Navy Drug Screening Laboratory Jacksonville

Screening News

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Contact Us

NDSL Jacksonville
P.O. Box 113
Bldg H-2033
Adams Avenue
NAS Jacksonville, FL
32212-0113
Comm 904-542-7755
DSN 942-7755

CO's Desk

As we enter deeper into 2011, new challenges related to drug trafficking continue to escalate all throughout the United States. Just a couple weeks ago, U.S. authorities arrested almost 700 people and seized thousands of pounds of drugs in a nationwide operation aimed at disrupting Mexican drug cartel activities. The operation included federal, local, and state law enforcement agents, who arrested 676 people, seized $12 million, more than 280 weapons, and 94 vehicles. Drugs confiscated included almost 40,000 pounds of marijuana, 467 kilograms of cocaine, 64 pounds of methamphetamine, and 21 pounds of heroin.

In addition to the traditional drugs mentioned above, we continue to see an increasing amount of synthetic drugs (cannabinoids including products like "Spice") being distributed from large cities to small towns in mid-America. Effective 1 March 2011, the Drug Enforcement Administration (DEA) issued a final order temporarily placing five of these synthetic substances into Schedule I of the Controlled Substances Act, the same drug category as heroin and ecstasy. This means that the possession, use, sale, and distribution of these five chemicals will be considered a federal crime by civilian authorities and charged as violations of the Uniformed Code of Military Justice Article 112a, which carries a maximum penalty of forfeiture of all pay and allowances, a dishonorable discharge, and 5 years confinement in the military justice system.

This temporary scheduling action will remain in effect for at least one year while the DEA and the United States Department of Health and Human Services (DHHS) further study whether these chemicals should be permanently controlled.

C. I. LeBron
CDR MSC USN

In Focus: Command Suite

NDSL is proud to introduce our new Commanding Officer, CDR Carlos LeBron. CDR LeBron comes to us from the U.S. Naval Research Laboratory (NRL) in Washington, DC where he served as Program Manager for Biotechnology. Prior to his rotation to NRL, CDR LeBron served as Head of Science & Technology, as well as Program Manager for Expeditionary Preventive Medicine with the Navy Environmental Health Center (NEHC) in Portsmouth, Virginia (which was renamed Navy and Marine Corps Public

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

Health Center (NMCPHC) in 2007). CDR LeBron also served as Science Advisor to the Fleet Forces Command, Command Operational Testing & Evaluation Forces, Naval Sea Systems Command, and the Naval Warfare Development Command on all matters related to biological weapons detection and Joint Doctrine Development. Welcome CDR LeBron!

Discrepancy of the Month

PACKAGE MISSING SIGNATURE/DATE (PD)

FIGURE 1-1. PACKAGE MISSING SIGNATURE/DATE (INCORRECT)

The discrepancy code PD is assigned when the outside of the package does not have a signature and date. This protects the integrity of the specimens and also prevents undetected tampering of the specimens within the sealed package. This discrepancy is applied to all specimens within the package submitted. For example, if there are 12 specimens in the box and the box is not signed and dated properly, then 12 discrepancies are applied. The Urinalysis Program Coordinator (UPC) Handbook published by the Navy Personnel Command states, "Once the shipping container is ready to be sealed, the UPC shall seal all sides, edges, and flaps of the box with adhesive paper tape and then sign and date across the top and bottom of each shipping container." Appendix E of the Marine Corps Personal Services Manual states, "Coordinator will ensure that each shipping container has the coordinator's signature over the seal to ensure integrity of the specimens. This requirement applies to all methods of transportation including hand-carried specimens".

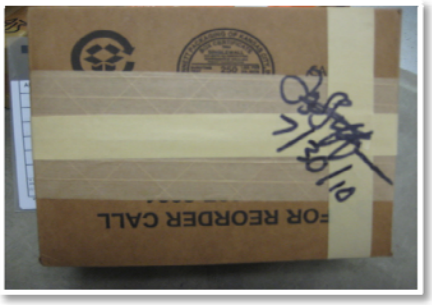

FIGURE 1-2. PACKAGE WITH SIGNATURE/DATE (CORRECT)

Did you know? PCP was used as an anesthetic in humans and animals, but was discontinued because of its severe side-effects.

Did you know? NDSL JAX has not had a positive PCP specimen result in over 2 years.

Drug Facts

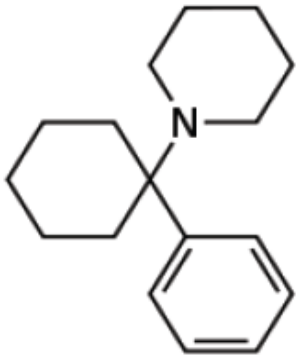

FIGURE 2. PHENCYCLIDINE CHEMICAL STRUCTURE

Description: Phencyclidine (PCP) is a hallucinogenic compound developed in the 1950s as an intravenous anesthetic (1). The medical use of PCP was discontinued in 1965 due to severe side effects such as hallucinations and mania. PCP is a synthetic drug sold as tablets, capsules, or white or colored powder. PCP is a Schedule II drug, meaning it has a valid medical use and a high potential for abuse. It can be snorted, smoked, or orally ingested (2). Smoking PCP is the most common method of abuse. Abusers typically saturate leafy material, such as mint, parsley, oregano, tobacco, or marijuana, with PCP, and then roll the saturated material into a cigarette called a joint (5). Another variation of this theme is dipping cigarettes or marijuana joints in liquid PCP. Powder/crystal PCP, also known as Angel Dust, can also be smoked by abusers when it is mixed with marijuana and/or tobacco.

Common Names: Angel, Angel dust, Tic tac, Zoom, Boat, Dummy dust, Love boat, Peace, Supergrass, Zombie *(4)*.

Effects: PCP is a dissociative drug, that is, it acts by distorting the individual's perception of reality. It affects sight and sound, producing feelings of detachment. Under the influence of PCP, the individual may see images and/or hear sounds or feel sensations that seem real but they are not (2). Users can experience several unpleasant psychological effects, with symptoms mimicking schizophrenia (delusions, hallucinations, disordered thinking, and extreme anxiety). The use of this drug will lead to cravings and PCP-seeking behavior despite its adverse physiological and physical effects.

Trend: PCP has been used illicitly since the late 1960s and although recreational use of the drug had always been relatively low, it began declining significantly in the 1980s. In surveys, the number of high school students admitting to trying PCP at least once fell from 13% in 1979 to less than 3% in 1990 (3). As of 2006, about 6.6 million people reported having used PCP in their lifetime (2.7%) and fewer than 200,000 used PCP in the past year (6). Trafficking data indicates that the vast majority of PCP available in the U.S. drug markets in 2002 is manufactured in clandestine laboratories in California *(5)*.

References:

1. Kerrigan S and Goldberger BA: Principles of Forensic Toxicology, Second Edition, Washington, DC: AACC Press, 2002, pages 297-306.
2. National Institute on Drug Abuse, Infofacts, PCP, 2009.
3. National Institute on Drug Abuse, Research Report Series: Hallucinogens and Dissociative Drugs, 2005.
4. Office of National Drug Control Policy (ONDCP), PCP Street Terms, 2005.
5. U.S. Drug Enforcement Agency, Microgram bulletin, PCP: the threat remains, 2003.
6. NSDUH REPORT: Use of Specific Hallucinogens: 2006.

Ask the Expert

1. Can dextromethorphan (a drug used in cough medications) cause a urine specimen to confirm positive for PCP?

Answer: No.

While high levels of dextromethorphan can result in a positive immunoassay screen result for PCP, the confirmation by GC-MS will be negative for PCP.

2. Can the nanogram level of a drug in urine be used to quantify how much drug a person used?

Answer: No.

A nanogram (ng/mL – one part per billion) level of drug (metabolite) in urine only gives us information regarding the amount of drug (metabolite) detected in that one particular urine specimen. While a level above the DoD administrative cutoff level indicates exposure, the amount of the drug (metabolite) detected cannot be definitively correlated with the amount of drug ingested. There are many factors which can influence the level of drug in urine. The most important factors include: how much drug was consumed; how long ago the drug was consumed; how long the drug stays in the body; how often a person uses the drug; a person's age, gender, weight, health, and level of hydration as well as the individual's metabolism.

3. Is it true that hair tests can be used to show recent drug use?

Answer: Generally, no.

Hair grows at a rate of approximately one-half inch per month. As such, a hair test is useful for demonstrating drug use that occurred in the past (up to 6 months or so). A hair test usually cannot give any information regarding drug use that occurred during the past 7 to 10 days.