RECENT OR HISTORIC DRUG USE?

WHY IT MATTERS

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Introduction

Essential to the practice of workplace drug testing is knowledge of windows of detection. Using a testing device with the proper window of detection can be the determining factor between whether your workplace tests for recent use, or historic use. Particularly in today's culture of rising marijuana use, that information can be critical. This article will explore what a window of detection is and why they are important.

Detection windows are the length of time a substance or its metabolite is detectable in a biological testing sample.[1] This includes both how long it takes after ingestion for a substance to become detectable and how long after ingestion it stays detectable.[2] Detection periods depend on many factors, such as:

- Substances that are being tested for;
- Specimen donor's metabolism speed;
- How the substance was ingested by the donor;
- How often the donor ingested the substance;
- The donor's health, diet, weight, gender, and fluid intake;
- Most importantly, the type of specimen used to test.[3]

All specimen types may detect the presence of both the parent drug and the metabolite; however, metabolites usually stay in the body longer than the parent drug.[4] Thus, detecting the parent drug is more indicative of recent use and therefore possible impairment.

A positive drug test result does not always mean that an individual is under the influence of a drug. For example, while isolated marijuana use will normally only remain in a donor's system for 1–2 days, heavy marijuana users will have it in their system for weeks after last ingestion.[5] Conversely, a negative drug test result does not always mean that an individual is not under the influence of a drug. Rather, it only means that a donor has not used the targeted drug within the detection window or under the cutoff level for a given testing method.[6] With this in mind, a working knowledge of general detection windows for commonly tested drugs and specimens will determine many choices about how an employer conducts workplace drug testing.

Urine

Urine is the most commonly used specimen in workplace drug testing.[7] Substances that are smoked are almost immediately available for detection in urine, while those that are ingested orally are usually slower, taking several hours.[8] After that point, the detection window depends on the type of drug tested.

DRUG	WINDOW OF DETECTION
Alcohol	10–12 Hours
Amphetamines	2–4 Days
Cannabis	1–30 Days*
Cocaine	1–3 Days[9]

** Light versus heavy use*

This makes urine useful in many workplace settings, such as random testing; however, it would not always be effective in long-term monitoring settings, such as return-to-duty or follow-up testing. Depending on frequency of use, a donor may be able to test negative for any of these substances by abstaining for several days before the test, and simply return to habitual drug use once the pre-employment test has been passed and the job is offered.[10]

Hair

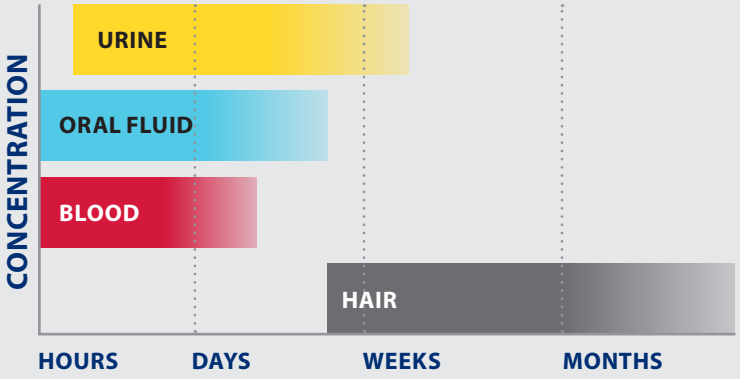
Hair testing has potentially the longest window of detection because the cells that generate hair absorb metabolites in the blood at the time hair is produced.[11] It also absorbs substances as sweat gathers and is absorbed at the base of a growing shaft of hair.[12] Generally, hair grows at a rate of 0.5 inches per month, thus, within a couple of weeks of substance use and until the donor cuts his or her hair, there is a record of what s/he ingested.[13] For example, a 1.5-inch sample cut from near the scalp would provide a record of any substances ingested during the preceding three months.[14] Comparing this to urine testing above, amphetamines, cannabis, and cocaine would all be detectable for the same amount of time when testing hair (i.e., approximately 90 days), whereas with urine testing the detection period varies by drug.[15] This provides a long history of use, making it ineffective in detecting recent use (i.e., post-accident testing) but very effective in historical use (i.e., return-to-duty or follow-up testing).

Oral Fluid

Oral fluid provides a nearly instant snapshot of substance use, with most substances being detectable 1–24 hours after ingestion.[16] This can extend up to 48 hours after ingestion regardless of the method of administration.[17] Because bodies produce saliva on a continual basis, oral fluid testing provides nearly identical results to blood-based testing, as concentrations of a given substance in oral fluid generally correlate with plasma concentrations and are a good indicator of the presence of the parent drug and impairment.[18] This makes oral fluid a good tool in situations such as post-accident testing or reasonable suspicion. However, as above, a donor may be able to test negative for a given substance by abstaining for several days before the test. Oral fluid testing offers the user an extremely short window of detection, particularly useful for pre-employment testing purposes where employers want to ensure that they're not eliminating a qualified candidate based on a one-time trip to Colorado two weekends ago.

Conclusion

It goes without saying that not every testing specimen will meet every need. Depending on the type of workplace, the risk of substance abuse, and the event that triggers the need to conduct testing, different detection windows, and thus, different testing specimens, will be the right fit. In an increasing complex and litigious legal environment, a multi-specimen policy provides the best of each world.



This chart outlines the most popular methodologies for drug testing and how they compare with regard to the window of detection.

1. *SUBSTANCE ABUSE AND MENTAL HEALTH SERVICES ADMINISTRATION, CLINICAL TESTING IN PRIMARY CARE, TECHNICAL ASSISTANCE PUBLICATION SERIES TAP 32 p. 11 (2012), https://store.samhsa.gov/system/files/sma12-4668.pdf*
2. *AMERICAN SOCIETY OF ADDICTION MEDICINE, APPROPRIATE USE OF DRUG TESTING IN CLINICAL ADDICTION MEDICINE p. 4 (2017), https://www.asam.org/docs/default-source/quality-science/appropriate_use_of_drug_testing_in_clinical-1-(7).pdf?sfvrsn=2.*
3. *Supra fn.1.*
4. *Id.*
5. *Scott E. Hadland and Sharon Levy, Objective Testing – Urine and Other Drug Tests, CHILD AND ADOLESCENT PEDIATRIC CLINICS OF NORTH AMERICA (Jul. 1, 2017), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4920965/.*
6. *Supra fn.2 p. 5.*
7. *Supra fn.1 p. 51.*
8. *Id.*
9. *Supra fn.5.*
10. *Supra fn.1 p. 51.*
11. *Supra fn.1 p. 19.*
12. *Supra fn.2 p. 23.*
13. *Supra fn.5.*
14. *Id.*
15. *Id.*
16. *Supra fn.5.*
17. *Supra fn.1 p. 20.*
18. *Supra fn.2 p. 21.*