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- JULY 2009 -

KHAT SUBMISSION IN ILLINOIS

The Illinois State Police Morton Crime Laboratory received four zip-top plastic bags of plant material, suspected marijuana and *Salvia*. Of the four bags of plant material, only one was suspected marijuana and the others had a different type of appearance, consistent with freeze-dried khat (*Catha edulis*). However, analysis of the largest exhibit (total net mass 90.9 grams, see Photo 1) by GC/MS identified cathinone and cathine (consistent with khat).

Photo 1
The freeze-dried khat.

[Editor's notes: Additional information provided by the laboratory: In Illinois, cathinone is a schedule I controlled substance and cathine is schedule IV.]

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4-METHYLMETHCATHINONE IN OREGON

The Oregon State Police Bend Forensic Laboratory received two submissions of white powder (see Photo 2) that were referred to by users as "sunshine." The first submission contained 17 plastic bags of white powder (total net mass 15.7 grams). A second submission contained two plastic bags of white powder (total net mass 5.5 grams). The powder was originally suspected to be 3,4-methylenedioxymethcathinone (MDMCat). However, analysis of both samples by color testing and GC/MS indicated not MDMCat, but 4-methylmethcathinone (4-MMC or mephedrone). The apparent 4-MMC was not quantitated, but was present in a moderate to high concentration based on the TIC.

Photo 2

[Editor's Notes: Additional information provided by the laboratory: The presence of 4-MMC in the white powder has not been confirmed (no authenticated standard to use for comparison). However, the mass spectral data matches data received from the Victoria Police Forensic Services Department in Australia.]

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PEYOTE BUTTONS IN OKLAHOMA

The Oklahoma City Police Department Forensic Drug Laboratory received a multiple drug case consisting of plant material, tablets, and white powder; suspected peyote, marijuana, Ecstasy, and cocaine. The peyote exhibit (see Photo 3) was the largest amount (total net mass 49.4 grams) of dried peyote ever submitted to the laboratory. Analysis of the "buttons" by microscope, color reagents, GC/FID, and GC/MS confirmed the presence of mescaline (not quantitated, but a much higher concentration than expected). The marijuana (total net mass 2,209 grams) was contained in six zip-top plastic bags and was identified via analysis by microscopy, Duquenois-Levine test, and thin layer chromatography (TLC). Also submitted were 17 pinkish-orange tablets with the Puma logo imprinted on one side and 65 yellow-green tablets with a smiley face imprinted on one side. Analysis confirmed the presence of 3,4-methylenedioxymethamphetamine (MDMA) in each tablet type. The white powder (contained in six plastic bags) was identified as cocaine salt (total net mass 74.6 grams). The MDMA tablets and the cocaine were identified using color reagents, GC/FID, and GC/MS. No quantitative analyses were performed.

Photo 3

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LAMINATED RECIPE SHEET CONTAINING TRACE COCAINE

The DEA Special Testing and Research Laboratory received one laminated sheet of cooking recipes from Quito, Ecuador (see Photos 4 and 5). The item was obtained from an anonymous source. It is believed the final destination of the menu was the United States. The sheet was laminated on one side and folded like a typical restaurant menu. Analysis of clippings from the sheet (total net mass 41.1 grams) by color test (cobalt thiocyanate), GC/FID, and GC/MS identified trace cocaine.

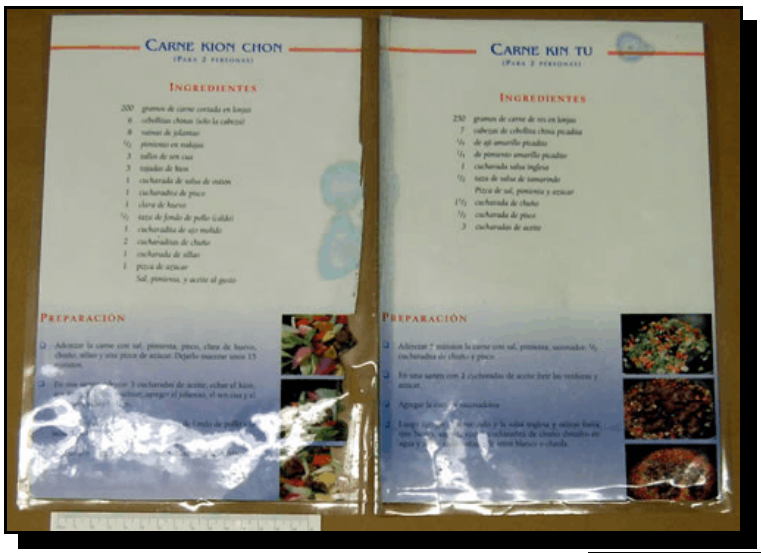

Photo 4-Front side

Photo 5-Reverse side

[Editor's Notes: Additional information provided by the laboratory: the DEA Southeast Laboratory received a similar exhibit in 2007, but the exhibit's interior contained a thin layer of visible cocaine hydrochloride powder covered by a film-like plastic wrap; see: Microgram Bulletin 2007:40(10):93.]

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VARIOUS TABLETS CONTAINING BZP AND TFMPP IN WASHINGTON, DC

The DEA Mid-Atlantic Laboratory received 10 small, round tablets with five different imprints, suspected Ecstasy (see Photo 6). Analysis by Marquis color test, GC, and GC/MS was performed on each type tablet. There were three tablet types with the same components: a red tablet with a seated woman design, a white tablet with a Playboy bunny design, and a light blue tablet with the LG Corporation logo (upside down in the photo). The three tablets each contained 3,4-methylenedioxymethamphetamine (MDMA), methamphetamine, and caffeine. A purple tablet with a rabbit design contained N-benzylpiperazine (BZP) and 1,3-trifluoromethylphenylpiperazine (TFMPP). Lastly, a lavender tablet with a penguin design contained MDMA, caffeine, and procaine.

Photo 6

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OXYCONTIN ® MIMIC TABLETS (ACTUALLY CONTAINING MELATONIN AND ACETAMINOPHEN) IN FLORIDA

The Florida Department of Law Enforcement Fort Myers Regional Operations Center received a submission of several mimic OxyContin® 80 milligram oxycodone tablets (not pictured). Analysis of the tablets by GC/MS identified melatonin and acetaminophen (not quantitated, but a 20:80 ratio based on the TIC). The mimic tablets had an "OC" on one side with an imprint width of 0.50 centimeters and an "80" on the other side with an imprint width of 0.50 centimeters. The mimic tablet dimensions were a diameter of 0.90 centimeters and thickness of 0.45 centimeters with an inconsistent weight of 0.24 to 0.26 grams. By comparison, the authentic OxyContin® tablets had an "OC" imprint width of 0.35 centimeters and an "80" on the other side with an imprint width of 0.45 centimeters. The dimensions of the authentic tablets were 0.85 centimeters in diameter and 0.50 centimeters thick with a consistent weight of 0.27 grams. The mimic tablets had a smoother surface and slightly darker shade of green than the authentic tablets.

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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. King LA. Forensic chemistry of substance misuse: a guide to drug control. 1st ed. Cambridge, UK: Royal Society of Chemistry, 2009;249.

Additional References of Possible Interest:

1. Berets SL, Kocak A, Lucania JP. **Some advances in Fourier transform infrared transflection analysis and potential applications in forensic chemistry.** Applied Spectroscopy 2009;63(5):507-511. [Editor's Notes: A discussion of the advantages and application of the subject technique. Contact: John Jay College of Criminal Justice, Department of Sciences, The City University of New York, New York, NY 10019.]

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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 October 2009 issue of *Microgram Bulletin*.

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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: