

Synthetic Cannabinoid Testing—urine

Frequently asked questions

What are synthetic cannabinoids?

Synthetic cannabinoids are chemical compounds that mimic the effect of THC, the principle active ingredient of cannabis. Like THC, they bind to cannabinoid receptors in the brain and were initially developed as therapeutic agents for the treatment of pain. However, these psychoactive research chemicals are frequently being sprayed on herbal mixtures and sold as “fake weed” or “synthetic marijuana.” Initially, JWH-018 and JWH-073 were the two most common synthetic cannabinoid chemicals found in a variety of herbal smoking blends. Others like JWH-250, JWH-210, JWH-081, AM-2201 and RCS-4 have started appearing in newer synthetic cannabinoid products and preparations.

How are synthetic cannabinoids being used?

Herbal smoking products laced with synthetic cannabinoid chemicals are readily available via the internet and in many head shops around the country. These products are sold as incense under names like K2, K3 Legal, Spice, Syn, Haze, Cloud Nine and many others. Users looking for a marijuana-like high often turn to these herbal smoking or incense products because they do not show up on a standard urine drug test.

The product is usually smoked by wrapping it in joints, smoking it in pipes, or inhaling fumes via vaporizers. Users also report that herbal blends or pure chemical concoctions can be ingested with an infusion or solvent process; purportedly allowing them to manage the potency and dose of the active ingredient(s).

What are the effects of using synthetic cannabinoids?

JWH-018, JWH-073, JWH-250, JWH-081, JWH-210, AM-2201, RCS-4 and other similar chemicals are the primary synthetic cannabinoid receptor agonists responsible for the euphoric and psychoactive effects that imitate marijuana.

These synthetic cannabinoids do not contain cannabis but when smoked produce effects similar to marijuana. Some of these synthetic cannabinoid chemicals are 4 to 100 times stronger in potency to marijuana. There have been many reports about the adverse effects including agitation, rapid heart rate, confusion, dizziness and nausea. According to the American Association of Poison Control Centers, the number of human exposure calls relating to synthetic cannabinoids increased to 139% between 2010 and 2011.

Long-term effects from research chemicals are unknown.

What herbal incense brand names are being used?

Users looking for a marijuana-like high often turn to popular herbal smoking products marketed under brand names such as K2, K3 Legal, Spice, Syn, Haze, Cloud Nine, Mr. Myagi Zero, Tyranny Green, Warped, Dragon Spice, Triple Diamond, Dream Smoke, Genie, Smoke, Pot-pourri, Buzz, Pulse, Hush, Mystery, Earthquake, Ocean Blue, Stinger, Serenity and many others. RTL maintains a composition list for different products, brands and preparations. View the list on our website at: www.redwoodtoxicology.com (list updated periodically).

The Food and Drug Administration (FDA) does not regulate the products, but maintains they are not approved for human consumption. Without proper ingredient labeling or measured potency, users increase the risk of overdosing. To complicate labeling and dose concerns, some reports indicate many popular brands are now counterfeit or fake brands.

What is the legal status of these chemicals?

Under the U.S. Drug Enforcement Administration (DEA) “Emergency Scheduling Authority,” 5 synthetic cannabinoid compounds became illegal March 1, 2011. The nationwide temporary ban was extended February 29, 2012 for another six months and restricts the manufacture, purchase and use of synthetic cannabinoids, including JWH-018, JWH-073, JWH-200, CP-47,497 and cannabicyclohexanol. The substances are categorized as Schedule I drugs, a restrictive category reserved for highly abused substances that provide no medical use. However, persistent designer drug chemists attempt to circumvent existing drug laws by developing new products containing compounds with similar chemical structures. Scientific research at RTL has found federally unregulated chemicals, such as: JWH-081, JWH-250, AM-2201, and RCS-4 are gaining prevalence as active ingredients in newer generation synthetic marijuana products.

How long can synthetic cannabinoids be detected in urine?

Following a single low dose exposure, synthetic cannabinoids can be detected up to 72 hours in human urine. In case of chronic exposure the window of detection is much longer.

How are synthetic cannabinoids metabolized in urine?

Synthetic cannabinoids metabolize extensively in humans via oxidation, carboxylation and glucuronide conjugation. Parent drug is usually not found in urine at detectable concentrations. The urine test relies on monitoring multiple hydroxylated and carboxylated metabolites.

What are the urine cutoff levels?

There are no cutoff levels for RTL's Urine Synthetic Cannabinoid Test. Toxicology result reporting will indicate either "Detected" or "Not Detected."

Will a standard drug test detect synthetic cannabinoids?

Conventional drug test panels will not detect the broad range of synthetic cannabinoids. They pass undetected in standard urine testing for such drugs as cocaine, marijuana, heroin and amphetamines. RTL's Urine Synthetic Cannabinoid Test can be ordered with your standard panel to ensure detection.

How accurate and reliable is the RTL Urine Synthetic Cannabinoid Test?

RTL's test utilizes the most sophisticated, sensitive and specific equipment and technology available, LC/MS/MS (liquid chromatography/mass spectrometry/mass spectrometry) to confirm JWH-018, JWH-073, JWH-081, JWH-250, AM-2201, RCS-4 and their metabolites in urine.

To ensure accuracy, the detection method relies on monitoring multiple metabolites for each of the compounds. RTL's test methodology provides the most definitive synthetic cannabinoid biomarker test results.

How do I request the RTL Urine Synthetic Cannabinoid Test?

Whether you're combining synthetic cannabinoid testing with your existing test panel or only want to test synthetic cannabinoids, our sales representatives are ready to help you set up your agency's test panel. Contact a RTL sales representative to ensure the Synthetic Cannabinoid Test Code(s) are added to your test request labels.

For a stand-alone synthetic cannabinoid test, only place a check mark next to Test Code "6473." Alternatively, you can also write "6473 ONLY" on the line marked "other." The lab will only run the synthetic cannabinoid urine lab test. RTL will not run your primary panel.

To order your standard panel plus synthetic cannabinoid test, place a check mark next to your standard panel and Test Code "6473." Alternatively, you can also write "6473" on the line marked "other." The lab will run your primary panel and the synthetic cannabinoid lab urine test.

Can I combine RTL Synthetic Cannabinoid Testing with other lab tests or on-site screening devices?

Yes. This test may be run in conjunction with your primary urine laboratory test panel. Likewise, a variety of solutions are available that combine rapid on-site devices with lab analysis.

*See additional information online at:
www.redwoodtoxicology.com.*



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