

# MICROGRAM BULLETIN

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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 which is provided by the abstracting service. Patents and Proceedings are reported only by their *Chemical Abstracts* citation number. For full text copies of any of the articles listed, you may email the DEA Library at [dea.library@usdoj.gov](mailto:dea.library@usdoj.gov).

1. Dal Cason TA, Corbett CA, Poole PK, de Haseth JA, Gouldthorpe DK. **An unusual clandestine laboratory synthesis of 3,4-methylenedioxyamphetamine (MDA)**. *Forensic Science International* 2012, 223(1-3):279-291. [Editor's Notes: unknown compd. from a putative clandestine lab. was analyzed by GC/MS, GC/IRD, FTIR, and NMR and found to be *a*-methyl-3,4-methylenedioxyphenylpropionamide (MMDPPA), an unusual precursor for the synthesis of 3,4-methylenedioxyamphetamine (MDA). A portion of this precursor was subjected to the Hofmann Degradation reaction using a sodium hypochlorite solution to produce MDA. When excess sodium hypochlorite was used in the reaction, a second, unexpected, compound was formed. Use of the listed instrumentation identified the new material as 2-chloro-4,5-methylenedioxyamphetamine, a compound not previously identified in the forensic literature. Contact: DEA North Central Laboratory, IL 60605, USA.]
2. Dunham SJB, Hooker PD, Hyde RM. **Identification, extraction and quantification of the synthetic cannabinoid JWH-018 from commercially available herbal marijuana alternatives**. *Forensic Science International* 2012;223(1-3):241-244. [Editor's Notes: Presents title study. Contact: Westminster College Department of Chemistry, Salt Lake City, UT 84105, USA.]
3. Locos O, Reynolds D. **The characterization of 3,4-dimethylmethcathinone (3,4-DMMC)**. *Journal of Forensic Sciences* 2012;57(5):1303-1306. [Editor's Notes: Presents title study. Contact: Illicit Drugs Section, Forensic Science Laboratory, ChemCentre, Bentley, WA 6893, Australia.]
4. Logan BK, Reinhold LE, Xu A, Diamond FX. **Identification of synthetic cannabinoids in herbal incense blends in the United States**. *Journal of Forensic Sciences* 2012;57(5):1168-1180. [Editor's Notes: Presents title study. Contact: NMS Labs, Willow Grove, PA 19090, USA.]
5. Musah Ra, Domin MA, Cody RB, Lesiak AD, John DA, Shepard JRE. **Direct analysis in real time mass spectrometry with collision-induced dissociation for structural analysis of synthetic cannabinoids**. *Rapid Communications in Mass Spectrometry* 2012;26(19):2335-2342. [Editor's Notes: Presents title study. Contact: Department of Chemistry, University at Albany, State University of New York (SUNY), Albany, NY 12222, USA.]
6. Romao W, Sabino BD, Bueno MIMS, Vaz BG, Amadeu C, Maldaner AO, de Castro EVR, Lardero RA, Nascentes CC, Eberlin, MN, Augusti R. **LSD and 9,10-dihydro-LSD analyses in street drug blotter samples via easy ambient sonic spray ionization mass spectrometry (EASI-MS)**. *Journal of Forensic Sciences* 2012;57(5):1307-1312. [Editor's Notes: Presents title study. Contact: ThoMson Mass Spectrometry Laboratory, Institute of Chemistry, State University of Campinas, Campinas, SP 13084-971, Brazil.]
7. Schaeffer M, Groeger T, Puetz M, Dieckmann S, Zimmermann R. **Comparative analysis of the chemical profiles of 3,4-methylenedioxymethamphetamine based on comprehensive two-dimensional gas chromatography–time-of-flight mass spectrometry (GC X GC-TOFMS)**. *Journal of Forensic Sciences* 2012;57(5):1181-1189. [Editor's Notes: Presents title study. Contact: Joint Spectrometry Center, Cooperation Group Analysis of Complex Molecular Systems, Helmholtz Zentrum Muenchen, Neuherberg 85764, Germany.]
8. Vircks KE, Mulligan CC. **Rapid screening of synthetic cathinones as trace residues and in authentic seizures using a portable mass spectrometer equipped with desorption electrospray ionization**. *Rapid Communications in Mass Spectrometry* 2012;26(23):2665-2672. [Editor's Notes: Presents title study. Contact: Department of Chemistry, Illinois State University, Normal, IL 61790-4160, USA.]

### Additional References of Possible Interest:

1. Merola G, Aturki Z, D'Orazio G, Gottardo R, Macchia T, Tagliaro F, Fanali S. **Analysis of synthetic cannabinoids in herbal blends by means of non-liquid chromatography**. *Journal of Pharmaceutical and Biomedical Analysis* 2012;71:45-53. [Editor's Notes: Presents title study. Contact: Department of Therapeutic Research and Medicines Evaluation, Istituto Superiore di Sanita, 00161 Rome, Italy.]
2. Meyer MR, Peters FT. **Analytical toxicology of emerging drugs of abuse – An Update**. *Therapeutic Drug Monitoring* 2012;34(6):615-621. [Editor's Notes: Presents title study. Contact: Department of Experimental and Clinical Toxicology, Institute of Experimental and Clinical Toxicology, Saarland University, Homburg, Germany Institute of Forensic Medicine, University Hospital Jena, Jena, Germany.]

3. Oestman P, Ketola RA, Ojanperae I. **Application of electrospray ionization product ion spectra for identification with atmospheric pressure matrix-assisted laser desorption/ionization mass spectrometry - A case study with seized drugs.** *Drug Testing and Analysis* 2013;5(3): 68-73. [Editor's Notes: Presents title study. Contact: University of Helsinki, Hjelt Institute, Department of Forensic Medicine, Finland.]
4. Schlatter J, Chiadmi F, Chariot P. **The spice in France: Mixed herbs containing synthetic cannabinoids.** *Annales de Biologie Clinique* 2012;70(4):413-422. (French) [Editor's Notes: Presents title study. Contact: Laboratoire de toxicologie medicolegale, Hopital Jean-Verdier (AP-HP), Brody, France.]
5. Schwaninger AE, Meyer MR, Maurer HH. **Chiral drug analysis using mass spectrometric detection relevant to research and practice in clinical and forensic toxicology.** *Journal of Chromatography, A* 2012;1269:122-135. [Editor's Notes: Presents title study. Contact: Department of Forensic Pharmacology and Toxicology, Institute of Forensic Medicine, University of Zurich, Zurich, Switzerland.]
6. Wallace N, Hueske E, Verbeck GF. **Ultra-trace analysis of illicit drugs from transfer of an electrostatic lift.** *Science & Justice* 2011;51(4):196-203. [Editor's Notes: Presents title study. Contact: Department of Chemistry, University of North Texas, Denton TX 76203, USA.]

### THE DEA STATE AND LOCAL FORENSIC CHEMISTS SEMINAR SCHEDULE

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

**September 16 - 20, 2013**  
**November 4 - 8, 2013**

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 this issue of *Microgram Bulletin*. Completed applications should be mailed to the Special Testing and Research Laboratory at 22624 Dulles Summit Court, Dulles, VA 20166. For additional information, send an email to: [DEA-Forensic.Chemist.Seminar@usdoj.gov](mailto:DEA-Forensic.Chemist.Seminar@usdoj.gov).

## DEA State and Local Forensic Chemist Seminar Application

Name: (PRINT NAME EXACTLY AS IT IS TO APPEAR ON CERTIFICATE)	Title:
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Employer:

Your Office Mailing Address (include city, state, and zip code):	Length of Service:
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Business Telephone: (     )     -	Business Fax: (     )     -	Date of Application:
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Email Address:

### Education

College or University	Degree	Major

### Please Check Which Techniques or Equipment Are Used in Your Laboratory

Color Tests	UV
Column Chromatography	IR
Microcrystal Tests	CE
Thin Layer Chromatography	GC/MS
GC	Other (please specify)
HPLC	Other (please specify)

Indicate Analytical Problem(s) Nominee Would Like to Have Covered:

Choice of Seminar Dates:  
1st Choice: \_\_\_\_\_ 2nd Choice: \_\_\_\_\_

Laboratory Chief/Director:

Printed Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Title: \_\_\_\_\_ Date: \_\_\_\_\_

Phone: \_\_\_\_\_