U.S. Department of Justice
Drug Enforcement Administration
Office of Forensic Sciences

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. Mailing address information duplicates that which is provided by the abstracting services.

Bayurka SV. **Development of identification and quantitative determination methods of mianserin suitable for the chemical and toxicological analysis**. Visnik Farmatsii 2012;2:52-56. [Editor's Notes: On-line searching indicates that mianserin is a psychoactive tetracyclic antidepressant. Analysis conducted by TLC, color testing, and UV/Vis. This article is written in Ukrainian. Contact: Natsional'nii Farmatsevtichnii Universitet, Ukraine.]

Esposito FM, Crumpton S, Mitchell J, Flegel RR. **Evaluation of the 20% d-methamphetamine requirement for determining illicit use of methamphetamine in urine.** Journal of Analytical Toxicology 2012;36(6):399-404. [Editor's Notes: Analytical methodology not specified in the abstract. This study includes analyses of OTC inhalers, and considers the optical impurity of the derivatizing reagent N-trifluoroacetyl-L-prolyl chloride. Contact: Center for Forensic Sciences, RTI International, Durham, NC 27709.]

Favretto D, Castagna F, Maietti S, Boscolo-Berto R, Ferrara SD. **When color fails: Illicit blue tablets containing anabolic androgen steroids. Journal of Pharmaceutical and Biomedical Analysis 2013;83:260-264**. [Editor's Notes: By Marquis and GC/MS; tablets contained methandienone and methyltestosterone. Contact: Department of Molecular Medicine, School of Medicine, University of Padova, I-35121 Padua, Italy.]

Holness H, Almirall J. **Speciation effects of solvent chemistry on the analysis of drugs and explosives by electrospray ion mobility mass spectrometry.** International Journal for Ion Mobility Spectrometry 2013;16(3):237-246. [Editor's Notes: Studies were conducted in both positive and negative mode ionization, with different solvents and using different levels of acid modifiers. Optimization allowed simultaneous, very rapid analyses of complicated mixtures. Contact: Department of Chemistry and Biochemistry and International Forensic Research Institute, Florida International University, Miami, FL 33199.]

Ibanez M, Bijlsma L, Nuijs ALN, Sancho JV, Haro G, Covaci A, Hernandez F. **Quadrupole-time-of-flight mass spectrometry screening for synthetic cannabinoids in herbal blends**. Journal of Mass Spectrometry 2013;48(6):685-694. [Editor's Notes: Analysis by UHPLC-QTOF-MS indicated JWH-081, JWH-250, JWH-203, and JWH-019 in various smoking blends. Contact: Research Institute for Pesticides and Water, University Jaume I, Castellon, Spain.]

Kwok K, Taylor LS. **Raman spectroscopy for the analysis of counterfeit tablets.** Infrared and Raman Spectroscopy in Forensic Science 2012:561-572. [Editor's Notes: A review on the techniques to detect counterfeit products, and the use of Raman spectroscopy to characterize genuine and counterfeit tablets. Contact: Department of Industrial and Physical Pharmacy, Purdue University, West Lafayette, IN (zip code not provided).]

Laursen KH, Mihailova A, Kelly SD, Epov VN, Berail S, Schjoerring JK, Donard OFX, Larsen EH, Pedentchouk N, Marca-Bell AD, Halekoh U, Olesen JE, Husted S. **Is it really organic? - Multi-isotopic analysis as a tool to discriminate between organic and conventional plants**. Food Chemistry 2013;141(3):2812-2820. [Editor's Notes: By analysis of stable isotopes of hydrogen, carbon, nitrogen, oxygen, magnesium, and sulfur, as well as nitrogen and oxygen isotope analyses of nitrates, for discrimination of organically and conventionally grown plants. Contact: Plant and Soil Science Section, Department of Plant and Environmental Sciences, Faculty of Science, University of Copenhagen, Thorvaldsensvej 40, DK-1871 Frederiksberg C, Denmark.]

Monakhova YB, Kuballa T, Loebell-Behrends S, Maixner S, Kohl-Himmelseher M, Ruge W, Lachenmeier DW. **Standardless 1H NMR determination of pharmacologically active substances in dietary supplements and medicines that have been illegally traded over the Internet**. Drug Testing and Analysis 2013;5(6):400-411. [Editor's Notes: By 400 MHz 1H-NMR, with comparison to literature spectra or against predicted (computational) NMR spectra. Contact: Chemisches und Veterinaeruntersuchungsamt (CVUA) Karlsruhe, Karlsruhe, Germany.]

Moosmann B, Hutter M, Huppertz LM, Ferlaino S, Redlingshoefer L, Auwaerter V. **Characterization of the designer benzodiazepine pyrazolam and its detectability in human serum and urine.** Forensic Toxicology 2013;31(2):263-271. [Editor's Notes: This article describes the characterization of pyrazolam (8-bromo-1-methyl-6-pyridin-2-yl-4H-[1,2,4]triazolo[4,3-a][1,4]benzodiazepine) by GC/MS, LC-MS/MS, LC-Q-TOF-MS, and NMR. Contact: Institute of Forensic Medicine, Forensic Toxicology Department, University Medical Center Freiburg, Freiburg 79104, Germany.]

Qian Z-h, Xu P, Liu K-l. **Introduction of 2C-series phenethylamines.** Zhongguo Yaowu Lanyong Fangzhi Zazhi 2013;19(2):102-104. [Editor's Notes: A review. This article is written in Chinese. Contact: Institute of Forensic Science, Public Security Ministry, Beijing 100038, Peoples Republic of China.]

Rodrigues NM, Guedes M, Augusti R, Marinho PA. **Cocaine contamination in Belo Horizonte-MG paper currency**. Revista Virtual de Quimica 2013;5(2):125-136. [Editor's Notes: Analysis by HPLC with UV detection. 43 of 50 banknotes were positive for cocaine. This article is written in Portuguese. Contact: Laboratorio de Quimica Legal, Instituto de Criminalistica de Minas Gerais, Belo Horizonte-MG 400, Brazil.]

Schaeffer M, Groeger T, Puetz M, Zimmermann R. **Assessment of the presence of damiana in herbal blends of forensic interest based on comprehensive two-dimensional gas chromatography**. Forensic Toxicology 2013;31(2):251-262. [Editor's Notes: Use of 2D-GC allowed differentiation between damiana and related Tunera species as well as between different batches of damiana. Contact: Joint Mass Spectrometry Centre, Comprehensive Molecular Analytics, Helmholtz Zentrum Muenchen, Neuherberg 85764, Germany.]

Shabalina AE, Kirichek AV, Kaletina NI, Vandishev VV. **The investigation of components in smoking blends containing synthetic cannabinoids RCS-4, JWH-250, CP 47 and 497-C8**. Voprosy Biologicheskoi, Meditsinskoi i Farmatsevticheskoi Khimii 2012;9:67-72. [Editor's Notes: Analyses of "Spice"-like smoking blends by TLC, GC/MS, PLM, and "phytochemical reactions" (to determine the plant components). This article is written in Russian. Contact: 111 Glavnyi Gosudarstvennyi Tsentr Sudebno-Meditsinskikh i Kriminalisticheskikh Ekspertiz, Ministerstva Oborony RF, Moscow, Russia.]

Zamengo L, Frison G, Bettin C, Sciarrone R. Variability of cannabis potency in the Venice area (Italy): **A survey over the period 2010-2012. Drug Testing and Analysis 2013, Ahead of Print**. [Editor's Notes: Analytical methodology not specified in the abstract; about 4000 samples were analyzed. Contact: Laboratory of Environmental Hygiene and Forensic Toxicology, Regione Veneto, Department of Prevention Veneziana, Venice ULSS12, Italy.]

Zou R, Lou X, Ou H, Zhang Y, Wang W, Yuan M, Guan M, Luo Z, Liu Y. **Highly specific triple-fragment aptamer for optical detection of cocaine**. RSC Advances 2012;2(11):4636-4638. [Editor's Notes: The method allows for sensitive and highly selective detection. Contact: Department of Chemistry, Capital Normal University, Beijing, Peop. Rep. China 100048.]

Zuba D, Byrska B. **Prevalence and co-existence of active components of "legal highs" - Analysis of legal highs' composition**. Drug Testing and Analysis 2013;5(6):420-429. [Editor's Notes: Title may not be correctly translated. Presents the analyses of 449 preparations collected in Poland between mid-2008 and mid-2011, by GC/MS, LC-QTOF-MS, HPLC, and NMR. The most common compounds identified were MPDV, caffeine, butylone, TFMPP, lidocaine, 4-MEC, mephedrone, pFPP, BZP, and MDPBP. Contact: Institute of Forensic Research, Department of Forensic Toxicology, Krakow, Poland.]

Additional References of Possible Interest

Barsegyan SS, Purvina EA, Salomatin EM, Sviridova TA, Fedorova TN. **Determination of morphine and codeine in forensic chemical studies with the use of a single quadrupole mass-selective detector coupled to the HPLC system**. Sudebno-Meditsinskaya Ekspertiza 2012;55(6):33-37. [Editor's Notes: For detection and quantitation of morphine and codeine in in "various biological objects." This article is written in Russian. Contact: Bureau of Forensic Medical Expertise, Moscow Health Department, Federal State Budgetary Institution "Russian Centre of Forensic Medical Expertise", Russian Ministry of Health, Moscow, Russia.]

Jayaprakash PT. **Practical relevance of pattern uniqueness in forensic science**. Forensic Science International 2013, Ahead of Print. [Editor's Notes: A discussion of individualization, pattern matching, probability, and uniqueness as mechanisms for error analysis. Contact: Forensic Science Program, Malaysia Forensic Science Program, Universiti Sains Malaysia Kubang Kerian Kelantan 16150, Malaysia.]