

MEDTOX[®] Journal News Alert

Spice, JWH-018, and CP 55940: What's going on out there?

Journal readers are probably getting fatigued by the sudden proliferation of designer "alternative" drugs of abuse. Infused in incense and botanical blends called "Spice," these new-age drugs have been dug up by marijuana scholars who used research from scientists who worked on the development of synthetic cannabinoids. The latest compound to splash on the scene is a substance known cryptically as JWH-018. This substance was the discovery of Dr. John Huffman, a Clemson University Chemistry Professor who supervised its development as part of a broader research project involving the study of endogenous cannabinoid receptors. JWH-018 is a substance that has specific binding or agonist actions at those receptor sites. The drug is a synthetic compound that has an official chemical designation of 1-pentyl-3-(1-naphthoyl) indole.

At the present time, JWH-018 is being synthesized overseas. In a liquid form, JWH-018 is sprayed over plant material destined for packaging as "Spice" incense or room deodorant. The treated botanicals are then packaged and labeled in branded products, such as K2. The product is widely available on the Internet and is available in varying weights, strengths, and colors. Some head shops in the U.S. are selling the product over their counters, in much the same way as salvia divinorum. In the present time, the Internet is the principle market for sales and distribution of the substance. It's clear that K2 has a fan club made up of long-time marijuana users. A number of blogs devoted to marijuana smoking and marijuana legalization contain testimonials from K2 and JWH-018 smokers. Thought to be 4-5 times more powerful than THC, the prime intoxicant in marijuana, JWH-018 causes what appears to be a unique set of effects on the central nervous system. The K2 incense is smoked and appears to have near instant sedative effects on the user. This stands in stark contrast to the effects of traditional smoked marijuana, wherein the THC high sometimes takes 15-20 minutes to take hold. The differences between the organic and the synthetic may lie in the fact that THC is transformed into a more psychoactive metabolite once it enters the bloodstream. It appears that JWH-018 is not manipulated and made more active by way of metabolism; it is instantly active as a cannabinoid receptor (s) agonist. A JWH high is shorter lived than a THC high. JWH smokers claim that the high can last up to two hours depending on how much was smoked. JWH is also sold in pure powder form. In that state, the marijuana-like high is more obvious and potent. Early reports of JWH's potency were that it was a drug that was noticeably more powerful than THC. Those reports, at least those coming from users who are willing to blog and talk about it, are that JWH is not as potent as THC. But these claims are less than scientific and there may be a myriad of other factors involved that impact the quality and potency of any given JWH high.

There is a dearth of reliable scientific information relating to JWH-018. The lack of information limits any broad assessment of it as a drug of abuse that is capable of causing physical dependency. Chronic marijuana use can lead to addiction and physical dependency. But early reports of JWH-018's effects tend to suggest that not all of the high is pleasurable. Some testimonials point to agitation, confusion, and dysphoria that persisted for an hour or more following the smoking of JWH-018 perfused incense. When combined with

alcohol, some JWH-018 can exacerbate the headache of a hangover. Others however are complimentary of JWH-018's hallucinogenic, LSD-like effects.

The proprietary "Spice-like" herbal blends that contain JWH-018 may well contain other psychogenic compounds; the high obtained from smoking these substances may be a confluence of multiple substances that create a unique, distinct high that varies from batch to batch. Research plods along in this regard.

Adding to the confusion surrounding the use and regulation of JWH-018 is the emergence of other synthetic cannabinoids like it. In the mid 70s, Pfizer Pharmaceuticals created a cannabinoid receptor agonist that it registered as CP 55940. The drug was never sold or marketed. With interest in synthetic cannabinoids booming, CP 55940 has jumped onto the stage. Like other cannabinoids, the drug can be vaporized in a glass pipe, or small amounts of the CP 55940 powder can be packed into a gelatin pill and swallowed. The drug is a powerful agonist of the two principle cannabinoid receptors, CB1 and CB2. Curiously, the drug is an alleged antagonist of the mysterious third receptor called CB3. Like marijuana, CP 55940 is long acting. Users claim that the high extends for hours and that an empty-headed hangover may persist well into the day after the drug was last used. Users also claim that CP 55940 makes them a bit more dimwitted and forgetful, as compared to marijuana.

Unfortunately our wonderful modern world and the unlimited opportunities of the Internet have opened the possibility of experimental drugs to just about anyone who has the time and money to experiment with them. Drugs like JWH-018 and CP 55940 are not hard to acquire, but they are usually more expensive than the drugs they aim to replace. In as much as these drugs skirt many state and federal laws that ban possession of them, they're instant hits with drug users. It's hard to say whether any of these drugs will have staying power with marijuana users, but at the moment anyway, marijuana users are excited to be able to use something new and different.

Urinalysis for JWH-018 in the U.S. is available through the auspices of a handful of specialty labs. Research and development of other designer cannabinoid drug testing is proceeding. MEDTOX is currently engaged on a number of different fronts in the development of fast and affordable laboratory-based testing assays. MEDTOX Laboratories is interested in acquiring suspected JWH-018 spiked urine samples from agencies where synthetic cannabinoid abuse has been confirmed in a testing population. Interested parties may contact MEDTOX at dmacneil@medtox.com about participation in the JWH-018 testing development process.

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