

NEW DRUG TESTING TECHNOLOGIES

BY BILL CURRENT AND BRIAN FEELEY

Oral fluid's tighter window of detection for cannabis is a significant advantage.

As employers consider the ever-expanding legalization of marijuana (and other illicit drugs), which has coincided with a sharp increase in substance abuse across the country and a dramatic increase in positive drug test results following workplace accidents, there is clearly a need to remain vigilant regarding workplace substance abuse.^{1,2} But how best to go about that in this changing environment of state laws, new testing methods and varied employer needs? Long-used drug testing methods such as lab-based urine testing, which is still effective in the traditional sense, may not always align well with today's workplace challenges.

Marijuana laws that push employers toward impairment identification rather than just drug use detection, an economy that places strains on company budgets, and employees who are clearly emboldened by laws that all too often favor the drug user over their employers require a new vision on how best to establish and maintain a safe and productive workforce. This article will give an overview of new and existing technologies that fit the unique needs facing employers today.

Emerging & exciting technologies

Emerging and exciting technologies that are gaining notoriety offer employers fresh alternatives to achieve their drug-free workplace objectives. For the first time since employers began establishing drug-free programs 30-plus years ago, new screening methods allow employers to focus on the priorities of maintaining safe and productive workplaces while doing so well within the constraints of the laws that apply to them.

Today's employers may want to consider screening technologies with the following attributes:



BREATH

Very Short-Term Impairment Detection.

While the science behind breath THC testing is still being vetted, companies such as Hound Labs look at detecting THC in breath within the first 2–3 hours post-ingestion. Paired with a longer (but still relatively short) detection method, such as oral fluid, breath testing for THC combined with oral fluid testing for THC could cover the entire window of impairment in two simple tests that can be performed onsite.



VR
HEADSET

Impairment Detection.

Gaize, Inc. has developed an impairment detection system that:

"... runs the same eye tests as specially trained Drug Recognition Expert Police Officers use, now contained in a virtual reality headset. Using embedded eye tracking sensors, it captures over 120,000 datapoints per test, which are then evaluated for signs of impairment."³

The device is robust, portable and results are securely stored in the cloud for easy access at any time.

This information is provided for educational purposes only and does not constitute legal advice. Reader retains full responsibility for the use of the information contained herein.

GO HAND IN HAND WITH ORAL FLUID



ORAL FLUID

Laboratory Quality In An Instant-Result Device.

ToxiTrace by Buzzkill Labs is an instant-result oral fluid test that uses lab-standard chromatography to filter out metabolites of THC and nonpsychoactive cannabinoids like CBD from oral fluid samples. What remains is psychoactive THC, the presence of which indicates marijuana use within hours, not days or weeks.⁴ Future versions of ToxiTrace will also be available for the detection of the other most common drugs of abuse.



DIGITAL

Virtual or Proctored Testing.

eMed Screen solves the problem of arranging collections in today's remote work environment and 24-hour shifts with "fully proctored screening and advanced controls that allow employers, and other testing agencies, to manage their drug screening while never needing to schedule an appointment."⁵ The eMed platform has been used to process millions of proctored tests.



PAPER

Surface Detection.

SwabTek's dry, paper-based tests make it possible to detect the presence of drugs and other substances such as vape pens, edibles, baggies, and other suspicious containers on surfaces. "SwabTek's reagents are dry-powder and set on paper" which is a significant advantage over older tests that utilize hazardous liquid chemicals, some of which are carcinogenic, eliminating safety risks from the testing process. These tests are available for cannabis, fentanyl, cocaine, opiates and other narcotics with a simple swab and test taking just seconds to perform.

Together these new and improved technologies represent a comprehensive approach to deterring and preventing workers from bringing drugs into the workplace or being impaired on the job. Importantly, they also provide a means of screening that go hand-in-hand with oral fluid drugs of abuse and alcohol tests that can corroborate the presumptive results found using these new emerging technologies.

Continues on page 6...

Oral fluid testing, more than any other testing method, solves the marijuana dilemma many employers face.



Solving the marijuana dilemma

Oral fluid testing, more than any other testing method, solves the marijuana dilemma many employers face. Three unique attributes of oral fluid testing make this possible—

- 1 the ability to detect parent THC rather than metabolites of cannabis,
- 2 the ability to detect marijuana within minutes after ingestion, and
- 3 a window of detection that covers the entire window of impairment of 3-to-10-hours caused by marijuana use.⁶

Parent THC becomes detectable in oral fluid within about 15 minutes after someone smokes a joint or eats a marijuana edible. But cannabis metabolites do not show up in urine for 6-to-7 hours after usage, making urine testing impractical at identifying very recent use. Additionally, the window of detection for marijuana in oral fluid is typically less than 24 hours (closer to 12 hours according to some reports), whereas with urine the window of detection begins after several days, far beyond the time in which someone used the drug.

In states that require employers to show some evidence of impairment in addition to a positive drug test for marijuana, oral fluid's tighter window of detection for cannabis is a significant advantage. This makes it possible to show a correlation between a positive test result and very recent use.

Conclusion

Oral fluid testing could be crowned the “ultimate” emerging technology, especially given the fact that the Department Of Transportation (DOT) has endorsed it as a viable alternative specimen to urine. Add to that the fact that 86% of drug testing providers now say they offer oral fluid testing (up from 39% in 2019) and that 46% of providers predict that it will someday be the most used drug testing method (the same percentage that predicted it will be urine).⁷

Now add to that the ability to screen workers for impairment, detect the presence of drugs on surfaces in the workplace, conduct oral fluid tests from any location any time of day with proctored testing, and get laboratory quality results from an instant-result oral fluid device — and a new vision for a comprehensive approach to maintaining a safe and productive workforce comes into focus.

However, workplace testing isn't a one-size-fits-all, and employers may be inclined to choose a combination of testing methods when facing the marijuana questions. Oral fluid pairs nicely with THC breath, impairment testing, instant testing, virtual testing, and/or surface detection testing, and provides additional peace of mind that comes with this vetted, well-documented test specimen. Employers may choose to use one specimen for pre-employment testing and another for post-employment purposes, or a combination of specimens depending on specific criteria. Regardless of why you're looking to perform THC testing, oral fluid solves the main dilemmas faced by employers when it comes to legal marijuana.

1. <https://www.samhsa.gov/data/sites/default/files/reports/rpt41909/2023NSDUHPillImages.pdf>
2. <https://newsroom.questdiagnostics.com/2023-05-18-Post-Accident-Workforce-Drug-Positivity-for-Marijuana-Reached-25-Year-High-in-2022-Quest-Diagnostics-Drug-Testing-Index-Analysis-Finds>
3. <https://www.gaize.ai/workforce>
4. <https://buzzkilllabs.com/>
5. <https://emedscreen.com/products/emed-screen-drug-screener>
6. <https://cosmosmagazine.com/health/how-long-does-impairment-last-after-cannabis-use/>
7. 2023 Drug Testing Industry Survey. Current Consulting Group.