

Microgram

Bulletin

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- AUGUST 2009 -

MARIJUANA “BUTTER” IN MISSISSIPPI

The Mississippi Crime Laboratory analyzed a yellow semi-solid substance with a rancid odor, suspected marijuana “butter” (see Photo 1). Preliminary testing with the Duquenois-Levine test was positive for cannabinoids, but a microscopic examination of the substance did not reveal the presence of any characteristic botanical features. The sample was extracted using a Toxi-Tube A (commercial product). Analysis of the substance (total net mass 21.6 grams) by GC/MS confirmed the presence of delta-9-tetrahydrocannabinol (the THC was not formally quantitated, but a relatively high loading based on TIC). A separate exhibit contained 447.4 grams of marijuana. This was the first known submission of marijuana butter, also known as “cannabutter,” to the Mississippi Crime Laboratory system.

[Editor’s Notes: For previous issues featuring a similar substance called “ganja butter” see Microgram Bulletin 2007;40(7):66 and 2007;40(8):77.]



Photo 1

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VICODIN® MIMIC TABLETS (ACTUALLY CONTAINING HEROIN, DIAZEPAM ACETAMINOPHEN, AND CAFFEINE) IN CANADA

The Canada Border Services Agency (CBSA) Laboratory received five white tablets imprinted with “VICODIN ES” on one face and a score line on the opposite face, suspected to be counterfeit US Vicodin ES® tablets (see Photos 2 and 3). The tablet



Photo 2

Photo 3

exhibits were selected from a larger seizure. The tablets had a dusty and slightly worn surface and averaged 15.3 millimeters long, 9.8 millimeters wide, 5.9 millimeters thick, and weighed 772 milligrams each. Analysis by FTIR, GC/MS, and ion mobility spectrometry (IMS), indicated not acetaminophen and hydrocodone bitartrate, but rather acetaminophen and small amounts of heroin, diazepam and caffeine (not quantitated). This is the first submission of Vicodin® mimic tablets to the laboratory.

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BUNNY SHAPED ECSTASY MIMIC TABLETS (ACTUALLY CONTAINING FLUOROPHENYLPYPERAZINE, FPP)



Photo 4

The California Department of Justice Laboratory received 12 red Playboy bunny tablets, suspected Ecstasy (see Photo 4). Analysis of two of the tablets by GC/MS indicated, not MDMA, but fluorophenylpiperazine (FPP). The laboratory has received numerous BZP/TMFPP Ecstasy mimic tablets, but this is the first submission received containing FPP.

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“XANAX” BLOTTER PAPER IN KANSAS

The Sedgwick County Regional Forensic Science Center received a partial blotter paper square, suspected LSD. Both sides of the square were printed with a partial picture of a tablet and the word “XANAX” (see Photo 5). Methanolic extracts of the paper did not fluoresce under UV irradiation or produce the proper violet to purple color, indicative of LSD, with Ehrlich’s (or Van Urk’s) reagent. Analysis by GC/MS identified the presence of alprazolam (not quantitated). Xanax is a trade name for alprazolam. This was the first time a prescription drug was found on blotter paper by the laboratory.

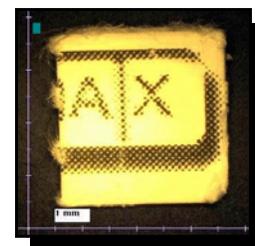


Photo 5

[Editor’s Notes: The same type blotter paper, also with alprazolam, was reported in a previous issue of Microgram. See Microgram Bulletin 2008;41(5):45.]

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MIMIC ALPRAZOLAM TABLETS IN TEXAS

The Texas Department of Public Safety Crime Laboratory received a prescription pill bottle containing 92 white rectangular tablets with imprint GG249, suspected alprazolam. The tablets were all similar in appearance; however, 90 of the tablets weighed 0.33 gram each, while two weighed the expected 0.26 grams (see Photo 6; mimic tablet on the left and the real tablet on the right). Analysis by UV and GC/MS of the 0.33 gram tablets identified, not alprazolam, but rather diazepam (not quantitated). This is the first known submission of alprazolam mimic tablets containing diazepam to the laboratory.



Photo 6

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FENTANYL POWDER IN COOLER IN NEW MEXICO

The DEA South Central Laboratory received 17 sealed, clear, plastic FoodSaver brand bags, each containing a fine white powder, suspected cocaine (not pictured). The 17 packages were found concealed in the liner of an Igloo brand cooler. Each package contained approximately 300 grams of a fine white powder, for a total net mass of 4,973 grams. Initial screening of each package by GC/MS and GC/FID identified not cocaine, but rather caffeine, lidocaine, and fentanyl. Further analysis by LC/MS, FTIR, and HPLC confirmed 6.3% fentanyl (calculated as the hydrochloride) and also identified lactose in the sample. This is the second exhibit of this kind submitted to the laboratory from New Mexico since 2007 (see Microgram Bulletin 2007;40(12):113).

[Editor's Notes: Fentanyl powder mixed with lactose and placed in vacuum-seal type plastic bags was reported by the DEA Southwest Laboratory in 2007. See Microgram Bulletin 2007;40(4):41.]

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SUGAR-LACED MARIJUANA AT CALIFORNIA POINT OF ENTRY

The DEA Southwest Laboratory received multiple bundles of plant material, suspected marijuana saturated with sugar crystals (see Photo 7). Analysis of the plant material (total net mass 65 kilograms) by microscopic examination, thin layer chromatography (TLC) and Duquenois-Levine color test confirmed marijuana. Analysis of the sugar crystals by IR identified sucrose. The laboratory received one other submission of this type of marijuana.



Photo 7

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UNUSUAL BZP TABLETS IN NEW YORK

The DEA Northeast Laboratory received 7,792 tablets with eight different types of logos, suspected Ecstasy (see Photo 8). Analysis of the tablets (total net mass 2,345 grams) by GC/MS, GC/FID, and FTIR identified 122.2 milligrams of N-benzylpiperazine (BZP) per tablet, 1,3-trifluoromethylphenylpiperazine (TFMPP), and caffeine. The laboratory has received these type tablets in the past, but the tablets contained ingredients other than BZP.



Photo 8

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MARIJUANA WITH “JOKER” LOGO IN FLORIDA

The DEA Southeast Laboratory received nine small, zip-top plastic bags of plant material, suspected marijuana. The nine zip-top plastic bags each had a “Joker” sticker affixed to the outside. Analysis of the substance (total net mass 11.9 grams) confirmed marijuana. This was the first known submission of the “Joker” sticker to the laboratory.

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ECSTASY/PIPERAZINE COMBINATION TABLETS IN NEW YORK

The DEA Northeast Laboratory received two off-white tablets (see Photo 9) depicting Barack Obama on a contoured tablet. Analysis of the tablets (total net mass 0.60 gram) by GC/MS, GC/FID and color test indicated N-benzylpiperazine (BZP), 1,3-trifluoromethylphenylpiperazine (TFMPP), 3,4-methylenedioxymethamphetamine (MDMA), procaine, and caffeine. This is the first known submission of the Obama logo tablets containing BZP to the laboratory.



Photo 9

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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. Cawley AT, Collins M, Heagney AC, Kissane L, Robertson J, Salouros H. **Delta13C, delta15N and delta2H isotope ratio mass spectrometry of ephedrine and pseudoephedrine: application to methylamphetamine profiling.** Rapid Communications in Mass Spectrometry

2009;23(13):2003-2010. [Editor's Notes: A case study. Contact: National Measurement Institute, Australian Forensic Drug Laboratory, Sydney, Australia.]

2. Ikehara Y, Kurashima N, Makino Y, Nagano T, Sanuki K, Urano Y. **Use of stable isotope ratios for profiling of industrial ephedrine samples: application of hydrogen isotope ratios in combination with carbon and nitrogen.** Forensic Science International 2009;189(1-3):14-18. [Editor's Notes: The utility of hydrogen stable isotope ratio measurement by IR-MS for establishing the origin of ephedrine and pseudoephedrine (ephedrines), and precursors of methamphetamine, was evaluated. Contact: Central Customs Laboratory, Ministry of Finance, 6-3-5 Kashiwanoha, Kashiwa-shi, Chiba 277-0882, Japan.]
3. Kauppila TJ, Kostianen R, Kotiaho T, Laakkonen UM, Luosujarvi L. **Analysis of street market confiscated drugs by desorption atmospheric pressure photoionization and desorption electrospray ionization coupled with mass spectrometry.** Rapid Communications in Mass Spectrometry 2009;23(9):1401-1404. [Editor's Notes: Results of the title techniques are presented. Contact: Department of Chemistry, Laboratory of Analytical Chemistry, FI-00014 University of Helsinki, Finland.]
4. Man G, Stoeber B, Walus K. **An assessment of sensing technologies for the detection of clandestine methamphetamine drug laboratories.** Forensic Science International 2009;189(1-3):1-13. [Editor's Notes: A review. Contact: Department of Electrical & Computer Engineering, The University of British Columbia, 2332 Main Mall, Vancouver, BC V6T 1Z4, Canada.]

Additional References of Possible Interest:

1. Accetta G, Bertol E, Biggeri A, Di Padua M, Mari F, Politi L, Trignano C. **Cocaine and heroin in waste water plants: A 1-year study in the city of Florence, Italy.** Forensic Science International 2009;189(1-3):88-92. [Editor's Notes: The use of cocaine and heroin in the city of Florence, Italy, over a 1-yr period was investigated. By using GC-MS, cocaine, benzoylecgonine, and morphine were detected in waste water samples and the amounts estimated. The heroin-to-cocaine use ratio in terms of estimated doses per month showed wider distribution of cocaine than heroin in Florence. Contact: Division of Forensic Toxicology, Department of Anatomy, Histology, and Legal Medicine Viale Morgagni, University of Florence, 85, Florence 50134, Italy.]
2. Went MJ, West MJ. **The spectroscopic detection of drugs of abuse on textile fibres after recovery with adhesive lifters.** Forensic Science International 2009;189(1-3):100-103. [Editor's Notes: This study shows that when fibers are tape lifted, particles of substances present trapped within those fibers are also lifted. The Raman spectra obtained showed that it is possible to identify drugs of abuse from particles trapped within fibers without interference from the fiber itself. Contact: School of Physical Sciences, Ingram Building, University of Kent, Canterbury, Kent CT2 7NH.]

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THE DEA FY 2010 STATE AND LOCAL FORENSIC CHEMISTS SEMINAR SCHEDULE

The FY 2010 schedule for the State and Local Forensic Chemists Seminar is as follows:

November 2-6, 2009
March 1-5, 2010

May 31-June 4, 2010
September 13-17, 2010

The school is open only to forensic chemists working for law enforcement agencies. It 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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