

K2/Spice & Other Synthetic Cannabinoids

You may not have heard about K2, Spice, or other synthetic drugs – but your employees probably have. In particular, employees who choose to abuse controlled substances have likely become fully educated about (and perhaps even fully addicted to) these once “legal” marijuana look-alikes. But although they resemble marijuana in appearance, their side effects and potential for safety-related problems at the workplace are much greater.



On March 1, 2011, the Department of Justice Drug Enforcement Administration (DEA) announced the temporary placement of five synthetic cannabinoids into Schedule I of the Controlled Substance Act. The DEA determined that the action was necessary to avoid an imminent hazard to the public safety. These substances will be controlled for at least 12 months, with the possibility of a six month extension.



At the time the Notice was published, several HHS-certified laboratories reported that they were testing for these five compounds:

- JWH-018
- JWH-073
- JWH-200
- CP-47,497 (C7)
- CP-47,497 (C8)

Background

First, these substances are not intended for human consumption, but there has been a rapid and significant increase in their abuse. As a result, synthetic cannabinoids are banned in at least 36 U.S. states and several countries, and all five branches of the U.S. military prohibit military personnel from possessing or using synthetic cannabinoids. Second, law enforcement has seized synthetic cannabinoids in conjunction with controlled substances and based on self-reports to law enforcement and health care professionals, synthetic cannabinoids are abused for their psychoactive properties. Third, numerous state and local public health departments and poison control centers have issued health warnings describing the adverse health effects associated with synthetic cannabinoids. Based on scientific data currently available, these five substances have the potential to be extremely harmful and, therefore, pose an imminent hazard.



History & Current Pattern of Abuse

A “cannabinoid” is a class of chemical compounds in the marijuana plant that are structurally related. The cannabinoid Delta-9-tetrahydrocannabinol (THC) is the primary psychoactive constituent of marijuana. “Synthetic cannabinoids” are a large family of chemically unrelated structures functionally (biologically) similar to THC.

Two of the five synthetic cannabinoids (CP-47,497(C7) and CP-47,497(C8)) now regulated were synthesized in the early 1980s for research purposes in the investigation of the cannabinoid system. The remaining three (JWH-018, JWH-073, and JWH-200) were prepared in the mid-1990s and evaluated to further advance understanding of drug-receptor interactions regarding the cannabinoid system. Developed and evaluated as research tools, no other known legitimate uses have been identified for these five synthetic cannabinoids. Furthermore, these five synthetic cannabinoids are not intended for human consumption.

The emergence of these five synthetic cannabinoids represents a recent phenomenon in the U.S. designer drug market. Since the initial identification of JWH-018 by U.S. forensic laboratories, many additional synthetic cannabinoids have been identified in related herbal incense products and plant food. These synthetic cannabinoids have purported psychotropic effects when smoked or ingested. These substances are typically found in powder form or are dissolved in appropriate solvents, such as acetone, before being sprayed on the plant material contained in the herbal incense products. The most common route of administration of these synthetic cannabinoids is by smoking (using a pipe, a water pipe, or rolling the drug-spiked plant material in cigarette papers).

Commercial Products

The two most common product names are “Spice” and “K2”, although many more manufacturers and distributors exist. Due to sophisticated marketing, the products that contain these five THC-like synthetic cannabinoids are perceived as “legal” alternatives to marijuana despite the fact that they are typically advertised as herbal incense or plant food (Bonsai-18) by Internet retailers, tobacco shops, head shops, and other domestic brick and mortar retail venues, and labeled “Not For Human Consumption.” No evidence exists that these synthetic cannabinoids have value as an additive to herbal incense products due to the absence of odor associated with the substances.

Based on law enforcement encounters, these five substances are typically found laced on plant material and packaged in small pouches or packets that are sold online, in tobacco and smoke shops, drug paraphernalia shops, gas stations, and convenience stores as herbal incense products, giving customers of all ages direct access. Research proposes that the packaging is professional and conspicuous, targeting young people possibly eager to use marijuana but who are afraid of the judicial consequences and/or association with illicit drugs.

Conclusion

Synthetic cannabinoids have the potential to be extremely harmful due to their method of manufacture and high potency. The full danger of these drugs has not yet been determined, although calls to poison control centers are steadily increasing, along with anecdotal evidence of negative consequences, including suicidal tendencies, of users.

Synthetic cannabinoids are illegal in Iowa, but that certainly doesn't mean they are going away. Abuse trends are on the rise; luckily, laboratory testing is available that provides the opportunity to detect these new substances as part of a urine drug screen. Interested employers should consult their drug testing facility about screening for these substances.

Source:

Department of Justice, DEA, 21 CFR Part 1308
(FR Vol. 76, No. 40, p11075 -11078).