

QUESTIONS AND ANSWERS FOR WEBSITE

1. I did not get my results yet. Who can tell me where they are?

A. Phone 847-688-2045 extension 10 and ask to speak to the department supervisor or lead clerk.

2. How accurate are the drug tests?

A: A regulated forensic drug testing laboratory is required to employ an immunoassay (IA) test to quickly distinguish between two types of specimens: those which are negative and those which are presumptive positive. The negative specimens are reported negative while the presumptive positives will go on to further testing. In the DoD labs, the next level of testing is a repeat IA under more stringent administrative conditions. If this test upholds the presumptive positive result obtained on the first test, then the lab is required to perform a confirmatory test by gas chromatography/mass spectrometry (GC/MS), which will determine beyond a doubt whether the presumptive positive specimen is truly positive. This combination of three tests employing two methodologies based on different chemical principles is called multi-modal testing and when coupled with the requirement to use a separate aliquot of urine for each test, assures an error-free result. For a sample to be reported as positive, it must be above a cutoff level in all three independent tests. A sample is reported as negative if it is below a cutoff value in any of the three tests.

3. Do you test every sample for every drug?

A: Every sample that is received is tested for THC, cocaine metabolite, amphetamine, methamphetamine and designer amphetamines, and heroin. Samples from Navy and Marine Corps units are pulse-tested for oxycodone, oxymorphone and PCP. All Recruit Training Command samples are tested for PCP. The only samples that are not tested are those that are received with certain defects in the chain of custody or sample collection. These untestable samples are reported to the submitting command along with a brief description of the problem.

4. How can I tell which laboratory to contact for assistance?

A. The Laboratory Accession Number begins with a "G" for Great Lakes, "J" for Jacksonville or "S" for San Diego NDSL. Check on the Web page of the specific laboratory for the appropriate contact number for assistance.

5. How do I get an expert witness to testify?

A: All requests for expert testimony and affidavits must be originated by the submitting Command. This is usually done by the Trial Counsel who also arranges that any requests from the Defense Counsel are forwarded. It is a matter of policy that only one opinion will be offered on a matter of record. This means that the Laboratory will provide one expert witness who will consult with both the Trial Counsel and Defense Counsel in an unbiased manner. Requests for an expert witness must be made by official command correspondence. A go-by for the letter is located at <http://www-nehc.med.navy.mil/ndslgl/Docs/CustReqLetter2006.pdf>. Final scheduling of the expert

witness may be done at COMM 847-688-2045 extension 13 (DSN 792-2045 extension 13).

6. What are the drug cutoffs at the laboratory?

A: A specimen is positive when its GC/MS result is equal to or greater than the cutoff concentration. The DoD guidelines include the following confirmatory test cutoffs for the specified drug/metabolites:

Drug/Drug metabolite	Screening Cutoff	Confirmation Cutoff
Marijuana metabolite (THCA)	50 ng/mL	15 ng/mL
Cocaine metabolite (benzoylecgonine)	150 ng/mL	100 ng/mL
Opiates:	2000 ng/mL	
Morphine		4000 ng/mL
Codeine		2000 ng/mL
Heroin metabolite (6-AM)	10 ng/mL	10 ng/mL
Oxycodone	100 ng/mL	100 ng/mL
Oxymorphone		100 ng/mL
Phencyclidine	25 ng/mL	25 ng/mL
Amphetamines:	500 ng/mL	
d-Amphetamine		100 ng/mL
d-Methamphetamine		100 ng/mL
MDMA (Ecstasy)	500 ng/mL	500 ng/mL
MDA (Ecstasy metabolite)		500 ng/mL
MDEA		500 ng/mL

7. Why is the immunoassay cutoff for THC 50 ng/mL and the confirmation cutoff 15 ng/mL? (The report says 20 ng/mL, isn't that negative using the 50 ng/mL cutoff?).

A: Once ingested, the body breaks down marijuana (THC) forming several THC metabolites many of which are detected by the immunoassay. The immunoassay detects their presence expressing the result as the sum of these metabolites. The confirmation assay only tests for the major THC metabolite. This metabolite is only one of the many of the THC metabolites present in the urine. The GC/MS cutoff is set lower than the immunoassay cutoff because of this. Thus, the result of 20 ng/mL listed in the report is the concentration of the single major THC metabolite.

8. How long can you detect drugs after they were taken?

A: It varies with each drug and individual as well as what kind and how much liquid has been consumed since the drug exposure. Generally, a single recreational dose of a drug will drop to less than the DoD cutoff in about three days. The sample would then be reported as 'Negative' because it is less than the DoD cutoff but not necessarily because there is no drug in the sample. Chronic marijuana smokers who have just stopped smoking may be positive above the DoD cutoff for a month after discontinuing use of the drug.

9. Will lidocaine show up as a positive result for cocaine?

A: Lidocaine, novocaine, and xylocaine are local anesthetics (i.e., they cause a numbing sensation when applied to the skin). None of these drugs will cause a false positive result for cocaine. The GC/MS test will determine beyond a doubt that the positive finding for cocaine is due to the use of cocaine. However, it should be noted that cocaine may be administered in a Navy Hospital for ears, nose, or throat surgical procedures or as a local anesthetic for the treatment of wounds.

10. Who do I call if I have questions on results or interpretation of results?

A: The Laboratory has several forensic chemists who will assist in interpreting the document package supplied upon request for court martial trial purposes or the results that are obtained by message or by the Internet Web Portal. Please note that results cannot be provided over the telephone. Phone 847 688-2045 ext 14 for questions on results, ext 13, 24 or 26 for interpretation of results.

11. What is security like at a drug testing laboratory?

A: There are several layers of security in the laboratory. To enter the laboratory an employee must have a NDSL issued ID card and must enter a corresponding unique NDSL identification code into a card reader. Access to and within different areas of the laboratory requires an electronically coded ID card and corresponding code. Only employees of NDSL Great Lakes are issued these ID cards. Each access area of the laboratory is permission specific, such that once inside the laboratory only employees that have permission to access a certain area are allowed to enter. Specimens, which are received either by mail or hand delivery, are immediately transferred to a secure accessioning area. Specimens that have screened positive by the first test are transferred to a separate secured area with limited access. Both the immunoassay and GC/MS testing areas also have limited access card readers which require an ID and corresponding identification code. Any visitors to the laboratory must sign in and are escorted at all times. Visitors are not allowed to handle the specimens or aliquots.

12. What kind of safeguards are in place to prevent errors?

A: The boxes containing the urine specimens are inspected for evidence of tampering. After inspecting seals, the boxes are opened and the specimen bottles are checked. During inspection, the bottles are inventoried against the enclosed chain-of-custody document, checked to insure the tamper resistant tape is intact and properly applied, checked to determine that information on the bottle label is the same as on the chain-of-custody document and checked to insure that information on the bottle label is complete and in accordance with service regulations. If any discrepancies are discovered, the discrepancies are documented and appropriate corrective action taken before the specimens can be processed. The names of the urine donors are not submitted to the laboratory.

Each specimen bottle is assigned a unique Laboratory Accession Number (LAN). The LAN for each specimen is placed on the chain-of-custody document, and multiple replicates of the LAN labels imprinted with the LAN are affixed to each bottle. Each specimen is retained in the Accessioning Area until it is approved for disposal. Only portions of urine (aliquots) are taken outside this room for testing. Aliquots are poured

from the original bottle on separate occasions, so that separate tests can be performed. Every time a test is done, a new aliquot of urine is used. Prior to the sample aliquot being poured, the SSN and LAN are scanned and the results are compared by computer to ensure that the correct bottle is used. The computer then prints a duplicate human readable bar-coded LAN label that is affixed to the receiver tube into which the urine is poured. Nothing is ever added to or dipped into the original bottle and aliquots are discarded after completing each test.

Throughout the testing process, each specimen drug test result is checked independently at least four times by employees in the laboratory. The final results are not released until two laboratory certifying officials review all of the testing data.

Quality control samples (both negative and positive) are inserted into every batch test. These account for at least 10% of every test batch. A batch is defined as a group of specimens processed with all testing parameters being constant. The controls are either "open" (marked as controls) or "blind" (inserted in the racks along with other samples, with no indication that they are controls).

Chain-of-custody procedures are strictly followed at the laboratory. The internal chain-of-custody forms are annotated each time aliquots are transferred from the custody of one person to another until completion of all testing procedures and disposal of the aliquots. When a technician receives the aliquots, he or she is responsible for maintaining physical control over them, until they are transferred to someone else or testing is completed and the aliquots are discarded.

The technical and administrative performance of the laboratory is continually and rigorously monitored by the Armed Forces Institute of Pathology (AFIP) Quality Control Program. AFIP sends positive and negative, "open" and "blind" control samples to the laboratory. The AFIP program not only stresses analytical aspects, but also detects clerical or administrative errors in the system. There is no margin of error allowed for a false positive (i.e. a specimen reported positive although it did not, in fact, contain a drug).

13. How do the immunoassay instruments detect drugs?

A: Immunoassay analysis is a chemical assay that utilizes enzymes and antibodies to identify specific chemical substances in urine samples. A separate test or assay is used for each drug class to be analyzed. Generally, the analysis involves a competitive binding process between drug in the urine, an enzyme, and an antibody. A small urine sample is combined with appropriate enzyme and antibody reagents. The presence of the target drug causes drug in the urine to compete with the enzyme reagent for antibody binding. Therefore, a urine sample containing drug will have a different enzyme reaction than a drug free sample. The difference in this enzyme reaction causes a difference in absorbance properties of the urine sample. The urine sample absorbance is measured spectrophotometrically to determine the presence or absence of the target drug.

14. What education requirements are in place for laboratory employees?

A: OPM determines the educational requirements to be qualified for a position at the laboratory. An employee can advance by experience or education.

A: For many of the entry level jobs at the Navy Drug Screening Laboratory, experience can substitute for a formal education. Higher level management and certifying scientist positions require courses in chemistry or other specific courses depending upon the job. All employees are required to undergo background checks and to meet the OPM requirements for the specific job they are applying for.

15. What does it take to become certified?

A: Before an employee can begin working on specimens they must be certified for the task they are going to perform. All new employees are initially given training on physical security, computer security, and safety procedures. Specific training is given on chain-of-custody procedures, filling out documents, and laboratory tests depending upon the specific job. Employees must read the required sections of the procedure manual, observe the task being performed, and finally have someone observe them perform the task correctly before they become certified. Confirmation physical scientist and certifying official certifications require an interview with a laboratory scientist. All certifications must be approved by the technical director.

16. The old messages used to give guidance for positive urinalysis results. How do commands know what to do now?

A. Information is provided on the Web Portal at the beginning and end of the report. If there are additional questions, phone 847-688-2045 extension 13, 24 or 26.

17. How to find the customer service request letter (on the same web page)

A. Log on to www-nehc.med.navy.mil. Click on the Field Activities tab and choose NDSL Great Lakes. In the middle of the page under Products and Services click on Navy Customer Request Letter.

18. What to do for a command-investigation involving a prescription?

A. The Service Member's medical record should be reviewed for prescriptions and the Service Member should be interviewed to determine if there has been prescription medication obtained outside of the military system. The prescriptions should be faxed with a request for an affidavit or technical consultation to the Navy laboratory that conducted the urinalysis test. The list of medications will be reviewed by an Expert and an affidavit prepared and sent to the submitting command.

19. Who do I contact for answers to questions about collection procedures, retest permission, steroid testing and etc?

A. These questions should be directed to Navy Alcohol and Drug Abuse Prevention (NADAP), Drug Detection/Deterrence (901) 874-4240

20. What is the best contact time to reach NDSL?

A. The Laboratory is staffed between 0600 and 1800 daily. Voice-mail messages may be left on any of the extensions.

21. For the web portal iFTDTL ---how do I register for the web-portal (NDOD and Navy) how do I get my password reset?

A. To add your name to an existing account for military, submit a request using official correspondence to PERS-6. FAX the request to (901) 874-6655. Any questions can be answered by the helpdesk for iFtdtl at (901) 874-2458.

22. Is it true that all samples from a local batch are pooled and tested, or are all samples processed individually?

A. All samples are tested individually. A minimum of three separate tests must be positive for the result to be positive. The samples are always poured. There is never anything placed into the original sample bottle.

23. Will any OTC drugs or nutritional supplements produce a positive test result? Are there medications that can cause false positives?

A: Over-the-counter drugs and nutritional supplements sold in the US will not cause a positive test result. One nutritional supplement, hemp oil, may contain small amounts of THC (the active ingredient of marijuana), but there is not enough THC in these type of supplements to cause the urine of someone taking hemp oil to test positive. Certain prescription medications may cause a positive result. For example a person taking Adderall® may test positive for d-amphetamine and a person taking Percocet® may test positive for oxycodone. Forensic chemists at The Navy Drug Screening Laboratory are required to assist the Command whose service member tested positive in determining if the positive result may have been due to the use of a prescribed medication.

24. Can the urine drug test results determine mode of administration?

A: The analysis also cannot determine the source or form of the drug taken.

25. How were the cutoffs determined?

A: The drug cutoff concentrations were set high enough to ensure that the military drug screening laboratories could accurately and easily determine the amount of drug present. For THC, the GC/MS cutoff concentration was set at 15 ng/mL to ensure that it would not be possible to have a positive urine sample as a result of being in the same room or area where someone else was smoking marijuana (passive inhalation). The morphine cutoff concentration was set at 4000 ng/mL to reduce the possibility of a positive due to poppy seed ingestion.

26. The member's urine tested positive for marijuana. The member had hair testing performed which resulted as negative for marijuana. Can you explain this inconsistency?

A: Hair testing is not recognized by the Department of Defense as a valid specimen for drug testing in the military and is currently not regulated by the Department of Health and Human Services (HHS). Drugs of abuse can be found in the urine and hair of drug users, but the amount of drug and detection times differ between the two matrices. The proportion of a drug detected and its breakdown product(s) or metabolite(s) also varies between hair and urine. Hair testing uses different testing methods than urine testing and the cutoff concentrations for hair testing are not required to match or correlate with the urine cutoff concentrations. When compared with urine, drugs may be detected for a longer period of time in hair, but if the hair sample is collected too soon or without the

root, the drug may not have had time enough to incorporate in the hair. Additionally, hair testing is usually less sensitive for THC compared to urine testing. It is possible to have a positive urine test and a negative hair test or a negative urine test and a positive hair test depending upon the cutoff concentrations, detection times and analytical instrumentation.

27. Can poppy seeds cause a false positive for opiates?

A: Poppy seeds can not cause a positive for oxycodone or oxymorphone, but may cause a positive result for morphine and or codeine. The amount of poppy seeds required to cause a positive is very large; approximately 2 cups of poppy seeds. The military raised the cutoff concentration from 300 ng/mL for codeine and morphine to 2000 ng/mL and 4000 ng/mL for codeine and morphine, respectively. The new cutoffs established in January 1995 make it very unlikely that a person will test positive for morphine when they eat food containing poppy seeds.

28. Can a positive urine drug result provide evidence of intoxication?

Certain drugs which are detected in the urine may indicate recent use. However, urine drug tests cannot determine whether a person was under the influence of the drug at the time the sample was taken, determine whether the individual is addicted to the drug(s) or distinguish between one-time or regular use.

29. How can I get the urinalysis collection software?

A. Log on to www-nehc.med.navy.mil. Click on the Field Activities tab and choose NDSL Great Lakes. Click on the tab for LINKS. One of the software links will take you to iFtdtl Portal. Follow the instructions for **DTP and NDSP Resources** to get the software.