

Emerging Trends in Synthetic Drugs

Anthony J. Tambasco

Mansfield Division of Police
Forensic Science Laboratory

Midwestern Association of Forensic Scientists (MAFS)

- 900 Members throughout the U.S.
- Midwest Region includes Ohio, Indiana, Illinois, Iowa, North Dakota, South Dakota, Minnesota, Michigan, Wisconsin.
- Chemistry Section Coordinator – Jillian Baker, DuPage County Laboratory, Illinois
- 2013 Annual Meeting – Dayton, Ohio (September 30- October 4)

February 2010 – AAFS

- “Get Ready for the Cathinones and Synthetic Cannabinoids”
- Laboratory Director, U.S. Customs – Chicago

Michigan

- Substances became controlled in October 2010, August 2011 and July 2012.
- Core Cannabinoid Chemical Group included in the 2012 legislation.
- Any other synthetic compound that is a cannabinoid receptor agonist...not listed in Schedules II – V and is not approved by the federal food and drug administration as a drug.

Michigan

- Non-controlled substances are being reported as such with a follow up call to the agency advising what the substance may be.
- Current emergency ruling covering the substituted phenethylamines are in place until July 2013.

Illinois

- A limited number of synthetic compounds are listed by name with five classes of synthetic cannabinoids.
- State's Attorney's Office is not pursuing analog charges.
- Laboratory will use literature references from two reliable sources in the absence of an available standard.

Illinois

- Rush cases on approval of State's Attorney's Office.
- State law prohibits the use of sampling plans, so each packet is analyzed individually.
- 200 gram maximum.

Illinois

- Traditional GC/MS methods – run times up to 45 minutes.
- Recent drop-off in “Bath Salt” cases.
- Suspected LSD cases negative for LSD have been found to contain NBOMe compounds.

Indiana

- Utilizes CLIC and Cayman for searching by base peak or molecular weight.
- Standards are ordered after preliminary ID.
- Established a “Current Trend” list and forwards the list to the State Board of Pharmacy.

Indiana

- Board of Pharmacy will place the substance under emergency control in approximately 30 days.
- Substance is then considered for permanent control.
- HB 1196 signed by the Governor in 2012 lists Mitragynine (Kratom) as a synthetic drug.

Kentucky

- Structure related legislation.
- Legislation groups “Synthetic Cannabinoids with Piperazines”.
- Synthetic Cannabinoids, Piperazines and Synthetic Cathinones use the language “not approved by the United States Food and Drug Administration”.

Kentucky

- Pending legislation HB8 – July 2013
- Adding Tetramethylcyclopropanoylindoles, Adamatoylindoles and NBOMe compounds.
- Analysis is two tests and positive ID with at least two reference sources.
- Reports document chemical name (street name) and schedule of control.

Ohio

- House Bill 64 (Spice/K2/Bath Salts – Analogs) - October 2011
- Analog Committee
- House Bill 334 December 2012 – Established Cannabinoid Categories (7) and Substituted Cathinone definition.

Ohio – Court Issues

- State vs. Silmi – December 2012 – Cuyahoga County
- “There is no definition of substantially similar”
- Retired DEA Laboratory Director
- Motion granted to exclude laboratory report.

Ohio – Court Issues

- State vs. Salash – March 2013– Dayton, Ohio
- Defense expert does not request a sample for analysis, only the data files via court order.
- Defense expert uses Automated Mass Spectral Deconvolution & Identification System (NIST)

Ohio – Court Issues

- “...matches declared by the analyst are like beauty, in the eye of the beholder”
- “I reserve the right to amend or change these opinions”
- Motion filed to exclude expert testimony
- Laboratory analysts allowed to testify to structural similarity.
- Convicted to be sentenced in May.

Case Sampling Issues

- New ASCLD/LAB accreditation requirement - How many do we do?
- “We are wrapping up a case that required 1104 GC/MS runs and have two others that are even bigger”.
- What about a validated Hypergeometric sampling procedure?

Case Sampling Issues

- “We do straight Hypergeometric - 90% at 95% confidence.”
- “I refuse to do hypergeometric sampling. The heck if I or anyone else in the lab is going to explain statistics in court”.

Case Sampling

- If you have 49 vials of MDPV a Schedule I, how many will you do?
- GC/MS on all 49 vials.
- 90% at 95% confidence = 19 vials
- Bulk = 10 (20%) = 2 vials

Management Issues

- Time is \$\$
- Consumable \$\$
- Instrument backup
- Increases Backlog
- Turn-around time

Local Perspective

- A shirtless man was swimming in a snow bank on Park Avenue West....trying to get away from snipers.
- “This is not your mother’s bath salt”





News Journal

One of Life's Necessities

MONDAY, APRIL 25, 2011

A GANNETT COMPANY

MANSFIELD, OHIO | 75 cents

Bath salts a growing problem

Hallucinations, paranoia among users pose challenges for police

By Mark Caudill
News Journal

MANSFIELD — A shot had been fired with an infant girl and an 18-month-old boy in the house.

City police Sgt. Bret Snavelly wasn't sure how to instruct his third-shift officers to handle the call. They had to get to the kids but didn't know what was happening.

In the recent incident in the 300 block of Cedar Street, three adults were arrested on charges

being marketed as a bath salt. Since then, police have handled about two dozen calls.

"We have seen an increase in the abuse of bath salts. It's a great concern," METRICH Commander Lt. Ken Coontz said. "The two main side effects that occur are hallucinations and paranoia. Those make for very difficult issues for the responding patrol officers."

Snavelly found out in the wee hours of April 16.

"They were thinking that peo-

system to convince the people to come outside.

"Had they not come out the front door, step two could have been more complicated," he said.

An anonymous caller told police the suspects were paranoid and had fired a gunshot inside the residence, but they claimed a rifle had fallen off a kitchen table and accidentally discharged.

Coontz was skeptical.

"You're in that state of paranoia, it's no wonder you mishandle



January 2011

- METRICH Enforcement Unit begins undercover purchases.
- What are these things?
- Are they controlled?
- They cost how much?

What Do We Do?

- Call DEA?
- Charge harmful intoxicants?
- “How can you charge me with something I can buy at J and J Foodmart?”
- Get these products off the shelves.



DASCENTS, LLC
P.O. Box 90849
Houston, TX 77290
281-537-7655

March 17, 2011

This letter should serve as an independent report for testing / analysis performed on the product packaged and labeled for sale as "VOODOO 31".

Product Name / Label Description	TDAL SID Reference	Accession No.	Specimen	Batch / Date Identifier	Test Name	Report Date
VOODOO 31	55305	201100337-18	Product mixture	None Provided / 03/14/2011	Synthetic Cannabinoid / Related Compound Testing	03/17/2011

Services were referenced through the Tulane Drug Analysis Laboratory to measure for the presence of synthetic cannabinoids and related compounds. The dried herb sample was received in good condition. Preparation of the sample for analysis consisted of weighing a portion of the representative sample (100 mg) and suspending it in 2 ml of Methanol. The resulting deeply colored solution was diluted 1:10 and assayed for confirmation of suspected synthetic cannabinoids and related compounds by Liquid Chromatography Electrospray Ionization - Mass Spectrometry (ESI-LC/MS/MS).

The product bearing the label VODOO 31 was found to be NEGATIVE for the following synthetic cannabinoids and related compounds:

JWH-015, JWH-018, JWH-019, JWH-073, JWH-081, JWH-133, JWH-200, JWH-203, JWH-249, JWH-250, HU-210, HU-211, HU-308, HU-331, AM-694, CP 47,497 and the C6-C8 homologues, CP 55,940, WIN-48098, WIN-55,212-2, Salvinorin A, Δ^9 -THC, Cannabidiol, Benzylpiperazine (BZP), and Trifluoromethylphenylpiperazine (TFMPP)

Final results are detailed on the attached confidential analysis report. If any further information is needed, you may contact me directly at my office at 504-333-6163. I thank you for allowing us to service your needs. We look forward to working with you in the future.

Sincerely yours,

Jeffrey Mendler
Tulane Drug Analysis Laboratory

NOTARY PUBLIC

DATE

June 2011

- Mansfield City Council Prohibits the Use, Possession, and Sale of Synthetic Cannabinoids and Other Synthetic Drugs.
- Other local communities follow utilizing the same legislative format.

June 2011

- METRICH Enforcement Unit advises all businesses involved in the sale of these substances that they have 10 days to remove these products.
- 11 Days later METRICH cleans out 4 businesses that have not complied with the local ordinance.

July 2011

- Law Director review of new cases
- Be careful what you wish for
- Standards are located and purchased
- Laboratory Reports are prepared

MANSFIELD POLICE FORENSIC SCIENCE LABORATORY
DRUG ANALYSIS REPORT

DATE SUBMITTED: October 5, 2011

REPORT NO: 29740-11

SUBMITTED BY: Ptl. Butler

LAB NO: LAB-11-0911

DATE ANALYZED: October 16, 2011



CHARGE: Drugs

SUSPECT: [REDACTED]

OCCURRENCE: 437 Park Avenue West

This report states the results of examinations and tests conducted by this laboratory as part of an official criminal investigation.

ITEMS SUBMITTED:

#1: A sealed plastic bag containing vegetable matter in cellophane. Note: The analysis of the sample revealed the presence of AM2201. AM2201 is currently a banned substance (Synthetic Cannabinoid) in the City of Mansfield.

RESULTS OF EXAMINATION:

#1: Vegetable matter, weighing 0.69 grams, failed to reveal the presence of a controlled substance.

A handwritten signature in black ink, appearing to read 'Anthony J. Tambasco'.

ANTHONY J. TAMBASCO
FORENSIC SCIENTIST

November 2011 – First Trial

- Trafficking in Harmful Intoxicants
- Testimony of Police Officer making the purchase “Just like Marihuana”.
- Testimony of the drug....6 minutes, no cross examination.
- Testimony of Ph.D Forensic Toxicologist.
- Guilty – 2 years suspended - \$\$

What's Next?

- MDPV begins to vanish – “Bath Salts” are gone
- Window Cleaner?
- \$19.00 a package...
- Pyrovalerone appears – Schedule V Controlled Substance

Next Wave

- Pyrovalerone goes away
- Pipe Cleaner
- Stain Remover
- Hookah Cleaner
- Alpha-Pyrrolindinopentiphenone appears

June 2012

- Bath Salt sample, packaging begins to disappear, samples are in vials.
- Possible 4-Methyl- α -pyrrolindohexiophenone (MPHP), 4-Methyl- α -PVP (MPPP) and Benzocyclidine appear in separate cases .

June 2012

- 5-Methoxy-diisopropyltryptamine (5-MeO-DiPT) appears in suspected ecstasy tablets.
- No standards, save for a rainy day.

June 2012 – White Rabbit

- 5-fluoro UR-144 (XLR11)
- UR-144
- URB-602
- URB-754
- AKB48
- Next generation of synthetic cannabinoids
 - no standards, another rainy day.

August 2012 – 1 Case

- Ethylone
- Ethylphenidate
- 4-MeMABP
- Methiopropamine
- Pentradone

September 2012 – Guilty Plea

- 5300 units of MDPV
- Four year sentence
- Included a bribery case involving an MPD officer.
- Conspiracy to commit felonious assault.

Current Trend

- Local “smoke shops” are sending samples to us.
- They continue to receive “Certificates of Analysis” indicating the absence of synthetic cannabinoids and even refer to Ohio House and Senate Bill numbers.
- They all have been found to contain the new URB compounds or AM2201.

What's Next?

- March 2013 PB-22 & 5-fluoro PB-22 indicated in samples.
- Notified local agencies of new synthetic cannabinoids.
- Cities of Shelby and Ontario ban PB-22, 5-fluoro PB-22 and BB-22 in April 2013.
- I'm waiting for a rainy day.