



Navy Drug Screening Laboratory Jacksonville

Screening News

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CO's Desk

More on Spice! Synthetic cannabinoids are chemically engineered compounds that when smoked or ingested can produce a high similar to that seen with marijuana. Consumption of these substances can result in elevated blood pressure, racing heartbeat, and nausea. In response to increased concern, the DEA recently banned five chemicals found in Spice, K2, and similar products. These products have raised alarms due to a recent increase in the number of individuals who found themselves in the hospital after smoking them. In fact, some recent deaths have been attributed to the consumption of these products.

Many synthetic cannabinoids have been found to be at least 5 (and up to 100) times more potent than some of the strongest varieties of marijuana. Recent investigations have cited the compounds as having greater potency than the THC found in traditional cannabis products because of Spice and K2's unregulated production. While the most popular route of administration is to smoke a product such as Spice Gold, it can also be used in powdered form.

The Navy's zero tolerance policy for drug abuse includes possession of substances or designated products that contain synthetic cannabinoid compounds, including Spice, fake marijuana or fake pot, herbal incense or potpourri, salvia divinorum, bath salts, Skunk, Genie, Blaze, Dream, Spike 99, Ex-Ses, Spark, Fusion, Dark Knight, Yucatan Fire, K2, and many others. Navy and Marine Corps personnel who wrongfully possess, use, promote, manufacture, or distribute designer drugs, products containing synthetic cannabinoid compounds (such as Spice) or drug paraphernalia may be subject to punitive action under Articles 92 and 112a of the UCMJ, adverse administration action, or both. Commanders do not need a positive urinalysis result to begin administrative separation for sellers and users.

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In Focus: Expert Witnesses

Did you know?

Information about the laboratory, including fact sheets and past newsletters, may be found at our website:

<http://www.med.navy.mil/sites/jaxdruglab/Pages/default.aspx>



FIGURE 1. EXPERT WITNESSES

(From left to right: LCDR Matthew Jamerson, Dr. James Evans, LT Hak Auth, LT Luis Estrella, Dr. Ricky Bateh, Mr. Albert Marinari, and Mr. Robert Sroka)

The Expert Witnesses at NDSL JAX serve in high visibility positions as the Command's technical experts in the area of forensic urine drug testing. They are responsible for providing testimony in support of test results produced by NDSL JAX and other laboratories within the Department of Defense's (DoD) urine drug testing system.

Our Expert Witnesses have over 80 years of combined Federal Government service (plus over 60 years with local and/or state agencies), and have a wealth of education and experience in the areas of biochemistry, chemistry, pharmacology, and toxicology. The Expert Witnesses maintain professional affiliations with the American Academy of Forensic Sciences (AAFS), American Society for Mass Spectrometry (ASMS), California Association of Toxicologists (CAT), Middle Atlantic Association of Forensic Scientists (MAAFS), Society of Forensic Toxicologists (SOFT), Southern Association of Forensic Scientists (SAFS), and The International Association of Forensic Toxicology (TIAFT).

The Expert Witnesses apply their technical expertise daily in certifying urine drug test results, providing testimony in legal proceedings (courts-martial and administrative separation boards), providing technical reviews and evaluations to customer submitting commands and attorneys (both prosecution and defense), and revising and developing testing procedures.

When an Expert Witness is provided for a proceeding, the witness assists the court in understanding the urine drug test result(s) and the documents produced in the normal course of business. The witnesses also answer questions about toxicology, pharmacology, patterns of drug use, and the physiological and psychological effects of pharmaceutical drugs and drugs of abuse.

The high demand for Expert Witness support is fluid and requires flexibility and extensive travel by our witnesses. In calendar year 2011, our Expert Witnesses testified in 24 courts-martial and 63 administrative separation board proceedings. Additionally, the NDSL JAX Expert Witnesses provided over 1,100 telephonic consultations. Bravo Zulu!

Discrepancy of the Month: FN = Form Chain of Custody Entries (Blocks 12a-d) Discrepant

Did you know?
Correspondence templates for technical reviews; summary reports; documentation packages; discovery requests; specimen bottles; and DD Form 2624s can be found at our website:
<http://www.med.navy.mil/sites/jaxdruglab/Pages/default.aspx>

This discrepancy was previously covered in Newsletters 1-3 and 2-1; however, it continues to be the most frequently applied discrepancy this year. Because the chain of custody is such an important element of forensic drug testing, we want to highlight this discrepancy again.

Blocks 12a through 12d are used by the submitting commands and the NDSLs to document the chain of custody for the Service members' urine specimens. The FN discrepancy code is applied for chain of custody entries that are incorrect, incomplete, illegible, overwritten, or missing.

The important point to remember when filling out the back of the DD Form 2624 is that anyone looking at the form should be able to tell where the specimens were from the time of collection to the point they were released to either the mail (or other courier service) or the NDSL. The best practice would be to collect and send the specimens the same day, but if that is not possible, document when the specimens are placed into and then removed from temporary secured storage. Ensure that your entries are legible and that any changes are documented with a date and the initials of the person making the change. The FN discrepancy is most commonly applied because the chain of custody is incomplete (e.g., there is a name and signature, but no indication that the specimens were released to the mail or that the specimens were taken out of storage with no other entries, etc.). There must be a clear indication on the back of the DD Form 2624 that the specimens are being released by the submitting command. It is also best practice to make the last entry in Block 12 of the DD Form

Drug Facts: “Bath Salts” (aka Designer Cathinones) = The New Designer Amphetamines

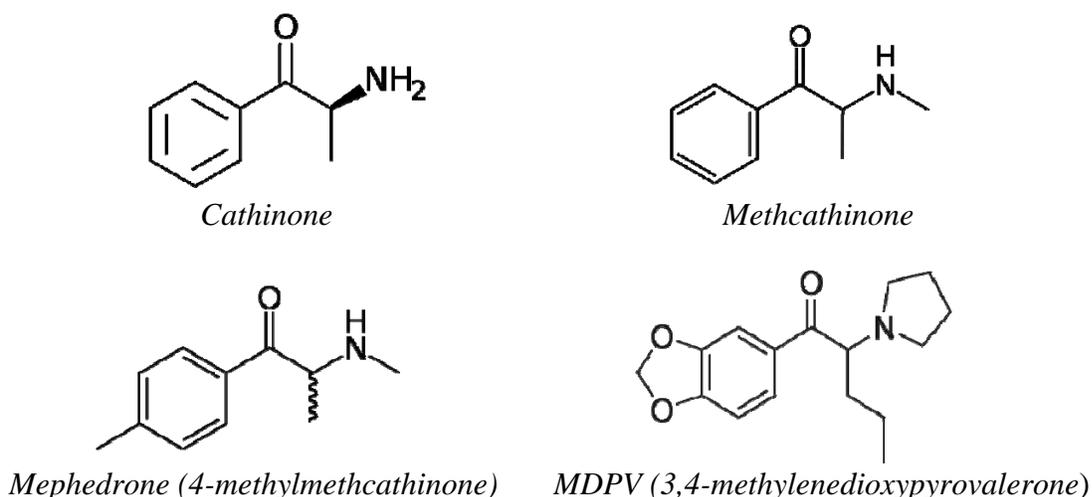


FIGURE 2. BATH SALTS STRUCTURES

Description: Designer cathinones are a new form of stimulants sold in a variety of markets as “bath salts” or “plant food” and are labeled as “not for human consumption”. “Bath salts” contain primarily mephedrone (4-methylmethcathinone) or a mixture of cathinone derivatives such as mephedrone and 3,4-methylenedioxypropylvalerone (MDPV).

Cathinone and methcathinone are naturally-occurring central nervous stimulants found in the khat plant and are structurally-related to amphetamine and methamphetamine. The Drug Enforcement Administration (DEA) previously listed cathinone and methcathinone as Schedule I drugs under the Controlled Substances Act. The cathinone derivatives commonly found in the “bath salts” products are not naturally-occurring drugs and can be synthetically produced from ephedrine or pseudoephedrine.

Common Names: Bliss, Blue Silk, Cloud Nine, Energy-1, Ivory Wave, Lunar Wave, Meow Meow, Purple Wave, Snow Leopard, Vanilla Sky, White Lightning, etc.

Effects: The “bath salts” products are typically administered by sniffing or snorting. A person who misuses these substances can experience agitation, delusions, dizziness, impaired perception of reality, panic attacks, paranoia, seizures, and suicidal thoughts. In addition to the psychological effects of the drugs, a person may also experience physiologic effects such as chest pains, nausea and vomiting, nose bleeds, rapid heart rate, strokes, and heart attacks.

Trend: During 2010 and 2011, based upon the dangers associated with the misuse of “bath salts”, at least 35 states scheduled the synthetic cathinones on an emergency basis or enacted legislation to place some regulatory control on the synthetic cathinones. Based on reports to the DEA from law enforcement and public health officials, as well as on a report from the Centers for Disease Control, the DEA, on 21 October 2011, temporarily listed mephedrone, methylone, and MDPV as Schedule I drugs.

References:

1. Drug Enforcement Administration, Office of Diversion Control, Drug & Chemical Evaluation Section, 3,4-Methylenedioxypropylone (MDPV), October 2011.
2. U.S. Department of Justice, Drug Enforcement Administration, Office of Forensic Sciences, Microgram Bulletin. *Schedules of Controlled Substances: Temporary Placement of Three Synthetic Cathinones Into Schedule I*. Springfield, Virginia: 2011.

Ask the Expert

1. Why are “bath salts” illegal?

Answer: “Bath salts” contain mephedrone, 3,4-methylenedioxypropylone (MDPV) and methylone, which are illegal in the United States because they pose an imminent threat to public safety.

2. Why are “bath salts” dangerous?

Answer: “Bath salts” are dangerous because the types and concentrations of psychoactive drug(s) vary from product to product. Even one-time use could result in death from stroke, heart attack, or multiple organ failure.

3. Can “bath salts” be addictive?

Answer: Although the psychoactive drug(s) found in “bath salts” mimic cocaine and amphetamines, there are no definitive studies which label these drug(s) as addictive.