations, in approximately a 1:3 ratio). The solutions are believed to be sodas containing added prescription cough syrup.



**Photo 6**

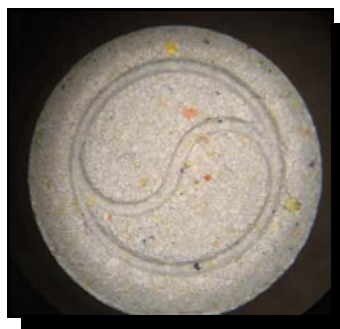
[Editor’s Note: Promethazine is an antihistaminic.]

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**- INTELLIGENCE ALERT -**

**ECSTASY MIMIC TABLETS (CONTAINING KETAMINE, METHAMPHETAMINE,  
AND DIMETHYLSULFONE) IN SAN JOSE, CALIFORNIA**

The DEA Western Laboratory (San Francisco, California) recently received two exhibits of apparent Ecstasy tablets, all 9 millimeters in diameter by 4 millimeters thick, suspected MDMA (see Photos 7 and 8 (colors not true)). The exhibits were acquired by the Santa Clara County Sheriff’s Office (no further details). The first exhibit contained two multicolored



**Photo 7**



**Photo 8**

speckled blue tablets (total net mass 249 milligrams) with a ying/yang logo on one side and a score mark on the opposite side. The second exhibit contained two multicolored speckled pink tablets (total net mass 256 milligrams) with a crown logo. Analysis of both exhibits by GC and GC/IRD, however, identified not MDMA but rather a mixture of ketamine, methamphetamine, and dimethylsulfone. The drug components were not formally quantitated, but were estimated as 4.1 percent ketamine and 0.4 percent methamphetamine in the ying/yang logo tablets, and 1.4

percent ketamine and 0.7 percent methamphetamine in the crown logo tablets. This is believed to be the first submission of Ecstasy mimic tablets containing a mixture of ketamine and methamphetamine to the Western Laboratory.

[Editor's Note: The ying/yang logo tablets appear to be the same as those reported by the California Department of Justice Forensic Laboratory in Eureka in the February 2007 issue of *Microgram Bulletin*.]

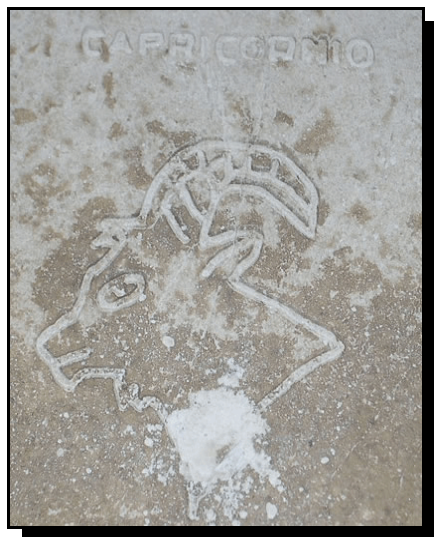
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**- INTELLIGENCE ALERT -**

**HEROIN BRICKS IN HAMMOND, INDIANA**

The DEA North Central Laboratory (Chicago, Illinois) recently received 3 full and 1 half bricks of extremely hard, light grayish brown powder with 2 different embossed images, suspected heroin. The exhibits were seized by the Indiana State Police pursuant to a traffic stop near Hammond (located at the far northwestern corner of Indiana, about 30 miles south-southeast of Chicago, Illinois). The first full brick (total net mass 1031.2 grams) had the word "CAPRICORNIO" over a Ram's Head logo (see Photo 9), whereas the other 2 full bricks and the half brick (total net mass 2587.5 grams) had a Scorpion logo (see Photo 10), without lettering (partial logo on the half-brick). Unusually, the bricks resembled kilogram bricks of cocaine in both their packaging and dimensions (wrapped in plastic food bags, plastic shrink wrap, tape, and carbon paper, and rectangular (full brick approximately 7.5 x 4.5 x 1 inches)). Analysis by GC/MS, IR, and GC/FID confirmed 90 percent heroin hydrochloride. This was the first submission of heroin bricks shaped, wrapped, and branded like cocaine bricks to the North Central Laboratory in many years.

[Editor's Note: The Ram's Head / "Capricornio" brick appears to be the same as those reported by the DEA South Central Laboratory in the December 2006 issue of *Microgram Bulletin* (the latter seizure (13 bricks) was made at the Laredo, Texas POE).]



**Photo 9**



**Photo 10**

**- INTELLIGENCE ALERT -**

**COWBOY BOOTS CONTAINING COCAINE AT THE WASHINGTON-DULLES INTERNATIONAL AIRPORT**

The DEA Mid-Atlantic Laboratory (Largo, Maryland) recently received 6 boxes that contained 26 pairs of cowboy boots, 25 pairs of which contained a clear plastic bag of white powder in the heel of each boot, suspected cocaine (see Photo 11). The boxes arrived as air cargo at Washington-Dulles International Airport, and were seized by Immigration and Customs Enforcement personnel (no further details). Analysis of the powder (total net mass 2.707 kilograms) by FTIR, GC, and GC/MS confirmed cocaine hydrochloride in all of the exhibits, ranging in purity from 64 to 76 percent. Four of the exhibits were adulterated with caffeine, and one was adulterated with diltiazem. The Mid-Atlantic Laboratory has previously received similar exhibits.



**Photo 11**

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**- INTELLIGENCE ALERT -**

**TOILETRIES CONTAINING HEROIN (FROM COLOMBIA) IN NEW YORK**

The DEA Northeast Laboratory (New York, New York) recently received a set of toiletries, each containing a tan colored powder, suspected heroin (see Photo 12). The exhibits (two hairbrushes, two makeup foundation applicators, and a makeup brush) were seized by Immigration and Customs Enforcement personnel from a passenger arriving on a flight from Colombia (details sensitive). Analysis of the powder (total net mass 130.2 grams) by GC/FID, NMR, GC/MS, and FTIR/ATR confirmed 89 percent heroin hydrochloride. The Northeast Laboratory routinely receives heroin concealed in various types of containers, including in shampoo bottles and secreted inside other types of toiletries.



**Photo 12**



**- INTELLIGENCE ALERT -**

**(POSSIBLE) PLASTIC BOTTLE STOPPER (CONTAINING COCAINE) SEIZED  
AT EZEIZA AIRPORT IN BUENOS AIRES, ARGENTINA**

The DEA Special Testing and Research Laboratory (Dulles, Virginia) recently received a reddish-brown, hard plastic tube resembling a cork that contained a white powder, suspected cocaine (see Photo 13). The exhibit was seized by Argentinean Airport Security Police at the Ezeiza Airport in Buenos Aires, from two Polish nationals who were boarding a flight to Chile. Analysis of the powder (total net mass 7.2 grams) by GC, IR, and GC/MS confirmed 87.8 percent cocaine hydrochloride, 2.4 percent cocaine base, and 2.1 percent caffeine. This is the first submission of this type to the Special Testing and Research Laboratory.



**Photo 13**

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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. Katainen E, Elomaa M, Laakkonen U-M, Sippola E, Niemela P, Suhonen J, Jarvinen K. **Quantification of the amphetamine content in seized street samples by Raman spectroscopy.** *Journal of Forensic Sciences* 2007;52(1):88. [Editor's Notes: Presents the title study. The results were favorably compared against LC. Contact: Department of Pharmaceutics, University of Kuopio, P.O> Box 1627, FIN-70211 Kuopio, Finland.]
2. Mercer JW, Oldfield LS, Hoffman KN, Shakleya DM, Bell SC. **Comparative analysis of gamma-hydroxybutyrate and gamma-hydroxyvalerate using GC/MS and HPLC.** *Journal of Forensic Sciences* 2007;52(2):383. [Editor's Notes: GHB and GHV were derivatized with BSTFA with trimethylchlorosilane prior to GC/MS analyses. UV/Vis detection at 254 nm was used for the HPLC analyses. Contact: C. Eugene Bennett Department of Chemistry, West Virginia University, 217 Clark Hall, Morgantown, WV 26056.]
3. Morris JA. **Modified cobalt thiocyanate presumptive color test for ketamine hydrochloride.** *Journal of Forensic Sciences* 2007;52(1):84. [Editor's Notes: An alkaline version of the cobalt thiocyanate test was moderately sensitive and highly selective for ketamine. 93 other compounds were checked. Contact: Johnson County Sheriff's Office, Criminalistics Laboratory, 6000 Lamar, Mission, Kansas 66202.]

4. Nguyen XT, Hoang MH. **Stability of the impurities in heroin samples during storage.** Tap Chi Duoc Hoc 2006;46(10):21. [Editor's Notes: Used GC analysis to determine ratios of heroin, acetylcodeine, O6-monoacetylmorphine, and possibly other byproducts and impurities (not clear from the abstract). This article is written in Vietnamese. Contact: Criminal Science Dept., Bureau of Public Security, Vietnam.]
5. Ojanpera S, Ojanpera I. **Forensic drug screening by LC-MS using accurate mass measurement.** LC-GC Europe 2005;18(11):607. [Editor's Notes: Uses LC/TOF-MS; focus appears to be toxicological, but "analysis of drugs of abuse in seized street drug samples" is specifically mentioned in the abstract. Contact: Department of Forensic Medicine, University of Helsinki, Finland.]
6. Oliver TL. **Clandestine laboratory (Clan-Lab) home test kit system, protocol, method and apparatus.** (Patent) Chemical Abstracts 2006:1342029.
7. Osan TM, Cerioni LMC, Forguez J, Olle JM, Pusiol DJ. **NQR: From imaging to explosives and drugs detection.** (Patent) Chemical Abstracts 2006:1348733.
8. Osokin DY, Khusnutdinov RR. **Two-frequency composite pulses in NQR.** Applied Magnetic Resonance 2006;30(1):7. [Editor's Notes: Use of the title technique for detection of narcotics is specifically mentioned in the abstract (NFI). Contact: Kazan Physical-Technical Institute, Russian Academy of Sciences, Kazan, Russia.]
9. Sachs SB, Woo F. **A detailed mechanistic fragmentation analysis of methamphetamine and select regioisomers by GC/MS.** Journal of Forensic Sciences 2007;52(2):308. [Editor's Notes: Presents the title study. Includes methamphetamine and 7 related compounds. Contact: San Francisco Police Department Crime Laboratory, 850 Bryant St., San Francisco, CA 94103.]
10. Wen T, Zhao X, Luo G, Wang Y, Wang J, Zhu J, Yu Z. **Comparison of the performance of microemulsion electrokinetic chromatography and 1-butanol modified micellar electrokinetic chromatography on the separations of amphetamine and its ephedra alkaloid impurities.** Fenxi Huaxue 2006;34(11):1529. [Editor's Notes: Nine different compounds (not specified in the abstract) were analyzed within 10 minutes. This article is written in Chinese. Contact: Department of Chemistry, Tsinghua University, Beijing 100084, Peop. Rep. China.]
11. Zamir A, Cohen Y, Azoury M. **DNA profiling from heroin street dose packages.** Journal of Forensic Sciences 2007;52(2):389. [Editor's Notes: Presents the title study. DNA could be recovered from fingerprints along the "amorphic" burnt edges of the plastic wrap typically used to package street-level doses of heroin in Israel. Contact: Latent Fingerprint Laboratory, Division of Identification and Forensic Science (DIFS), Israel Police, National HQ, Jerusalem 91906, Israel.]

**Additional Reference of Possible Interest:**

1. Kemeny GJ. **Micro-ATR identification of forensic materials using the  $\mu$ MAX microscope accessory.** Spectroscopy 2006;Suppl.:22. [Editor's Note: A minor overview and review of the title accessory. Application is stated only as "unknown forensic materials." Contact: PIKE Technologies, Inc., Madison, WI 53719.]

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