



21st Century Drug and Alcohol Testing

Improving accuracy and efficiency with biometric eye scanning technology



Substance Abuse in Youths

For millions of teens, high school is a convenient place to get high. Based on statistics, 20% of all drug addicts in Russia are school children and 60% are young people aged 16 to 30. Those statistics also show that in Russia, drug use begins between the ages of 15 and 17 on average. The percentage of drug users among children between the ages of 9 and 13 has been increasing dramatically. There have been cases of drug use by children aged 6 to 7, who are introduced to drugs by parents who are addicts.

To battle these trends, In 2013, the Russian Federation passed laws to expand drug testing to all students in schools and universities older than 15.

“Areas of concern are the high rate of daily marijuana smoking seen among high school students, because of marijuana’s potential deleterious effects on the developing brains of teenagers...”

Substance Abuse at Work

Fueled in part by an influx of drugs from Afghanistan, it is estimated that there are over 3 million regular illegal drug users in Russia, most of them under the age of 25. Russia ranks first in the world in the consumption of heroin; 21% of the world's heroin production and 5% of all opium-based drugs are consumed in Russia, according to the UN Office on Drugs and Crime Prevention report.

Studies have shown that employees who have substance abuse issues are:

- 33% less productive in their work
- absent from the workplace is 10 times more frequently
- 3 times more often late for work
- with probability 3.6 times higher than the falls in accidents at work (and causes injury both themselves and the people around five times more likely)
- 25% of them steal from work

21st Century Substance Abuse Testing Challenges

Organizations can now use faster drug tests to determine if somebody is high, but the table below shows that many drugs may not even be detectable until after school or work. An intoxicated student may be let onto school grounds because a urine drug test didn’t catch anything. Or a heavy machine operator can inject heroine in the parking lot.

Drug	How soon after taking drug will there be a positive drug test?	How long after taking drug will there continue to be a positive drug test?
Marijuana/Pot	1 - 3 hours	1 - 7 days
Crack (Cocaine)	2 - 6 hours	2 - 3 days
Heroin (Opiates)	2 - 6 hours	1 - 3 days
Speed/Uppers	4 - 6 hours	2 - 3 days
Angel Dust/PCP	4 - 6 hours	7 - 14 days
Ecstasy	2 - 7 hours	2 - 4 days
Benzodiazepine	2 - 7 hours	1 - 4 days

Barbiturates	2 - 4 hours	1 - 3 weeks
Methadone	3 - 8 hours	1 - 3 days
Tricyclic Antidepressants	8 - 12 hours	2 - 7 days
Oxycodone	1 - 3 hours	1 - 2 days

Urine and saliva drug tests, while accurate, require training and proper handling of fluids. Improper procedures can easily affect the test's reliability. Other factors such as what the person ate/drank before the test, or what over-the-counter medication they are on can also undermine the effectiveness of these common tests. Furthermore, their speed means these tests can't be performed on a daily basis but only as a reaction to a suspected problem.

There is also an issue with ethics in forcing somebody to urinate in a cup. Or having somebody watch a student to make sure that they aren't trying to trick the test with another person's urine.

Biometric-based Substance Intoxication Testing

Iris recognition has been one of the most effectively deployed biometrics to ensure secure, efficient, and expedited processing for a broad range of identification applications. Recent advancements in capture technology, algorithms, and usability along with associated reductions in product and deployment costs have made it practical to be used for detecting on-the-spot intoxication as well.

Eye-based substance testers measure how quickly a person's pupil reacts to changing light. For example, a drunk high student can have a much slower reaction to a brighter light than a sober one. Their main purpose is to determine whether a person is CURRENTLY under the influence of drugs or alcohol, rather than have they abused drugs in their recent history.

Advantages of Biometric Eye Testing

Preventing intoxicated students or employees from being on premises is vital to maintaining a safe learning and/or working environments. Drug testing solutions at schools and production facilities needs to be effective, fast, and extremely accurate. Biometric Eye testing is a definite advantage:

- Impossible to fake a pupil's reaction to light
- Determines whether someone is intoxicated right now
- Quick, only takes a few seconds per person
- Can be combined with access control to prevent unauthorized entry
- Person Identification capabilities is combining with drug testing

iSobrietyTest Substance Abuse Testing Solutions

Before the invention of modern breathalyzer in the 1950s, determining if someone was too intoxicated to operate a motor vehicle was incredibly subjective. Today, roughly 30% of America's traffic fatalities involve a drunk driver. Back in the 1950s and '60s, that percentage was closer to 50%.

iSobrietyTest is committed to decrease substance abuse in youth by offering "on-the-spot" testing that can determine intoxication with a push of a button.

Why Eyes?

Accurate and Reliable: More real-time than other testing alternatives – blood, urine, or otherwise. Tests whether the person is currently high/drank rather than past history of abuse.

Fast and Stable: Takes a few seconds to scan the eyes and determine whether a person is sober. Can be used every day by students and doesn't require taking any liquid samples.

Non-invasive/No contact: No bright lights or lasers are used in the imaging process. No physical contact is required for drug/alcohol testing.

Expandable, Scalable, and Flexible: System can support thousands of students and staff, and multiple scanning stations can be installed to increase throughput. Additional information can be gathered from the eye scan such as identity and tiredness.

Operates in standalone mode and easily integrates with other systems.

Learn Where iSobrietyTest Testing Is Important

- **Traffic roadside testing** – 18% of drivers killed in an accident tested positive for at least one drug. [NHTSA](#)
- **Pilots** – 4% of all pilots killed in noncommercial airplane crashes in recent years tested positive for illicit drugs. [NTSB](#)
- **Workplace fatalities** – 22% of fatal workplace accidents had positive toxicology tests for at least one substance. Up to 40% of industrial fatalities can be linked to alcohol abuse and alcoholism. [Bureau of National Affairs](#)
- **Cost to employers** – Substance abusers are 1/3 less productive. Substance abusers incur 300% higher medical costs than non-abusers. [Working Partners](#)

Learn other iSobrietyTest Eye solutions for:

- Identification and access control
- Attendance and time tracking
- Detecting health issues such as fatigue
- Integrating with other systems

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