

**EMERGING THREAT REPORT****DRUG ENFORCEMENT ADMINISTRATION  
INTELLIGENCE DIVISION**June 2010  
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## Herbal High - Legal Synthetic Cannabinoids Produce Illicit Marijuana Effects: Spice, K2, and Other “Legal” Products Sold as Marijuana Alternatives

### OVERVIEW

- Synthetic cannabinoids and synthetic cannabinoid-mimicking compounds found in products such as K2 or Spice, are increasingly popular. These smokeable herbal blends are packaged in 3 to 5 gram packets that sell for \$30 to \$50. Frequently marketed as incense and sometimes labeled “not for human consumption,” the products can be obtained at retail establishments, such as head shops, and from Internet distributors.
- There are multiple types of these herb-based products, which contain unknown ingredients, to include varying amounts of herbs, spices, flavoring, and chemicals that may mimic the effects of marijuana. Although the manufacturer of these products is unknown, it is believed that the key ingredients and possibly the products themselves are produced in Asia.
- The scientific research chemicals HU-210, CP-47,497, and its homologues, JWH-018, and/or JWH-073 have been found in K2 and similar products. Authorities have found the chemical HU-211 in Spice sold in Europe.
- Sales occur under many product names, to include Black Mamba, Blayze II, Blaze, Ganga, Genie, Gemini, Majic Spice, Who Dat, Paradise Botanical Incense, Red Bird, Red X Dawn, Sence, Serenity Now, Skunk, Space, Spark-20, Spice Diamond, Spice Gold, Spice Silver, Swerve, Yucatan Fire, and Zohai.
- Field test kits for marijuana do not produce positive results for these herb-based products. In addition, a narcotics detecting dog has produced weak-to-moderate alerts for the drugs.



### EFFECTS

- K2 and similar products are purported to produce effects similar to marijuana. Users report highs ranging from 30 minutes to two hours.
- Limited research suggests some of the chemicals may be at least three times more potent than marijuana. However, since they have not been tested on humans the effects are unknown. Emergency room reports suggest that these drugs, or other unknown ingredients, can severely affect users’ cardiovascular and central nervous systems.
- According to WebMD, the effects of these drugs may not be apparent for some time, since they are stored in the body for a long period. Additionally, JWH-018 and similar substances have a chemical structure that is shared with known cancer-causing agents.
- German officials have advised that their research shows smoking Spice can have adverse effects on the heart, circulation, and the nervous system, and in some cases can cause unconsciousness. The use of Spice also may lead to addiction.

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- According to published literature, HU-210 may be 60 to 80 times more active than  $\Delta^9$ -tetrahydrocannabinol (THC). The March 2009 Drug Enforcement Administration (DEA) publication, *Microgram*, cited anecdotal reports that suggest HU-210 is hundreds of times more potent than marijuana. As such, “these materials may be viewed as stealth marijuana.”

### POPULARITY

- Since 2009, the DEA has received reports about the abuse of these herbal products in the United States. Media outlets confirm their presence in nearly 20 states.
- In some areas, like St. Louis, Missouri, demand appears to exceed supply.
- Media reports suggest the substances are popular among youth. It is reported that individuals of all age groups and ethnic backgrounds purchase K2 in Missouri, where there does not seem to be a typical user.
- Limited open-source reporting suggests some individuals make their own K2 using JWH-018. The chemical is easily purchased from online distributors.

### LEGALITY

- While JWH-018, JWH-073, and CP 47,497 are not classified under the Controlled Substances Act, HU-210 is a Schedule I drug in the United States. Trade of non-controlled substances falls under the purview of the Food and Drug Administration, whose regulations bar the import and sale of unsafe and unapproved products.
- Several states have passed legislation making K2 a scheduled drug, and several states have legislation pending. Several counties have outlawed the sale and possession of K2. Spice also is prohibited by several U.S. military commands.
- Canada, Chile, South Korea, Russia, and many European countries have prohibited, to some degree, products that contain HU-210, CP-47,497, JWH-018, and/or JWH-073.

### FORECAST INTELLIGENCE

- Absent nationwide legislation, users will obtain K2 and similar products from retailers in states where they are legal. In states with pending legislation, increased sales and stockpiling may occur. Prices may increase and secondary outlets may develop. Internet purchases may rise.
- Retailers and users will exploit loopholes, looking for similar products that may not be regulated as evidenced recently in St. Charles County, Missouri, where K2 is banned. Several alternate products, marketed as Texas Gold and Sky, are being sold by an area retailer. Reportedly, despite store owner assurances from a vendor that the substance was safe, testing confirmed the presence of an unnamed prohibited chemical.

**The Drug and Chemical Evaluation Section (ODE) of the Office of Diversion Control continues to gather information on abuse, diversion and trafficking of “Spice/K2” and other herbal mixtures containing synthetic cannabinoids including HU-210, JWH-018, JWH-073, JWH-250, CP 47,497 and its homologues. ODE would appreciate receiving any information related to federal, state or local law enforcement encounters, drug identification, toxicology testing, overdose, and abuse of these products and substances. Contact ODE by phone (202)-307-7183 or email ODE@usdoj.gov.**

This report was prepared by DEA's Indications and Warning Section. This report reflects information received through March 2010. Comments may be directed to the Indications and Warning Section at (202) 307-4358. Requests for copies may be emailed to the Intelligence Production Unit, Intelligence Division, DEA Headquarters at [IntellProduction@usdoj.gov](mailto:IntellProduction@usdoj.gov).

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