



Navy Drug Screening Laboratory Jacksonville

Screening News

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CO's Desk

From the moment a specimen arrives at the laboratory until a result is reported about 3-4 days later, an incredible amount of teamwork is required to ensure accuracy. Each task in the testing process requires a tremendous amount of concentration and attention to detail making sure, with 100% confidence, that your results are correct. I know this not only as the Commanding Officer, but as a trainee who experienced the process first-hand.

Certainly our job is not easy or glamorous. However, every NDSL JAX team member will tell you they feel a tremendous sense of pride, knowing the importance of our mission to the Department of Defense. Our motivation? Quite simply, we know our work not only impacts force readiness but potentially a career and a life. These are not just words. It's our culture.

The next time you contact the laboratory, feel confident that every NDSL JAX team member is dedicated to ensuring your success.

E. R. Hoffman
CDR MSC USN

In Focus: Quality Control Department



Shown above: Quality Control Department staff

The Quality Control (QC) Department, which may be behind the scenes, is very important to the success of our Laboratory's mission of supporting warfighter readiness. The QC Department is like a distribution center in the overall scheme of

laboratory production. They prepare, certify, supply, and monitor all drug-spiked materials used in the testing of service member urine specimens. These QC materials are used by the Accessioning Division, Screening Division, and Confirmation Department to accomplish accurate testing. Calibrators, which are also prepared by the QC Department, provide the laboratory instruments with known cutoff levels for each drug on the DoD test panel. Open QC materials are known to the analyst and have known amounts of drug. Open QC materials provide low-drug and high-drug level checks of the instruments to ensure they are working properly. Blind QC materials are not known to the analyst and these materials are incorporated into each laboratory batch. Blind QC materials can be negative (drug-free) or positive (contain drugs in amounts greater than the cutoff level). If a blind QC material fails to show the expected results, the entire laboratory batch must be repeated. After a laboratory batch is tested, QC technicians review each set of test results to identify the blind samples in that batch. The QC technician also checks the open QC materials to ensure they are acceptable before sending the data to the Review Department for final review and reporting of results. The QC materials are prepared using strict protocols and are evaluated using narrow acceptance criteria. The materials made in the QC Department play a very important role in the Laboratory's ability to provide accurate and reliable drug testing.

Discrepancy of the Month

GP = FORM OR OTHER DOCUMENT SHOWS SERVICE MEMBER'S NAME/SIGNATURE

Did you know:

The "GP" discrepancy code is currently the second most common discrepancy.

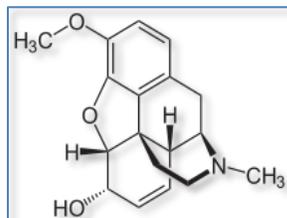
This discrepancy code is applied to the DD Form 2624 when it lists the SM's name and/or signature or when it is received with a document listing the names of service members being tested. In most cases where this discrepancy is applied, the command roster was submitted with the DD Form 2624. The roster, along with a copy of the DD Form 2624, should be retained by the submitting command. If an entry is made in Block 13 on the DD Form 2624, the specimen number should be used as a reference, not the service member's name. To protect personally identifiable information (PII), the laboratory should not receive the service member's names.

Drug Facts

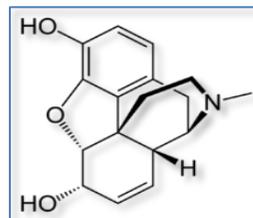
Did you know:

The opium poppy plant contains several alkaloids of profound medical relevance.

Codeine



Morphine



Opium pod



Description: Opiates are naturally occurring alkaloids which are obtained from the sap of the poppy, *Papaver somniferum*. The two most abundant opiates are morphine and codeine; they are the focus of this review (1). Morphine is the most prevalent

alkaloid in opium, making up anywhere from 10% to 16% of the total pod's mass, while codeine makes up 1% to 3%. Semi-synthetic opioids such as heroin, oxycodone, and hydrocodone are derived from these naturally-occurring substances (2). With the exception of heroin, the other semi-synthetic opioids are prescription medications intended for the treatment of moderate to acute pain, diarrhea, cough, and irritable bowel syndrome (3). Morphine is one of the most effective drugs known for the relief of severe pain and remains the standard against which new pain-relieving (analgesia) medications are measured. Codeine is the most widely-prescribed, naturally-occurring opiate in the world (4).

Common and Street Names: Tylenol #3, Dream stick, Aunti Emma, Dreamer.

Effects: Opiates are psychoactive drugs that may result in a state of euphoria with comprehensive alleviation of distress (5). Morphine has a high potential for addiction. Although physical addiction may take several months to develop, tolerance and psychological dependence develop rapidly. Morphine addiction is the model upon which the current perception of drug addiction is based. For codeine, tolerance develops with prolonged use and the rate at which tolerance develops occurs at different rates. The most serious physical manifestation of opioid use and abuse is respiratory depression. Respiratory depression is dose-related and is the mechanism for the potentially fatal consequences of an overdose (5). Compared to morphine, codeine produces less analgesia, sedation, and respiratory depression.

Trend: The use of prescribed pain relievers without a doctor's prescription ("non-medical" use) constitutes the second most common drug group abuse (marijuana being #1) in the United States (6). Pain relievers such as morphine or codeine, when taken without a physician's direction and oversight, can cause serious adverse consequences and produce dependence and abuse (7). In 2007, 2.1 percent of individuals aged 12 or older (approximately 5.2 million persons) reported using prescription pain relievers in a non-medical fashion. As of 2007, abuse was more prominent among young adults (age 18-25) with 4.6% (1.5 million young adults) of the population reporting illicit use of pain relievers (8).

References:

1. Kapoor LD. *Opium Poppy: Botany, Chemistry, and Pharmacology*. The Haworth Press Inc., 1995.
2. Cone EJ, Welch P, Paul BD, Mitchell JM. Forensic drug testing for opiates, III. Urinary excretion rates of morphine and codeine following codeine administration. *J. Anal. Toxicol.* **15**: 161-166, 1991.
3. Vree TB, van Dongen RT, Koopman-Kimenai PM. Codeine analgesia is due to codeine-6-glucuronide, not morphine. *Int. J. Clin. Pract.* **54** (6): 395-8, 2000.
4. Quantitation of the Major Alkaloids in Opium from *Papaver Setigerum* DC. Sini Panicker* and Heidi L. Wojno^a, U.S. Department of Justice, Drug Enforcement Administration, Special Testing and Research Laboratory.
5. Codeine Information from www.drugs.com.
6. Office of Applied Studies. (2008). *Results from the 2007 National Survey on Drug Use and Health: National findings* (DHHS Publication No. SMA 08-4343, NSDUH Series H-34). Rockville, MD: Substance Abuse and Mental Health Services Administration.

Did you know:

Most codeine is prepared from morphine.

Codeine is a prodrug and the primary effects are from its metabolite, morphine.

Did you know:

Oxycodone and its metabolite oxycodone are prepared from thebaine, which is present in the opium plant.

Did you know:
Hydrocodone is prepared from codeine.

7. National Institute on Drug Abuse. (July 2008). *NIDA InfoFacts: Prescription and over-the-counter medications*. Retrieved on October 22, 2008
8. Trends in Nonmedical Use of Prescription Pain Relievers: 2002-2007. The NSDUH Report, February 2009.

Ask the Expert

1. Why is it important for me to keep the roster after I send the specimen to the Drug Lab?

Answer: The roster is your record of which service members actually provided a urine specimen. The service member may document any medications currently prescribed or used on that roster. After the test results are received from the NDSL, the DD Form 2624 should be compared to the roster to ensure that all urine specimens submitted were tested and that results were received by your Command. In the event of a positive result that could be caused by a prescription medication, the Command should contact an NDSL Technical Expert for additional information (Technical Review).

2. Will a person taking Percocet® or Vicodin® show a positive urine drug result for morphine or codeine?

Answer: No. Percocet® contains oxycodone and Vicodin® contains hydrocodone. Neither prescription medication will result in a positive urine drug results for morphine or codeine.

3. Will a person using heroin have a positive urine drug result for morphine or codeine?

Answer: Frequently (for morphine). Once ingested, humans metabolize (“break-down”) heroin to 6-monoacetylmorphine (6AM) which is further metabolized to morphine. Morphine and codeine may be detected in the urine but may be present below the DoD administrative cutoff levels.

4. If a person eats commercially-prepared products with poppy seeds, will that person have a positive urine drug result for morphine or codeine?

Answer: Under realistic conditions, no. Based upon the DoD administrative cutoff levels for morphine and codeine, a person who ingests a reasonable amount of foodstuffs (such as bagels, muffins, or pastries) containing poppy seeds will not have a positive urine drug test result for morphine or codeine.