

Microgram

Bulletin

Published by:

**The Drug Enforcement Administration
Office of Forensic Sciences
Washington, DC 20537**

The U.S. Attorney General has determined that the publication of this periodical is necessary in the transaction of the public business required by the Department of Justice. Information, instructions, and disclaimers are published in the January issues.

- FEBRUARY 2008 -

- SAFETY ALERT / INTELLIGENCE ALERT -

LIVE AMMUNITION IN PACKAGES OF COMPRESSED MARIJUANA IN ANDRADE, CALIFORNIA

The DEA Southwest Laboratory (Vista, California) recently received a multi-part exhibit of plant material, consisting of one intact, tape-wrapped plastic package and 10 core samples, all suspected marijuana (total net mass approximately 300 grams). The package and core samples were selected from 21 such packages seized from within a truck tire by Immigration and Customs Enforcement (ICE) personnel in Andrade, California (about 150 miles east of San Diego). Upon opening the intact package, a live 7.62 millimeter rifle round was discovered within the plant material (see Photo 1). The package was subsequently X-rayed, and three other live rounds were



Photo 1 - Note that the package is about 10 inches in diameter.

discovered, including another 7.62 round and two 7.65 millimeter handgun rounds (see Photo 2). Analysis of the plant material by microscopy, Duquenois-Levine, and TLC confirmed marijuana (THC not quantitated). X-ray screening of the other 20 packages (by ICE personnel) revealed an additional 12 rounds in those exhibits (distribution and types not provided). This is the first instance of ammunition discovered within marijuana at the Southwest Laboratory.

[Editor's Note: This also appears to be the first-ever report to *Microgram* of any form of ammunition in a package of any type of controlled substance.]

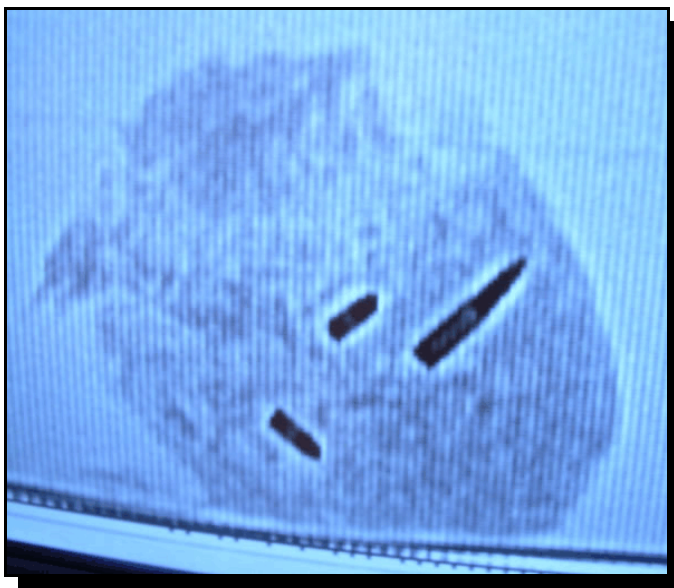


Photo 2

* * * * *

- INTELLIGENCE ALERT -

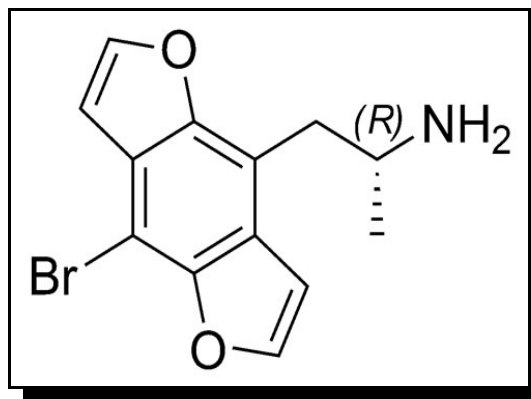
“BROMO-DRAGONFLY” IN QUEENSLAND, AUSTRALIA

The Queensland Health Forensic and Scientific Services Clandestine Laboratory Division (Brisbane, Australia) recently received a submission of five exhibits, one labelled as and all suspected to contain Bromo-DragonFLY

(1-(8-bromobenzo[1,2-*b*;4,5-*b'*]-difuran-4-yl)-2-aminopropane hydrochloride;

Bromo-Benzodifuranyl-Isopropylamine Hydrochloride), a hallucinogenic designer drug related to 4-Bromo-2,5-dimethoxyamphetamine (DOB) and 4-bromo-2,5-dimethoxyphenethylamine (2C-B) (see Figure, right). The exhibits consisted of:

A) A clip sealed plastic bag containing a quantity of a pink powder, hand-labelled as “FLY 4 Bromo Dragonfly” (see Photo 3 (all photos next page)); B) a plastic jar containing a pink paste (see Photo 4); and C) three different bottles each containing a pink liquid with a suspended pink sediment (see Photos 5, 6, and 7). The jar and all three bottles were commercially labelled as various forms of specialty paints. The exhibits were seized by the Australian Crime Commission (circumstances sensitive). Analysis of the materials (total net mass approximately 750 grams) by GC/MS, GC/IRD, and FTIR confirmed Bromo-DragonFLY (NMR and XRD analyses are still pending). This was the laboratory's first encounter with Bromo-DragonFLY, and appears to be the first such seizure within Australia. This was also the laboratory's first encounter with smuggling illicit substances as paints.



Bromo-DragonFLY

[Editor's Notes: This is the second report of Bromo-DragonFLY to *Microgram*; see: Anonymous. "Bromo DragonFLY" (Bromo-Benzodifuranyl-Isopropylamine) in Ashland, Oregon. *Microgram Bulletin* 2007;40(8):78. For analytical data, see: Reed EC, Kiddon GS. The characterization of three FLY compounds. *Microgram Journal* 2007;5(1-4):27-33.]

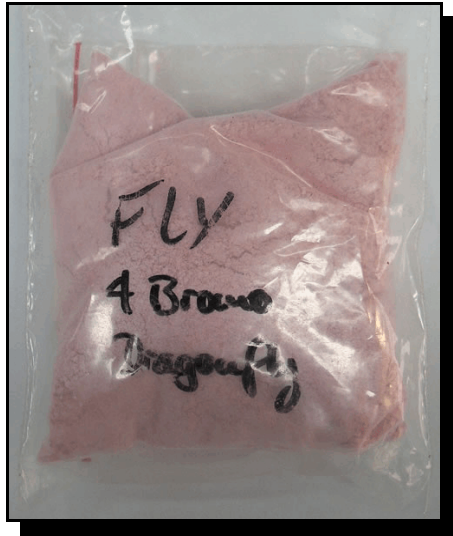


Photo 3



Photo 4



Photo 5



Photo 6



Photo 7

- INTELLIGENCE ALERT -

**ECSTASY COMBINATION TABLETS (CONTAINING MDMA,
METHAMPHETAMINE, BENZYLPIPERAZINE, AND
TRIFLUOROMETHYLPHENYLPIPERAZINE) IN MILWAUKEE, WISCONSIN**

The Wisconsin State Crime Laboratory - Milwaukee recently received 100 blue, round tablets with a raised diamond logo, suspected Ecstasy (see Photo 8). The exhibit was acquired by the Division of Criminal Investigation Narcotics Bureau in an undercover buy operation in Milwaukee. Analysis of the tablets (total net mass 28.9 grams) using color tests (Marquis (+), Mecke (+), PDMAB (strong yellow), and Scott's (-)), GC, and GC/MS confirmed MDMA, methamphetamine, N-benzylpiperazine (BZP), N-(3-trifluoromethylphenyl)-piperazine (TFMPP), caffeine, and procaine (ratio based on the TIC: 67 : 11 : 24 : 10 : 33 : 100). This was the first submission of this logo and this drug combination in Ecstasy tablets to the laboratory.



Photo 8

[Editor's Notes: The color, dimensions, and drug combination in these tablets appear to be similar to a tablet reported in the January 2008 issue of *Microgram Bulletin* (page 1); however, that tablet (seized in Concord, California) had an iron cross logo.]

* * * * *

- INTELLIGENCE ALERT -

TERRY-CLOTH BATHROBE LACED WITH HEROIN BASE IN NEW YORK CITY

The DEA Northeast Laboratory (New York, New York) recently received a tan colored, terry-cloth bathrobe, which was suspected of having been laced with heroin (see Photo 9). The exhibit was seized at a residence in New York City by Immigration and Customs Enforcement personnel. Analysis of representative sections and extracts of the bathrobe by color testing, microscopic crystal testing, FTIR/ATR, GC/MS, and GC/FID confirmed 7.5 percent heroin base and trace cocaine by weight in the cloth. Heroin-laced clothing is not unusual; however, heroin base is not commonly submitted (in any form) to the Northeast Laboratory.



Photo 9

* * * * *

- INTELLIGENCE ALERT -

HEROIN IN COMPUTER COOLING UNITS IN MIAMI, FLORIDA

The DEA Southeast Laboratory (Miami, Florida) recently received 41 commercially packaged computer cooling units, two different types, each consisting of a plastic fan and a separate metal cooling grid; the metal grids each had a hidden compartment, containing a light brown powder, suspected heroin (see Photo 10). The exhibits were seized in Miami, Florida by Immigration and Customs Enforcement personnel (no further details). Analysis of the powder from one of the exhibits (total net mass 321.4 grams in 12 units) by FTIR, GC/MS, and GC/FID confirmed 86.9 percent heroin hydrochloride. This is the first such submission to the Southeast Laboratory.



Photo 10

* * * * *

- INTELLIGENCE BRIEF -

**LARGE SEIZURE OF “ICE” METHAMPHETAMINE
NEAR CORPUS CHRISTI, TEXAS**

The DEA South Central Laboratory (Dallas, Texas) recently received 75 plastic-wrapped, sealed plastic containers, each containing large crystalline shards, suspected “Ice” methamphetamine (see Photos 11 and 12). The containers were all the same size (about 6 x 12 x 3 inches), but were a variety of colors, both bodies and lids. The exhibits were seized by an unspecified law enforcement agency from the passenger side fuel tank of an 18-wheel truck in Sarita, Texas (about 100 miles north of Brownsville, Texas), and were submitted by the DEA Corpus Christi Resident Office. Analysis of the crystals (total net mass 74.7 kilograms) by FTIR, GC/MS, GC/FID, and HPLC confirmed 98.1 percent *d*-methamphetamine hydrochloride (“Ice”). This is the fifth largest seizure of methamphetamine ever submitted to the South Central Laboratory.



Photo 11



Photo 12

- INTELLIGENCE ALERT -

**MECHANICAL PREPARATION OF CONCENTRATED CANNABIS
IN SALT LAKE CITY, UTAH**

The DEA Western Laboratory (San Francisco, California) recently received a 2-pound ziplock plastic bag commercially labeled as brown sugar, and containing a light brown, crystalline powder, presumed sucrose (see Photo 13). Hidden within the powder were two smaller ziplock bags, each containing a darker brown material, suspected marijuana (see Photo 14). The exhibit was seized by investigators at an express mailing facility in Salt Lake City, and was submitted by the DEA Salt Lake City Resident Office. The light brown, crystalline powder in the large bag was identified as sucrose. Analysis of the darker brown material in the smaller zip-lock bags (total net mass 55.2 grams) by GC/MS confirmed delta-9-tetrahydro-cannabinol (THC, not quantitated); however, no cannabinol, cannabidiol, or cannabichromene was identified. Stereomicroscopic examination showed fragmented trichomes, and it is suspected that the material had been sieved to remove resin and trichomes (see Photo 15). The Western Laboratory has previously received similar exhibits of this form of marijuana.



Photo 13

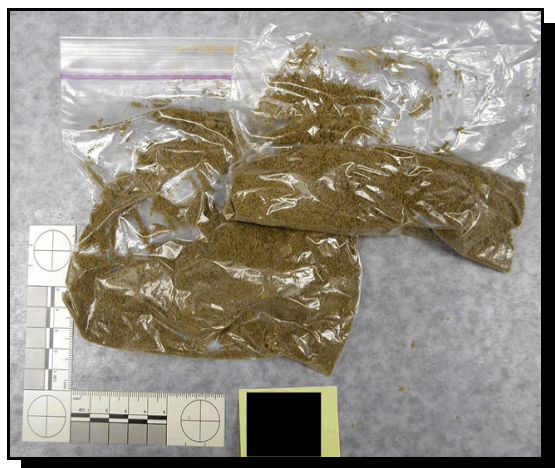


Photo 14

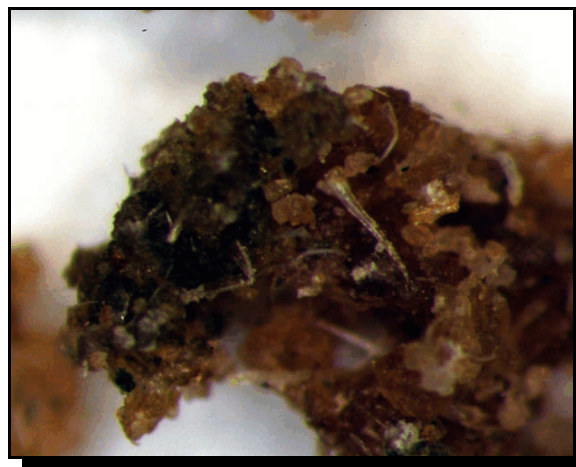


Photo 15

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. Dal Cason TA. **Synthesis and identification of N,N-dimethylcathinone hydrochloride.** *Microgram Journal* 2007;5(1-4):3-12. [Editor's Notes: The syntheses and analyses of N,N-dimethylcathinone and N-ethylcathinone are presented and discussed. Contact: U.S. Department of Justice, Drug Enforcement Administration, North Central Laboratory, 536 S. Clark Street, Chicago, IL 60605.]
2. Fasanello JA, Placke AD. **The isolation, identification, and quantitation of dimethyltryptamine (DMT) in *Mimosa hostilis*.** *Microgram Journal* 2007;5(1-4):41-50. [Editor's Notes: Dimethyltryptamine (DMT) was extracted from the root bark of *Mimosa hostilis* via two methods, using methanol and acetic acid, respectively. FTIR/ATR, GC/MS, GC/IRD, ¹H-NMR, and HPLC data are presented. Quantitative analysis by ¹H-NMR and HPLC indicated 0.9 percent and 0.8 percent DMT, respectively, in the analyzed samples. Contact: U.S. Department of Justice, Drug Enforcement Administration, Northeast Laboratory, 99 Tenth Avenue, Suite 721, New York, NY 10011.]
3. Fucci N. **Analysis of fatty acids in marijuana (*Cannabis sativa* leaf).** *Microgram Journal* 2007;5(1-4):20-6. [Editor's Notes: Various fatty acids (palmitic, myristic, oleic, and stearic acids) were identified in 20 marijuana samples by GC/MS. This is believed to be the first study demonstrating the presence of fatty acids in marijuana. The potential value of the results in source determination and comparative analyses is discussed. Contact: Catholic University of the Sacred Heart, Institute of Legal Medicine, Largo Francesco Vito, 1- 00168 Rome, Italy.]
4. de Korompay A, Hill JC, Carter JF, Nic Daeid N, Sleeman R. **Supported liquid-liquid extraction of the active ingredient (3,4-methylenedioxymethylamphetamine) from ecstasy tablets for isotopic analysis.** *Journal of Chromatography A* 2008;1178(1):1. [Editor's Notes: Presents a simple method for the isolation of MDMA and other active ingredients from illicit ecstasy tablets, for subsequent IRMS analysis. No significant isotopic fractionation was observed as a result of the extraction process. Contact: Centre for Forensic Science, Department of Pure and Applied Chemistry, University of Strathclyde, Royal College, 204 George Street, Glasgow G1 1XW, UK.]
5. Panicker S, Wojno HL, Ziska LH. **Quantitation of the major alkaloids in opium from *Papaver setigerum* DC.** *Microgram Journal* 2007;5(1-4):13-9. [Editor's Notes: Quantitation of morphine and other major alkaloids in opium gum from specially cultivated *Papaver setigerum* DC ("Wild Poppy") by CE is presented. Morphine was confirmed at an average of 2 percent by weight. Codeine, noscapine, and papaverine were also detected; however, thebaine was below the limits of quantitation. Contact: U.S. Department of Justice, Drug Enforcement Administration, Special Testing and Research Laboratory, 22624 Dulles Summit Court, Dulles, VA 20166.]
6. Reed EC, Kiddon GS. **The characterization of three FLY compounds.** *Microgram Journal* 2007;5(1-4):26-33. [Editor's Notes: The analysis and characterization of 1-(8-bromo-2,3,6,7-tetrahydrobenzo[1,2-*b*;4,5-*b'*]-difuran-4-yl)-2-aminoethane hydrochloride (2C-B-FLY), 1-(8-bromo-2,3,6,7-tetrahydrobenzo[1,2-*b*;4,5-*b'*]-difuran-4-yl)-2-aminopropane

hydrochloride (3C-B-FLY), and 1-(8-bromobenzo[1,2-*b*;4,5-*b'*]difuran-4-yl)-2-aminopropane hydrochloride (Bromo-DragonFLY) are presented. GC/MS, IRD, and FTIR spectra are presented. Contact: Office of the Ohio Attorney General, 30 E. Broad Street, 14th Floor, Columbus, OH 43215.]

7. Ropero-Miller JD, Stout PR, Bynum ND, Casale JF. **Comparison of the novel direct analysis in real time time-of-flight mass spectrometry (AccuTOF-DART™) and signature analysis for the identification of constituents of refined illicit cocaine.** Microgram Journal 2007;5(1-4):34-40. [Editor's Notes: 25 Illicit cocaine samples were analyzed by AccuTOF-DART™. Potential applications, including use for signature analyses of controlled substances, are discussed. Contact: RTI International Center for Forensic Sciences, 3040 Cornwallis Road, Research Triangle Park, NC 27709.]
8. Waddell-Smith RJH. **A review of recent advances in impurity profiling of illicit MDMA samples.** Journal of Forensic Sciences 2007;52(6):1297. [Editor's Notes: A review of the title topic, from 2002 up to the end of 2006. Contact: School of Criminal Justice and Department of Chemistry, Michigan State University, 560 Baker Hall, East Lansing, MI 48824.]

* * * * *

EMPLOYMENT OPPORTUNITIES

Position: **Forensic Chemist.** (First Posting)
Location: South Dakota Public Health Laboratory, Forensics Laboratory, South Dakota Department of Health, Pierre, SD.
Salary: \$38,397 - \$47,997.
Application Deadline: March 25, 2008.

Duties and Responsibilities: The successful candidate will perform urine and blood testing for drugs of abuse submitted by all levels of law enforcement in South Dakota. Responsibilities include utilizing GC/MS; interpret chromatographic data; perform wet chemical analyses; review files; maintain laboratory equipment, instruments and records, and testify to findings in federal, state and municipal court. The candidate will be the Department of Health's expert on urine and blood testing for drugs of abuse. The candidate will also act as backup to the blood alcohol and controlled substances laboratory. The applicant must have strong written and verbal communication skills, along with a strong knowledge of software, databases and word processing. A very strong knowledge of the principles of quality control/assurance is required.

Qualifications: A minimum of a Bachelors degree in forensic science, chemistry, or a physical science is required. An advanced degree is desirable. A minimum of two years experience examining blood, urine, or controlled substances is desired.

Contact: Further job information and application forms can be found at: <http://www.state.sd.us/bop/> For additional information, contact: S. Ellwanger or M. Smith at 605-773-3368: [stacy.ellwanger -at- state.sd.us](mailto:stacy.ellwanger-at-state.sd.us)

* * * * *