

56.



# City of West Allis Matter Summary

7525 W. Greenfield Ave.  
West Allis, WI 53214

File Number	Title	Status
O-2010-0045	Ordinance An Ordinance to Create 6.07 Banning Synthetic Marijuana. Introduced: 11/3/2010	Introduced  Controlling Body: License & Health Committee Sponsor(s): Vincent Vitale

### COMMITTEE RECOMMENDATION

APPROVES

ACTION DATE:	MOVER	SECONDER		AYE	NO	PRESENT	EXCUSED
<u>11-3-10</u>			Barczak				✓
			Czaplewski				
			Kopplin				
			Lajsic				
			Narlock				
			Reinke				
		✓	Roadt				
			Sengstock				
	✓		Vitale				
			Weigel				
			TOTAL	<u>4</u>	<u>0</u>		<u>1</u>

### SIGNATURE OF COMMITTEE MEMBER

*[Handwritten Signature]*

Chair

Vice-Chair

Member

### COMMON COUNCIL ACTION

pass

ACTION DATE:	MOVER	SECONDER		AYE	NO	PRESENT	EXCUSED
<u>11-3-10</u>	✓		Barczak				✓
			Czaplewski	✓			
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		✓	Narlock	✓			
			Reinke	✓			
			Roadt	✓			
			Sengstock	✓			
			Vitale	✓			
			Weigel	✓			
			TOTAL	<u>9</u>	<u>1</u>		<u>1</u>

Ordinance

**File Number: O-2010-0045**

**Final Action:**

**Sponsor(s):** Vincent Vitale

**NOV 03 2010**

An Ordinance to Create 6.07 Banning Synthetic Marijuana.

The Common Council of the City of West Allis do ordain as follows:

PART I. Section 6.07 of the Revised Municipal Code of the City of West Allis is hereby created to read:

6.07 BANNING SYNTHETIC MARIJUANA.

(1) Declaration of intent.

(a) Whereas, The open sale of synthetic marijuana - commonly known as "K-2", "Spice", or by other street names at convenience stores and other retailers, and the public consumption and use of so-called incense products and herbal potpourris is on the rise; and

(b) Whereas, These synthetic marijuana products - which sell for as much as \$40 a gram - are believed to be potpourri-like blends of herbs and marijuana-derivatives formulated in research labs as scientists study their possible therapeutic use (e.g., pain management for cancer patients) and promise users an intoxicating, "legal" high every bit as intense as natural marijuana that will not show up on employer drug screens; and

(c) Whereas, The marijuana derivatives used in these synthetic marijuana products have yet to be tested by the FDA and certified as safe for human consumption, and because they are sold as incense or potpourri there is no health or quality assurance regulation to ensure these products are safe; and

(d) Whereas, Some scientific articles indicate synthetic marijuana may be between 3 and 100 times more potent than natural marijuana with longer duration; and

(e) Whereas, The American Association of Poison Control Centers reports 1,503 synthetic marijuana related calls through September 27, 2010, up from only 13 in 2009; and

(f) Whereas, The National Drug Intelligence Center of the U.S. Department of Justice indicates the adverse effects of synthetic marijuana, when smoked, include panic attacks, anxiety, elevated pulse and blood pressure, numbness, tingling, intense hallucinations, vomiting, and in some cases, seizures; and

(g) Whereas, Users of these synthetic marijuana potpourri products often present in emergency rooms in highly anxious and agitated states requiring repeated doses of sedatives not typically associated with either marijuana or synthetic marijuana use, suggesting these products may be contaminated by unknown harmful chemicals; and

(h) Whereas, The death by suicide of an Iowa teenager has been linked by some to synthetic marijuana use, although the cause is still under investigation; and

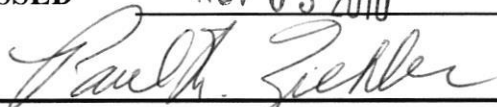
- (i) Whereas, a 28-year-old mother in Indiana passed away after smoking a lethal dose of K2, and a 19-year-old Texas man died after smoking K2; and
- (j) Whereas, a 19-year-old Waukesha man, while under the influence of K2, drove on a highway in the wrong direction, led police on a high-speed chase, and was fatally injured when he crashed into a tow truck; and
- (k) Whereas, a 25-year-old Wisconsin man suffered hallucinations, panic attacks, and agitation after taking K2 and required a three-month stay in the hospital due to the drug's side effects; and
- (1) Whereas, The risk to the health, safety and welfare of West Allis residents from using synthetic marijuana is of deep concern; now, therefore it is determined that it is in the best interest of the health, safety and welfare of the community to establish reasonable regulations for the possession of synthetic marijuana, and to such purpose this section is hereby enacted.
- (2) Possession, Sale, and Use Prohibited. No person or entity shall possess, purchase, display for sale, attempt to sell, give, barter or use any chemical derivative of marijuana or any other substance designed to mimic the physical, psychological, intoxicating, narcotic, or other effects of marijuana.
- (3) Medical and Dental Use Exception. Acts prohibited under (2) shall not be unlawful if done by or under the direction or prescription of a licensed physician, dentist, or other medical health professional authorized to direct or prescribe such acts, provided such use is permitted under state and federal laws.
- (4) Penalties. Any person or entity violating Subsection (2) of this ordinance shall be required to forfeit not less than two hundred dollars (\$200) nor more than one thousand dollars (\$1000). Any person or entity who violates Subsection (2) by offering synthetic marijuana for sale, displaying it for sale, or selling it shall be required to forfeit not less than four hundred dollars (\$400) nor more than two thousand dollars (\$2000). The person or entity shall be required to pay the costs of prosecution. In default of payment thereof, the person shall be imprisoned in the Milwaukee County House of Correction until such forfeiture and costs are paid, but not more than the number of days set forth in Section 800.095(4) of the Wisconsin Statutes. Each and every day that an offense continues constitutes a separate offense.
- (5) Severability. If any part of this section is found to be unconstitutional or otherwise invalid, the validity of the remaining parts shall not be affected. PART II. All ordinances or parts of ordinances contravening the provisions of this ordinance are hereby repealed.

PART III. This ordinance shall take effect and be in force from and after its passage and publication.

ATTO-CreateSect6.07BanningSyntheticMarijuana

**PASSED**

NOV 03 2010



Paul M. Ziehler, City Admin. Officer, Clerk/Treas.

**APPROVED**

11/10/11



Dan Devine, Mayor

ORDINANCE NO. \_\_\_\_\_

An Ordinance to Create 6.07 Banning Synthetic Marijuana.

BY Alderperson Vincent Vatale

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agitated states requiring repeated doses of sedatives not typically associated with either marijuana or synthetic marijuana use, suggesting these products may be contaminated by unknown harmful chemicals; and

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(k) Whereas, a 25-year-old Wisconsin man suffered hallucinations, panic attacks, and agitation after taking K2 and required a three-month stay in the hospital due to the drug's side effects; and

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(2) Possession, Sale, and Use Prohibited. No person or entity shall possess, purchase, display for sale, attempt to sell, give, barter or use any chemical derivative of marijuana or any other substance designed to mimic the physical, psychological, intoxicating, narcotic, or other effects of marijuana.

(3) Medical and Dental Use Exception. Acts prohibited under (2) shall not be unlawful if done by or under the direction or prescription of a licensed physician, dentist, or other medical health professional authorized to direct or prescribe such acts, provided such use is permitted under state and federal laws.

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PART III. This ordinance shall take effect and be in force from and after its passage and publication.

PASSED: \_\_\_\_\_, 2010

\_\_\_\_\_  
CAO, Clerk/Treasurer

APPROVED: \_\_\_\_\_, 2010

\_\_\_\_\_  
Mayor



## Memorandum

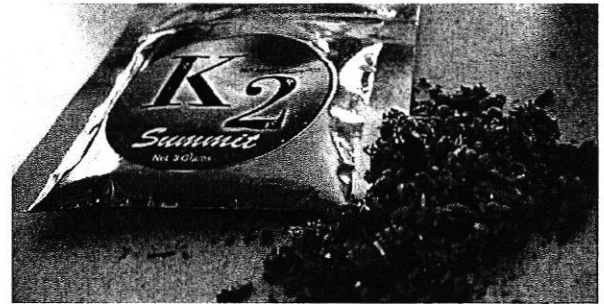
**DATE:** July 21, 2010  
**TO:** Mike Huggins, City Manager  
**FROM:** Richard Thoune, Director/Health Officer  
**SUBJECT:** Summary of Health Effects and Concerns Related to Herbal Incense Products (Street names K2, Spice, etc.) and Synthetic Cannabinoids

The Health Department has searched information sources via the Internet on the health effects and concerns associated with herbal incense products that may be intentionally contaminated with synthetic cannabinoids.

Our summary is as follows:

### The Street Product:

1. Contains one or more herbs. Herbs that could be included: *Canavalia rosea*, *Clematis vitalba*, *Nelumbo nucifera*, *Pedicularis grandifolia*, *Heimia salicifolia*, *Leonurus sibiricus*, or *Ledum palustre*.
2. The most frequently identified active synthetic cannabinoid ingredient reported in the literature is JWH 018, an analgesic chemical that binds with cannabinoid receptors in the human brain. Other synthetic cannabinoid compounds include JWH-073, HU-210, TFMPP, BZP, CP 47,497.
3. JWH-018 is not currently controlled under the federal Controlled Substances Act (CSA), but it is listed as a "drug and chemical of concern", according to Customs and Border Protection.
4. JWH-018 is useful in basic scientific research to identify cannabinoid receptors in the brain and to study the mechanisms of action of Tetrahydrocannabinol (THC), the psychoactive chemical compound in marijuana.
5. JWH-018 is not categorized as a THC substance, and tests for THC in urine will not detect it. It can be identified in product samples using gas chromatography/mass spectrometry testing.
6. HU-210 is a controlled listed drug on Schedule I of the CSA. Products containing it are controlled within the U.S. and subject to U.S. Customs and Border Protection seizure.
7. Ingredients typically listed on packages of K2 or Spice are all herbs, with no mention of synthetic cannabinoids. Some packages are labeled "not for human consumption."



## Summary of Health Effects and Concerns Related to Herbal Incense Products (Street names K2, Spice, etc.) and Synthetic Cannabinoids

### Health Effects and Concerns:

1. Based on anecdotal reports and some published scientific articles, synthetic cannabinoids are between 3 and 100<sup>1</sup> times more potent than tetrahydrocannabinol (THC)<sup>2</sup>, the psychoactive chemical compound in marijuana, but with a longer duration of action.
2. When smoked, synthetic cannabinoid products mimic the hallucinogenic effects of marijuana. Adverse effects reported<sup>3</sup> include:
  - panic attacks
  - rapid heart beat (in the range of 110 to 150 beats/minute)
  - anxiety
  - numbness and tingling
  - hallucinations (which can be intense)
  - agitation
  - elevated blood pressure (in the 140-160/100-110 range)
  - pallor
  - vomiting (which can be severe and may require sedation)
  - In some cases, tremors, and seizures

*Note: The source of the above reported adverse effects has not been validated and/or researched by the National Drug Intelligence Center, U.S. Department of Justice.*

3. At least one case of psychological dependence has been reported by a user who consumed JWH-018 daily for eight months.<sup>4</sup> Withdrawal symptoms were similar to those experienced as a result of cannabis dependence.
4. There are no published scientific research articles on the adverse effects of these products on human health.
5. The true toxicity of synthetic cannabinoids is not known because few reports are available. There is no research on the long-term effects of use. There may be acute and long-term toxicity. All of the possible effects of these drugs may not become known for a long time.
6. Synthetic cannabinoids have not been tested as a drug by the FDA, and cannot be considered safe.
7. In February 2010, Missouri reported 12 cases of K2 synthetic marijuana product exposure among teens in hospital emergency departments across the state, prompting the Director of the Missouri Department of Health and Senior Services to issue a health advisory.<sup>5</sup>
8. Based on the signs and symptoms reported, the Missouri Regional Poison Center is concerned that K2 may be contaminated with other unrecognized chemicals, in addition to the synthetic cannabinoid-like substance. Missouri also reported that K2 is reportedly being used together with other legal and illegal substances. These factors may complicate patient evaluation and management for health care providers.
9. In June 2010, an 18-year-old central Iowa teen that smoked K2 product is reported to have suffered an acute panic attack and committed suicide, prompting the Iowa Office of Drug Control Policy Coordinator to issue a cautionary news release about K2/Spice.<sup>6</sup>

<sup>1</sup> Nicoll RA, Alger BE (2004). "The brain's own marijuana". *Sci. Am.* **291** (6): 68-75.

doi:10.1038/scientificamerican1204-68. PMID 15597982.

<sup>2</sup> <http://en.wikipedia.org/wiki/Tetrahydrocannabinol>

<sup>3</sup> <http://www.justice.gov/ndic/pubs41/41193/sw0006p.pdf>

<sup>4</sup> <http://en.wikipedia.org/wiki/JWH-018>

<sup>5</sup> [http://www.dhss.mo.gov/BT\\_Response/HAd/HAd3-5-2010.pdf](http://www.dhss.mo.gov/BT_Response/HAd/HAd3-5-2010.pdf)



Summary of Health Effects and Concerns Related to Herbal Incense Products (Street names K2, Spice, etc.) and Synthetic Cannabinoids

10. In Eau Claire County, hospitalization of one young adult has been reported by a family after use of K2 or Spice herbal product.<sup>7</sup>

**Conclusions:**

1. Information from legitimate federal and state sources, and one medical professional at a poison control center, document the potential acute adverse health effects that are possible among users who smoke the product, as well as other potential associated fatal consequences, such as suicide. The adverse health effects associated with product use constitute a health hazard.
2. The reported adverse effects of product use could be expected to leave a user temporarily incapacitated and unable to function without supervision. The user could harm themselves or other members of the public when under the influence of the product, creating a public safety hazard.
3. Long term health effects and acute and long term toxicity of the products remains unknown at this time.
4. Information collected to date on adverse health effects remains mostly anecdotal.

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<sup>6</sup> <http://www.iowa.gov/odcp/docs/NewsReleaseSpiceAlert61610.pdf>

<sup>7</sup> Individual Family Report to Eau Claire City Council Member D. Wachs

## An Ordinance to Create 6.07 Banning Synthetic Marijuana

Sponsored by Vincent Vitale

### (1) Declaration of intent.

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An Ordinance to Create 6.07 Banning Synthetic Marijuana

Sponsored by Vincent Vitale

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- c. Whereas, The marijuana derivatives used in these synthetic marijuana products have yet to be tested by the FDA and certified as safe for human consumption, and because they are sold as incense or potpourri there is no health or quality assurance regulation to ensure these products are safe; and
- d. Whereas, Some scientific articles indicate synthetic marijuana may be between 3 and 100 times more potent than natural marijuana with longer duration; and
- e. Whereas, The American Association of Poison Control Centers reports 567 synthetic marijuana related calls in the first six months of 2010, up from only 13 in 2009: and
- f. Whereas, The National Drug Intelligence Center of the U.S. Department of Justice indicates the adverse effects of synthetic marijuana, when smoked, include panic attacks, elevated pulse and blood pressure, intense hallucinations, and in some cases, seizures; and
- g. Whereas, Users of these synthetic marijuana potpourri products often present in emergency rooms in highly anxious and agitated states requiring repeated doses of sedatives not typically associated with either marijuana or synthetic marijuana use, suggesting these products may be contaminated by unknown harmful chemicals; and
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Jenna,  
You should do your  
computer magic + find  
these reports/studies  
to include in the CC  
jacket.

Add  
Witness

Double  
the amount  
if offered  
or displayed  
for sale  
or selling

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*Can we still do the suspensions for non-traffic offenses?*



# Microgram

## Bulletin

Published by:

The Drug Enforcement Administration  
Office of Forensic Sciences  
Washington, DC 20537

The U.S. Attorney General has determined that the publication of this periodical is necessary in the transaction of the public business required by the Department of Justice. Information, instructions, and disclaimers are published in the January issues.

- MARCH 2009 -

- INTELLIGENCE ALERT -

### "SPICE" - PLANT MATERIAL(S) LACED WITH SYNTHETIC CANNABINOIDS OR CANNABINOID MIMICKING COMPOUNDS

The Customs and Border Protection (CBP) - Chicago Laboratory (Illinois) recently received five small, re-sealable, bright foil packets containing dull olive-colored plant material(s), labelled as "Spice Gold," "Spice Silver," "Spice Diamond," "Genie," and "Yucatan Fire" incense (see Photo 1, right, and Photos 2 - 3, next page), all reputedly laced with various synthetic cannabinoids or synthetic cannabinoid mimicking compounds, notably "HU-210" [(6aR,10aR)-9-(hydroxymethyl)-6,6-dimethyl-3-(2-methyloctan-2-yl)-6a,7,10,10a-tetrahydrobenzo[c]chromen-1-ol); see Figure 1, next page]. The exhibits were selected from a shipment containing approximately 1,500 such packets that were detained by a CBP agricultural specialist at an express parcel service hub in Wilmington, Ohio. The items were not smuggled but were rather part of a formal entry. Standard marijuana analyses (microscopy) of the materials were negative. Analysis of extracts by



Photo 1 - Packages are about 2 x 3 inches.

GC/MS in the scan mode with split injection indicated only the presence of a large amount of vitamin E and other, smaller amounts of various natural products. However, when the extracts were derivatized with N,O-bis(trimethylsilyl)acetamide and injected splitless with selected ion monitoring, HU-210 was found in very small but verifiable amounts in every packet (not quantitated). The results were confirmed against a standard. These were the first such submissions to the laboratory.



Photo 2



Photo 3

[Additional Laboratory and Editor's Notes: In addition to the above-named products, there are at least two other such herbal products: "Skunk," and "Sence." These products are currently being encountered nationwide. They, and the synthetic cannabinoids and cannabinoid mimic compounds they contain, are also the subjects of widespread discussion and speculation on the Internet. Based on anecdotal reports, HU-210 is hundreds of times more potent than THC; thus, the trace amounts detected in the above case are physiologically active, and these materials may be viewed as "stealth marijuana." The reference standard of HU-210 used in this case was purchased from Cayman Chemical of Ann Arbor, Michigan. The ions selected for the analysis were  $m/z$  446 (100%), 530 (molecular ion), 447, 474, and 356. Note that HU-210 is named in several different ways; for example: (6a*R*,10a*R*)-3-(1,1'-dimethylheptyl)-6a,7,10,10a-tetrahydro-1-hydroxy-6,6-dimethyl-6H-dibenzo[b,d]pyran-9-methanol. HU-210 is controlled (Schedule I) in the U.S. (See: [http://www.deadiversion.usdoj.gov/drugs\\_concern/spice/spice\\_hu210.htm](http://www.deadiversion.usdoj.gov/drugs_concern/spice/spice_hu210.htm)), and products containing it and similar cannabinoids are controlled within the U.S. and in a number of other countries, including Austria, Canada, Germany, the Netherlands, and Switzerland. In addition to HU-210, there are at least half a dozen other compounds with similar structures, plus several unrelated compounds that have cannabinoid mimicking effects (notably JWH-018 (1-pentyl-3-(1-naphthoyl)indole)), that are being used to adulterate the plant materials in "Spice" and similar products. An article presenting mass spectral data and background information on these compounds was recently published on line (not yet published in hard copy); see: Auwarter V, Dresen S, Weinmann W, Muller M, Putz M, Ferreiros N. "Spice" and other herbal blends: Harmless incense or cannabinoid designer drugs? *Journal of Mass Spectrometry* 2009.]

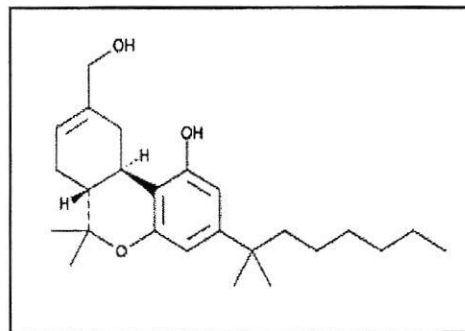


Figure 1 - HU-210

Sept. 27, 2010  
Jessica Wehrman  
(703) 894-1863  
wehrman@aapcc.org  
[www.aapcc.org](http://www.aapcc.org)

### **Fake Marijuana Spurs More than 1,500 Calls to U.S. Poison Centers This Year Alone**

**Alexandria, Va.** - Synthetic marijuana products being sold at gas stations, convenience stores and "head shops" have spurred more than 1,500 calls to U.S. poison centers this year alone, causing increased concern among doctors and clinicians as well as state lawmakers, who are quickly moving to outlaw such products.

Synthetic marijuana, marketed under product names including "Spice," "K2," "Genie," "Yucatan Fire," "Sence," "Smoke," "Skunk," and "Zohai," has spurred callers to poison centers from 48 states and the District of Columbia. As of Sept. 27, 2010, poison centers reported 1,503 calls about the products, according to the American Association of Poison Control Centers' National Poison Data System (NPDS).

"These products present a health risk that is not worth it for consumers," said Missouri Poison Center Medical Director Anthony J. Scalzo, MD, who first noticed increased calls about these products to his center last fall. "The products are meant to create a similar reaction to marijuana, but in fact, patients often report the opposite – a fast, racing heartbeat, elevated blood pressure and nausea."

These products are typically marketed as incense or potpourri and have been sold since 2006 for about \$30 to \$40 per three-gram bag. Scalzo said parents should be on the lookout for what looks like incense in their child's room and watch to see if their children seem more anxious than usual. "Statistics from NPDS show that this is an emerging phenomenon," said Alvin C. Bronstein, MD, acting director of toxicosurveillance for the American Association of Poison Control Centers. "The symptoms can be life-threatening."

Jim Hirt, executive director of the American Association of Poison Control Centers, said those with questions about synthetic marijuana should call their local poison center.

"Poison centers are staffed with medical professionals who are trained to know how to treat a poison exposure, including an exposure to synthetic marijuana," he said. "Poison centers are available 24 hours a day, seven days a week, to answer questions about any substance that could be harmful to your health. "

The American Association of Poison Control Centers supports the nation's poison control centers. Poison centers offer free and confidential services 24 hours a day, seven days a week. For questions about poison or poison prevention, call your local poison center at 1 (800) 222-1222.



**K2/Spice Fact Sheet**

**( Sue Parr, CCOVA Public Policy Coordinator )**

1. K2/Spice products are a mixture of herbal/spice plant products sprayed with potent psychotropic drugs, often contaminated with unidentified toxic substances which contribute to various adverse health effects (also cause hallucinogenic effects similar to effects of PCP).
2. Marketed under variety of names including K2, Spice, Pep Spice, Spice Silver, Spice Gold, Spice Diamond, Smoke, Sence, Skunk, Yucatan Fire, Genie & Zohai- sold in variety of colors/flavors-usually sold in foil packaging
3. Symptoms/Side-Effects may include:
  - a. mimics marijuana "high" (often induced more quickly/more intense than "real" marijuana)
  - b. hallucinations
  - c. seizures/tremors
  - d. coma/unconsciousness
  - e. vomiting
  - f. numbness/tingling
  - g. increased respiration rate
  - h. elevated blood pressure (reported up to 200/100-medically dangerous)
  - i. elevated heart rate (reported up to rate of 150-medically dangerous)
  - j. increased level of anxiety/agitation leading to panic attacks (possible suicide attempts)
4. Depending on synthetic compound in specific commercial brand, can be anywhere from 4 times to over 100 times more potent than regular marijuana (THC)
5. Sold in tobacco shops, head shops, and convenience stores
6. Sold as "incense" marked "not for human consumption"
7. Price averages \$45 for 3 grams (about equal to 3 sugar packets)-higher than good grade marijuana
8. Most often smoked but can be mixed in with food or drink
9. Most likely users:
  - a. 14-27 yr. olds
  - b. Prisoners/probationers
  - c. Military (use now banned by all military branches)
10. Developed by Dr. John W. Huffman, a Clemson University professor, as part of research for National Institute for Drug Abuse (NIDA) on endogenous cannabinoid receptors-but never tested on humans nor approved by FDA
11. Dr. Huffman said in interview to WebMD "It is like Russian roulette to use these drugs. We don't know a darn thing about them for real." "It shouldn't be out there."
12. JWH-018 & many of its "cousins" such as HU-210/211, JWH-073 & CP 47/497 found in these drugs have a chemical structure shared with known cancer-causing agents.
13. All effects of K2/Spice drugs may not be known for very long time because of long time period that body stores them.
14. So far nothing is known about metabolism of the chemical compounds in K2/Spice drugs-some may be toxic and/or pharmacologically active-differing from batch to batch in kind/amount of applied drugs (synthetic) thus resulting in higher risk of

- accidental overdosing which has already been seen & is on rise with these drugs with increase numbers of ER & hospital incidents reported
15. There are hundreds more of these chemical compounds containing active cannabinoid receptors so can be safely assumed that further such substances will appear on market soon if not banned-greatly increasing challenges for toxicology testing, law enforcement and medical/healthcare professionals.
  16. Causing difficulties for law enforcement agencies, including probation & parole, as well as drug courts due to difficulties in testing for presence-one lab test now known to detect it in system but at cost of \$50 & will probably not test positive for all the known variations
  17. Dr. Huffman & Dr. Huestis (Chief of Chemistry/Drug Metabolism at National Institute for Drug Abuse) indicate that when taking these drugs, it is "hijacking the part of the brain important for many major functions: temperature control, food intake, perception, memory and problem solving. Many people taking these high-potency drugs are affecting important functions throughout their bodies-hormone functions for example." Doctors also express concern that the drugs may involve acute toxicity levels, possibly long term, as well as impacting cannabinoid receptors that regulate body's immune system.
  18. Retailers selling the drugs report a recent increase in sales from app. \$1000 daily up to \$10, 000 daily.
  19. Medical reports indicate that K2/Spice drugs potentially result in users developing a rapid and powerful addiction on a level not usually found among smokers of "real" marijuana.
  20. Recently linked to over 352 nationwide emergency room incidents-includes suicide attempts, extremely elevated heart rate/blood pressure, comas, seizures, and anxiety attacks.
  21. Police in Indianola, Iowa report 18 yr old smoking K2 resulting in severe anxiety attack-stated was "going to hell" and went home and shot & killed his self.
  22. K2/Spice is labeled by users as the "stealth" marijuana.
  23. Dr. Anthony Scalzo (professor of toxicology at St. Louis University) indicates he's seen nearly 30 cases in past month involving teenagers experiencing hallucinations, severe agitation, elevated heart rate/blood pressure, vomiting and tremors/seizures as result of smoking K2.
  24. Dr. Scalzo says that what makes K2 (and other Spice derivatives) so dangerous is that its side effects suggest that it also affects the user's cardiovascular system, as well as the central nervous system.
  25. One sign of use that parents should look for is dried herbal residue in their children's rooms, as well as the foil packets in trash.
  26. Check out advertising at <http://www.dutchincense.com/>

\*\*\* If you have any additional questions, information or input regarding this synthetic marijuana product and it's local use/distribution, please contact Sue Parr, the legislative/public policy director for CCOVA (Community Coalitions of VA-[www.ccova.org](http://www.ccova.org)) & the Bragg Hill Community Coalition's Drug Free Community Project Director at 540-371-3513 (W), 540-287-5764 (C), or [bragghillcc@live.com](mailto:bragghillcc@live.com)

## CASE REPORT

# Withdrawal Phenomena and Dependence Syndrome After the Consumption of "Spice Gold"

Ulrich S. Zimmermann, Patricia R. Winkelmann, Max Pilhatsch, Josef A. Nees,  
Rainer Spanagel, Katja Schulz

## SUMMARY

**Background:** "Spice" and other herbal blends were marketed in Germany until January 2009 as substances purportedly exerting similar effects to cannabis, yet containing no cannabinoids. These products were recently forbidden in Germany under the provisions of the German Narcotics Law after they were found to contain undeclared, synthetic cannabinomimetic substances. The authors describe physical withdrawal phenomena and a dependence syndrome that developed after the consumption of "Spice."

**Case presentation and course:** A 20-year old patient reported that he had smoked "Spice Gold" daily for 8 months. He developed tolerance and rapidly increased the dose to 3 g per day. He felt a continuous desire for the drug and kept on using it despite the development of persistent cognitive impairment. His substance use led him to neglect his duties in his professional training position. Urinary drug screens were negative on admission to the hospital, as they were again on discharge. On hospital days 4–7, he developed inner unrest, drug craving, nocturnal nightmares, profuse sweating, nausea, tremor, and headache. His blood pressure was elevated for two days, with a maximal value of 180/90 mm Hg accompanied by a heart rate of 125/min. The patient stated that he had experienced a similar syndrome a few weeks earlier during a phase of abstinence owing to a short supply, and that it had quickly subsided after he had started consuming "Spice" once again.

**Conclusions:** The authors interpret the symptoms and signs described above as a dependence syndrome corresponding to the ICD-10 and DSM-IV criteria for this entity. The physical withdrawal syndrome closely resembles that seen in cannabis dependence. The authors postulate that the syndrome in the patient described was due to an admixture of synthetic cannabinomimetics such as JWH-018 and CP 47497 in "Spice Gold," in combination with the patient's daily consumption in very large amounts.

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**Key words:** designer drugs, drug abuse, addictive behavior, pathogenesis of addiction, drug-withdrawal therapy

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**P**re-packed herbal blends were sold in Germany and other European countries until January 2009. The smoke of these products is supposed to have cannabinoid-like effects when inhaled, although they do not contain any cannabis. Several names have been given to these products, such as "Spice," "Smoke," "Scence," "Yucatan Fire," or "Skunk." As this drug had spread rapidly by the end of 2008, there was an intensive discussion about any possible risk. In December 2008, several laboratories detected an admixture of the synthetic cannabinomimetic substances JWH-018 and CP-47-497. These are in all probability the sole cause of the psychotropic effects of these smoked products (1). Therefore, the German Federal Ministry of Health made all products containing these substances subject to the Narcotics Law, by fast-track legislation on 22 January 2009. For this reason, production, trade and possession are prohibited. There is still no reliable scientific information on the actions of these substances in man. We have observed withdrawal phenomena after regular consumption of these substances in the form of "Spice Gold."

## Medical history

A youth care worker presented a 20-year-old patient (165 cm, 50.8 kg). She had been taking care of him as part of a professional rehabilitation measure. He had not participated in practical work for four weeks and now he was threatened with losing his professional training position. As regards his drug history, the patient reported that he had been consuming illegal drugs for about three years. At the beginning, he had only consumed hashish. After that he had also begun to take hallucinogenic mushrooms and *Salvia divinorum*, a type of sage with the hallucinogenic active substance salvinoin A. He drank alcohol very rarely; he had never regularly consumed opiates or other illegal drugs than the above mentioned and had not done this at all in recent years. Besides ten cigarettes per day, he has only been consuming "Spice Gold," initially 1 g daily, for eight months. Due to decreasing effect, he had rapidly increased the dose to a final value of 3 g daily—split into 3 to 4 doses, with the first dose early in the morning. For this purpose, he inhaled the smoke from the herbal mixture burned in a glass pipe ("bong"). Owing to the consumption of the substance, he had often recently been listless and had had problems in thinking clearly. A few weeks ago

during a phase of abstinence owing to shortages in supply, he had developed symptoms in the form of profuse sweating during the day and especially in the night, as well as internal unrest, tremor, palpitation, insomnia, headache, diarrhea, nausea, and vomiting. Additionally he had suddenly felt depressed and desperate. This had lasted for two days and had only abruptly disappeared after taking the drug again. Therefore, he no longer had the courage to discontinue the drug by himself. In the last month, he had additionally unintendedly lost 5 kg in weight and could only sleep about five hours in the night. As a result, the primary care physician initially prescribed zopiclone four days earlier. The patient stated that he had taken 7.5 mg of this drug for the night.

### History

The patient fell ill from Langerhans cell histiocytosis at the age of four months. When he was two years old, he was successfully treated with chemotherapy and operated for chronic otitis media. He subsequently developed pituitary deficiency, which required substitution of growth hormone up to the age of 18 and permanent treatment of diabetes insipidus with vasopressin (desmopressin nasal spray). This constellation allows the conclusion that the patient had been suffering from the Hand-Schüller-Christian disease.

He received psychotherapy as an outpatient from the age of three to ten and again at the age of 16, due to social withdrawal and occasional eating disorders. The responsible psychiatrist reported that he had already diagnosed attention deficit/hyperactivity disorder (ADHD) and this had improved during treatment with unretarded methylphenidate at up to 2 x 15 mg/d. However, the patient denied any positive effect and reported that he had in fact discontinued this treatment after six months because of frequent impulsive and aggressive behavior. He stated that he had felt internal unrest and nervousness in a disturbing way since early childhood and that this had been the trigger for his drug consumption, too. His experience had been that the unrest could only be improved by cannabis or "Spice Gold." The patient's half-sister was addicted to methamphetamine ("Crystal") and had committed suicide at the age of 31. The rest of the family's medical history was unremarkable. Due to his previous experience of withdrawal phenomena, the patient requested medical treatment for detoxication of "Spice Gold" and therefore was admitted to hospital on a voluntary basis.

### Findings on admission

The patient's very slim build and his spinal scoliosis were striking during the examination. The internal and neurological findings were unremarkable. From the psychopathological point of view, the patient acted in an appropriate manner to the situation, although he was slightly anxious and insecure. Otherwise, the alcohol breath test was normal. Immunological rapid tests for cannabinoids, benzodiazepines, amphetamines, cocaine, opiates and methadone in urine were negative. In routine laboratory tests, normal values were found apart from

borderline anemia with Hb 8.5 mmol/L (normal: >8.6). The heart rate (HR) was 82/min, the blood pressure 130/70 mm Hg and the ECG was unremarkable.

### Clinical course in hospital

The first abstinent day of treatment (day 1) was symptom-free. In the evening of day 2, the patient complained about increasing internal unrest. As requested by the patient, zopiclone was nevertheless reduced from 7.5 mg to 3.75 mg and discontinued after one single dose. In the following night, the patient started to sweat profusely for the first time.

From day 4, the patient started to develop increasing internal unrest, strong desire for "Spice," nightmares, profuse sweating, nausea, tremor, and headaches. These symptoms did not improve after a renewed single administration of 7.5 mg zopiclone, either. Additionally the patient reported that "he had stood beside himself." He had also developed the familiar intermittent feeling of electrical shocks and "twitches" around the shoulder, followed by a feeling of numbness in the right arm, radiating into the fingers and lasting for approximately one minute. The blood pressure increased to a maximum of 180/90 mm Hg with a maximum heart rate of 125/min. For two days, the blood pressure was mostly 140/90 mm Hg with a heart rate of 95/min. Oral single administrations of promethazine 25 mg and clonidine 0.175 mg decreased the blood pressure. However, they hardly changed the other symptoms.

From the morning of day 7, the symptoms disappeared and the patient felt well despite further hypertension around 140/85 mm Hg with HR around 100/min, lasting till his release on day 21. From day 10 of treatment, he was clearly irritable and reported that he had had several arguments with his parents. This was contrary to his normal friendly behavior. An EEG on day 14 showed an alpha-beta-mixed type without epileptiform potentials.

From day 8 of treatment, the patient complained about the familiar increasing internal unrest and nervousness. This was especially disturbing in the night and kept him from falling asleep. Because of the unfavorable prior experience with methylphenidate and with the suspicion of hypofunction of the dopaminergic system, the patient was treated off-label (after prior explanation) from day 11 with 0.175 mg pramipexole for the night. This brought a slight improvement. The patient reported that the unrest and his sleep at night had effectively improved after increasing the dose to 0.35 mg on day 18. He had only been able to sleep so well when consuming the drug. No adverse events were reported or observed.

A second immunochemical drug screening in urine on the day of release was negative for cannabis metabolites, amphetamines, cocaine metabolites, and opiates. The patient fully participated in a structured and addiction-specific psychotherapeutic program with group meetings using a cognitive behavioral therapy approach, taking place four times weekly. Four days after his release, the patient returned to the hospital. He was still well. Nevertheless, he did not take advantage of further outpatient

meetings offered to him. Four months after his release, he returned to the hospital as an outpatient and reported that he felt well and that he was abstinent from Spice products. However, he had consumed cannabis about four times since his release. He stated that he had discontinued pramipexole after approximately one month, as he could now sleep well enough without either this drug or zopiclone.

### Discussion

In accordance with the experience of other consumers discussed in relevant Internet forums, the patient described how "Spice Gold" acted similarly to cannabis and was relaxing and sedative. It produced ravenous cravings. However, the main difference between "Spice" and cannabis was that "Spice" produced less euphoria. Overall he felt that the effect of "Spice" was stronger than that of hashish. A sample of "Spice Gold" was bought through the Internet and then examined by gas chromatography and mass spectroscopy. No cannabinoids or other familiar ingredients of illegal drugs could be detected. The psychotropic effect of the sample was confirmed by two experienced consumers of cannabis through inhaling the smoke.

The symptoms described can be interpreted as a physical withdrawal syndrome as a consequence of the discontinuation of "Spice Gold." This has several similarities with withdrawal symptoms after discontinuing cannabis. A zopiclone withdrawal syndrome is also a theoretical possibility; this would resemble benzodiazepine withdrawal (2). However, the following points argue against this:

- the very short-term and low dosage administration of zopiclone,
- the patient's spontaneous request for dose reduction,
- the lack of observable difficulty in falling asleep and sleeping through,
- the persistence of withdrawal symptoms despite renewed zopiclone administration, and
- their reproducible occurrence after discontinuation of "Spice Gold."

For this reason, this differential diagnosis was excluded as cause of this withdrawal syndrome.

Besides the withdrawal symptoms, the following other addiction criteria are also present in the described case:

- dose increase,
- strong desire for the substance with an urgent need for consumption,
- continuous consumption despite the consequences ("often listless and problems with thinking clearly"),
- Neglect of other interests or duties (participation in practical work).

Therefore, five dependency criteria have been fulfilled within a period of eight months, justifying the diagnosis of a dependency syndrome according to both ICD-10 and DSM-IV.

In December 2008, different synthetic substances were detected in "Spice" and other products mentioned before. These substances act agonistically on the canna-

binoid receptors CB1 and CB2. They exhibit much higher receptor affinity than natural cannabinoids. These cannabinoids are JWH-018, CP-47-497, and homologs and stereomers of these, as well as oleamide (1). For this reason, the addictive disease of our patient is in all probability based on the action of these cannabinomimetics. However, it must be pointed out that no body fluids were stored when he was admitted to hospital and therefore the detection of the actual consumption of these substances is lacking.

With this limitation, the authors' observations serve as further evidence for the cannabinoid withdrawal syndrome—which has long been a controversial topic (3). This syndrome could only be established with absolute certainty as a separate clinical entity after two new developments (4). On the one hand, the THC content (THC, tetrahydrocannabinol) of the commercially available cannabis products has doubled in the last twenty years through targeted culture and artificial lighting of the plants (5). According to other sources, the content has even increased by factor of four (6). On the other hand, consumption habits have changed, in that more and more hashish is burned in a "bong" and inhaled in a single breath, instead of being mixed with tobacco and then smoked as a joint over a period of several minutes. Then the ingredients rapidly flood into the body and produce more intensive psychotropic effects. This typically leads to consumption of higher amounts, more intensive withdrawal symptoms and higher risk of addiction (7). The patient described here used a "bong." This form of consumption was connected with the use of high amounts of "Spice Gold" (3 g daily). Together this may have led to a fully developed and manifest addiction disease, which is theoretically expected for these cannabinomimetic substances. The probable ADHD may have enhanced this process, as the patient used the substance for self-treatment of his lasting disrupting unrest, nervousness and sleep disturbances.

The observations confirm the necessity of the planned classification of the mentioned synthetic cannabinomimetics as narcotic in January 2009. The special feature of the phenomenon "Spice" is that for the first time a synthetic drug has been commercially distributed disguised as "herbal blend." This must be seen as a malicious deception of the consumer. What makes this particularly alarming is that neither JWH-018 nor CP-47-497 has been examined with respect to its safety when used in man. The same applies to about 100 other cannabinomimetics with similar chemical structures which have been synthesized in recent years (8). Here the possibility of a wave of other cannabinomimetic "designer drugs" must be considered. Due to the increasing knowledge about the utilization of cannabinoids for treatment of therapy resistant symptoms (9), this should not be used as an excuse to neglect scientific studies of innovative cannabinomimetic substances.

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**Conflict of interest statement**

The authors declare that there is no conflict of interest in the sense of the guidelines of the International Committee of Medical Journal Editors.

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# IOWAPOLITICS.COM

## IowaPolitics.com Press Releases

### U.S. Sen. Grassley: Prepared statement of Sen. Grassley of Iowa

9/22/2010

The Growing Problem of K2  
Wednesday, September 22, 2010

Video of Senator Grassley's floor speech can be found by clicking here.

Mr. President, as a parent and grandparent I have long been concerned about the dangers that face our kids. I have been especially concerned about the large amount of dangerous drugs in this country.

It is clear that drug dealers will stop at nothing to get our kids hooked on drugs. All too often we learn of new and emerging drug threats to our communities that often have a negative impact on our youth.

When these drug threats emerge it is crucial that we unite to halt the spread of the problem before it consumes families and communities.

Today we are confronted with new and very dangerous substances packaged as innocent products. Specifically, kids are able to go online or to the nearest shopping mall and purchase incense laced with chemicals that alter the mind and body.

These products are commonly referred to as K2 or Spice among other names.

In the chart behind me, you can see the packaged varieties of K2 products. Kids and drug users are smoking this product in order to obtain a "legal high." It is believed that K2 products emerged on the scene beginning about 4 or 5 years ago. Their use spread quickly throughout Europe and the U.S.

According to a study conducted by the European Centre for Drugs and Drug Addiction, most of the chemicals found in K2 products are not reported on the label. This study concluded that these chemicals are not listed because there is a deliberate marketing strategy to represent this product as a natural substance.

However, K2 is anything but natural.

Most of the chemicals the DEA has identified within K2 products were invented by Dr. John W. Huffman of Clemson University for research purposes. These synthetic chemicals were never intended to be used for any other purpose other than for research.

They were never tested on humans and no long term effects of their use are currently known.

As more and more people are experimenting with K2 it is becoming increasingly evident that K2 use is anything but safe.

The American Association of Poison Control Centers reports significant increases in the amount of calls concerning these products. There were only 13 calls related to K2 use reported for 2009. There have been over 1,000 calls concerning K2 use in 2010 to date.

This is a drastic increase in a short amount of time.

Common effects reported by emergency room doctors include: increased agitation, elevated heart rate and blood pressure, hallucinations, and seizures. Effects from the highs from K2 use are reported to last several hours and up to one week.

Dr. Huffman has stated that since so little research has been conducted on K2 chemicals using any one of them would be like, "playing Russian roulette."

In fact, Dr. Anthony Scalzo, a professor of emergency medicine at St. Louis University, reports that these chemicals are significantly more potent than marijuana. Dr. Scalzo states that the amount of chemicals in K2 varies from product to product so no one can be sure exactly the amount of the drug they are putting in their body. Dr. Scalzo reports that this can lead to significant problems such as altering the state of mind, addiction, injury, and even death.

According to various news articles across the nation, K2 can cause serious erratic and criminal behavior.

In Mooresville, Indiana police arrested a group of teens after they were connected to a string of burglaries while high on K2. The local County Attorney prosecuting the case stated this was an unusual crime spree. These kids were not the type who are normally seen in the criminal justice system. The County Attorney stated that these kids had, "no prior record, good grades, athletes, so that got me wondering: is there a correlation between K2 and the crime?"

Another case in Honolulu, Hawaii shows police arrested a 23-year-old man after he tried to throw his girlfriend off an 11th floor balcony after smoking K2.

A 14 year-old boy in Missouri nearly threw himself out of a 5th story window after smoking K2. Once the teen got over his high he denied having any suicidal intentions. Doctors believe he was hallucinating at the time of this incident.

K2 use is also causing serious health problems and increased visits to the emergency room.

A Louisiana teen said he became very ill after trying K2. The teen said he experienced numbness starting at his feet and traveling to his head. He was nauseous, light-headed and was having hallucinations. This teen stated that K2 is being passed around at school. The teen also stated that many people were trying it without fear, assuming it was safe because it was legal.

Another case has a teenager in Indiana being admitted to the emergency room with a blood pressure of 248/134 after testing positive for K2.

A teen in Texas, became temporarily paralyzed from the waist down after smoking K2.

Another teen in Texas had a heart attack after smoking K2 but fortunately survived this event.

Regrettably, K2 use also has deadly consequences.



The picture behind me is of David Rozga. David was a recent 18 year-old Indianola, Iowa High School Graduate. According to his parents and friends, David was a bright, energetic, talented student who loved music, was popular, and active in his church. David was looking forward to attending the University of Northern Iowa this fall.

On June 6, 2010 David, along with some of his friends, smoked a package of K2 thinking it was nothing more than a little fun. David and his friends purchased this product at a mall in Des Moines after hearing about it from some college students who were home for the summer. After smoking this product, David's friends reported that David became highly agitated and terrified. When he got home, he found a family shotgun and committed suicide 90 minutes after smoking K2.

The Indianola police believe David was under the influence of K2 at the time of his death. David's parents and many in the community who knew David were completely shocked and saddened by this event. As a result, the Iowa Pharmacy Board placed an emergency ban on K2 products in Iowa which began on July 21, 2010.

David's tragic death may be the first case in the United States of K2 use leading to someone's death, but sadly it was only the beginning.

A month after David's tragic death police report that, a 28-year-old Middletown, Indiana mother of two passed away after smoking a lethal dose of K2. This woman's godson reported that anyone could get K2 easily because it can be sold to anybody at any price at any time.

This last August, a recent 19-year-old Lake Highlands High School graduate in Dallas, Texas passed away after smoking K2. The medical examiner confirmed that this boy had K2 in his system at the time of his death.

These incidents throughout the country give me great concern that K2 use is a dangerous and growing problem.

Twelve states, including Iowa, have acted to ban the sale and possession of the chemicals found in K2 products. Many more states, counties and communities throughout the country have proposed bans or are in the process of banning these products.

However, a recent article in the Des Moines Register highlights the fact that some stores are working around these bans by changing some of the chemicals and relabeling the products.

I believe it is time we have a national discussion about these dangerous substances. I hope in the coming weeks and months that my colleagues will begin to take notice of this issue.

As Co-Chairman of the Senate Drug Caucus it is my hope that we will have a hearing on this issue in the not-too-distant future.

It is important to fully understand the magnitude and implications of allowing these products to remain legal in the U.S.

Mr. President, it is clear that the sale and use of K2 products is a growing problem.

People believe these products are safe because they can buy them online or at the nearest shopping mall. We need to do a better job at educating the public and our communities about the dangers these

products present. We need to nip this problem in the bud before it grows and leads to more tragedy.

I urge my colleagues to join me as we explore positive actions to stem the use of K2.

-30-



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## **Justice News Flash, Press Release**

/ Middletown IN Mother of Two Dead After Smoking Synthetic Marijuana a.k.a Spice

# **Middletown IN Mother of Two Dead After Smoking Synthetic Marijuana a.k.a Spice**

2010-08-16 21:16:24 (GMT) (JusticeNewsFlash.com - Justice News Flash, Press Release)

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08/16/2010 // West Palm Beach, FL, USA // [Sandra Quinlan](#) // Sandra Quinlan

Middletown, IN— An Indiana mother of two died in July after smoking Spice, commonly regarded as synthetic marijuana. While a label reading, “Not for human consumption,” is affixed to all packages of Spice, emergency calls related to its use have risen from 13 in 2009 to over 567 this year, according to a August 4, 2010 Fox59 report and a previous report titled, “Several States Taking Action to Outlaw Synthetic Marijuana, Known as K2 or Spice.”

The synthetic marijuana has been sold as incense under names including Spice, K2 and Mr. Smiley. It contains synthetic cannabinoids, which emulate the effects of tetrahydrocannabinol (THC), marijuana’s most active ingredient.

Nonetheless, the cannabis substitute remains unregulated by the U.S. Food and Drug Administration (FDA). It also appears more people experimented with the dangerous substance, based on the incentive that it is legal and will not show up on drug tests.

Lilly Helsley, a 28-year-old Middletown woman, reportedly died after smoking Spice last month. According to Helsley's godson Doug Hogan, 16, "You can get it really easily... It's pretty much like marijuana. It can be sold to anybody at any price at any time."

Reports indicated at least eight people in Marion County, Indiana were hospitalized after smoking the synthetic pot. Two deaths in the state were also apparently linked to the lethal incense.

"You can't detect it. It's more powerful than marijuana. People who smoke it say it really does mess you up. It causes a person to become extremely high. The withdrawals are horrible. Clients get very angry and agitated," Brendan Bickley, clinical director of a Southern California addiction treatment center, said.

Another horrific case involved 18-year-old David Rozga, of Iowa. He and some friends apparently experimented with K2 in June. However, Rozga apparently began "freaking out," declaring he was "going to hell" after smoking the substance. Rozga eventually went home and tragically shot himself in the head.

Bickley added, "Whatever is being done is not being done fast enough... It's the perfect drug. It's legal. It's undetectable. It's odorless. It's cheap."

Eight states have banned the sale and use of the Spice thus far. Several other states are also working towards establishing similar legislation.

Legal News Reporter: [Sandra Quinlan](#) - Legal News for Indiana **Personal Injury Lawyers**.

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# Drug Alert Watch

## Use of Synthetic Cannabinoid Products by Teens and Young Adults Increasing

U . S . D E P A R T M E N T O F J U S T I C E

EWS Report 000006

May 18, 2010

***Law enforcement officials in many areas of the country are reporting increasing use of synthetic cannabinoid products by teens and young adults as these products are widely available. Often hyped as a legal alternative to marijuana, individuals subject to scheduled or random drug screening tests allegedly also have used synthetic cannabinoid products to avoid a positive test for cannabis and the resulting consequences. Many synthetic cannabinoid users also abuse marijuana.***

Synthetic cannabinoid products typically include olive-colored herbs, combination of herbs, or plant materials enhanced with a delta-9-tetrahydrocannabinol (THC) synthetic analog. When smoked, synthetic cannabinoid products mimic the hallucinogenic effects of marijuana. However, they have many adverse effects, including panic attacks, agitation, tachycardia (in the range of 110 to 150 beats per minute), elevated blood pressure (in the 140-160/100-110 range), anxiety, pallor, numbness and tingling, vomiting (which can be severe and may require sedation), hallucinations (which can be intense), and, in some cases, tremors, and seizures. Users report effects last between 30 minutes and 2 hours. Common brand names for synthetic cannabinoids include K2, Spice, Spice Gold, Spice Diamond, Yucatan Fire, Solar Flare, K2 Summit, Genie, PEP Spice, and Fire n' Ice.

Synthetic cannabinoid products are produced primarily internationally, but also produced domestically. Synthetic cannabinoid products are generally sold on Internet websites; however, they are becoming increasingly available at "headshops" and similar locations. The products often are marketed as "natural herbal incense" and include warnings that they "are not for human consumption."

*This SENTRY Watch is based upon source materials that have not been validated and/or researched by NDIC. It is intended to serve as an immediate alert to law enforcement and public health officials of potential substance abuse problems.*

If you would like to report an emerging drug issue in your area or have questions or comments about SENTRY, please e-mail us at [NDIC.Sentry@usdoj.gov](mailto:NDIC.Sentry@usdoj.gov) or visit us at [www.justice.gov/ndic/sentry](http://www.justice.gov/ndic/sentry)



An Ordinance to Create 6.07 Banning Synthetic Marijuana

Sponsored by Vincent Vitale

(1) Declaration of intent.

- a. Whereas, The open sale of synthetic marijuana - commonly known as "K-2", "Spice", or by other street names at convenience stores and other retailers, and the public consumption and use of so-called incense products and herbal potpourris is on the rise; and
- b. Whereas, These synthetic marijuana products - which sell for as much as \$40 a gram - are believed to be potpourri-like blends of herbs and marijuana-derivatives formulated in research labs as scientists study their possible therapeutic use (e.g., pain management for cancer patients) and promise users an intoxicating, "legal" high every bit as good as natural marijuana that will not show up on employer drug screens; and
- c. Whereas, The marijuana derivatives used in these synthetic marijuana products have yet to be tested by the FDA and certified as safe for human consumption, and because they are sold as incense or potpourri there is no health or quality assurance regulation to ensure these products are safe; and
- d. Whereas, Some scientific articles indicate synthetic marijuana may be between 3 and 100 times more potent than natural marijuana with longer duration; and
- e. Whereas, The American Association of Poison Control Centers reports 567 synthetic marijuana related calls in the first six months of 2010, up from only 13 in 2009; and
- f. Whereas, The National Drug Intelligence Center of the U.S. Department of Justice indicates the adverse effects of synthetic marijuana, when smoked, include panic attacks, elevated pulse and blood pressure, intense hallucinations, and in some cases, seizures; and
- g. Whereas, Users of these synthetic marijuana potpourri products often present in emergency rooms in highly anxious and agitated states requiring repeated doses of sedatives not typically associated with either marijuana or synthetic marijuana use, suggesting these products may be contaminated by unknown harmful chemicals; and
- h. Whereas, The death by suicide of an Iowa teenager has been linked by some to synthetic marijuana use, although the cause is still under investigation; and
- i. Whereas, The risk to the health, safety and welfare of West Allis residents from using synthetic marijuana is of deep concern; now, therefore it is determined that it is in the best interest of the health, safety and welfare of

the community to establish reasonable regulations for the possession of synthetic marijuana, and to such purpose this section is hereby enacted.

- (2) Possession, Sale, and Use Prohibited. No person shall possess, purchase, display for sale, attempt to sell, give, barter or use any chemical derivative of marijuana or any other substance designed to mimic the physical, psychological, intoxicating, narcotic, or other effects of marijuana.
- (3) Medical and Dental Use Exception. Acts prohibited under (2) shall not be unlawful if done by or under the direction or prescription of a licensed physician, dentist, or other medical health professional authorized to direct or prescribe such acts, provided such use is permitted under state and federal laws.
- (4) Penalties. Any person violating Subsection (2) of this ordinance shall be required to forfeit not less than two hundred dollars (\$200) nor more than one thousand dollars (\$1000). The person shall be required to pay the costs of prosecution. In default of payment thereof, the person shall be imprisoned in the Milwaukee County House of Correction until such forfeiture and costs are paid, but not more than the number of days set forth in Section 800.095(4) of the Wisconsin Statutes. Each and every day that an offense continues constitutes a separate offense.
- (5) Severability. If any part of this section is found to be unconstitutional or otherwise invalid, the validity of the remaining parts shall not be affected.



## New Urine Drug Test for Spice and K2: Dominion Diagnostics Now Offers UPLC/MS/MS Testing for Metabolites of Synthetic Marijuana Compounds JWH-018 and JWH-073

NORTH KINGSTOWN, R.I., Sept. 20 /PRNewswire/ -- Dominion Diagnostics (Dominion) has recently developed and validated one of the first clinical urine drug monitoring assays to detect the metabolites of JWH-018 and JWH-073, two compounds typically found in synthetic cannabinoids, also referred to as "herbal incense" products.

Users looking for a "legal high" have reportedly turned to these products as an alternative to marijuana. Two compounds, JWH-018 and JWH-073, have been identified in these products as primary receptor agonists that produce marijuana-like effects. These ingredients surreptitiously sprayed on herbal incense are not currently listed as controlled substances. Despite similarities to marijuana, these products, found in over 25 different herbal blends, are not detectable using standard drug tests. Dominion's new in-house assay can detect the primary metabolites of the synthetic cannabinoids, JWH-018 and JWH-073, in urine by Ultra Performance Liquid Chromatography/Tandem Mass Spectrometry (UPLC/MS/MS).

The term "herbal incense" refers to products which have been portrayed as natural herbal mixes of substances such as vanilla and baybean. These innocent-sounding items are being increasingly banned by many groups and agencies, although they have been legally marketed as harmless products. Manufactured in Asia and sold via the Internet or in local stores under various names such as K2, Spice, Genie, Yucatan Fire, Skunk, and Sence, these products consist of herbs that are sprayed with synthetic substances. When smoked or ingested, an effect similar to the euphoric high of marijuana is realized.

The JWH-compounds were originally used in scientific research to identify cannabinoid receptors in the brain and to study the mechanism of action of THC. Health and drug officials say the danger of using these products is the unregulated nature of their production and chemical makeup. In addition to the potential for users to inhale contaminants along with the substance they think they are smoking, some evidence suggests that the potency of the active ingredients exceeds that of THC. These may be contributing factors to some of the adverse effects reported by users including panic attacks, paranoia, heart palpitations, respiratory issues, impaired motor skills, agitation, and altered mood and perception.\*

"At Dominion, we recognize the issues that the field has encountered with these newer synthetic and unregulated products," stated Chief Operating Officer Stephen Jordan. "Our Research & Development Team's early investigation and in-house development have led to new testing solutions that will help clinicians work more effectively with their patients."

Dominion's new UPLC/MS/MS assay, one of the first presented to the industry, is now available to clinicians across the country. This new development comes as part of Dominion's continued commitment to unparalleled laboratory excellence. Dominion continues to lead the industry in its quest for accurate, clinically relevant science for use in improving treatment outcomes.

## **ABOUT DOMINION DIAGNOSTICS**

Dominion Diagnostics is a premier provider of comprehensive clinical quantitative urine drug testing, medication monitoring, and support services nationwide. For over 13 years, Dominion has provided services to thousands of clients in a variety of medical specialties, including Pain Medicine, Primary Care, Addiction Treatment, Behavioral Health, Psychiatry and Hospital Systems. Dominion is supported by a world-class team that shares a commitment to clinical and operational excellence. For more information about Dominion, please visit [www.dominiondiagnostics.com](http://www.dominiondiagnostics.com).

Contact: Julie K. Lenahan, MBA, Director of Marketing, Dominion Diagnostics, (401) 667-0876, [jlenahan@dominiondiagnostics.com](mailto:jlenahan@dominiondiagnostics.com)

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# wausaudailyherald.com

## Panel votes to ban synthetic marijuana

By Chad Dally • Wausau Daily Herald • October 19, 2010

Although Cheryl Berg of Augusta and Bonnie Gable of Waukesha had spoken on the phone, the first time they met face to face was at Monday's Wausau Public Health & Safety Committee.

The two women and others attended Monday's meeting to urge the committee to ban synthetic marijuana. Gable, Berg and Berg's ex-husband, Rick Bell, know firsthand the dangers of synthetic marijuana.

They got all they could have hoped for.

The Public Health & Safety Committee unanimously approved an ordinance banning synthetic marijuana, also called K2, and attached hefty fines for those who violate the ordinance.

Under the measure, a person caught with or using K2 would be fined between \$300 and \$500. The committee also attached a \$2,000 to \$3,000 fine to the sale of synthetic marijuana. The City Council must approve the measure, and will likely take up the issue in November.

The substance is composed of dried herbs sprayed with chemicals that mimic the active ingredient in real marijuana. But different manufacturing methods can result in different chemicals being sprayed on the herbs, and in different concentrations.

Gable said synthetic marijuana was a "big factor" in the death of her 19-year-old son, Charlie. While under the influence of K2, Charlie got into a car, entered a highway near Waukesha going the wrong direction and led police on a high-speed chase. He eventually exited the highway, but was fatally injured when he ran into a parked tow truck.

Berg and Bell's 25-year-old son, Jason, suffered hallucinations and panic attacks, became belligerent and even began talking to himself in the second- and third-person. The effects of the drug led to a three-month stay in a hospital.

One of the dangers of fake pot is that its effects differ from person to person. Berg and Gable both

said the people with whom their sons smoked synthetic marijuana suffered no ill effects.

Berg said while some might say alcohol and tobacco also are harmful to health, the manufacturing and sale of those products are strictly regulated, unlike synthetic marijuana.

Committee chairwoman Lisa Rasmussen said the ban is one instance in which the city has the chance to be "proactive rather than reactive."



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## **Spice, K2 – the Synthetic Marijuana: the Good, the Bad, and the Ugly**

– October 3, 2010 **Posted in:** [News](#), [United States](#)



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“Legal Marijuana” has been in the news in the U.S. as this concoction of herbs that have been common in Europe for years enters the United States. Many governments on the local level around the nation have been contemplating banning this alternative to pot. It is currently legal everywhere in the U.S. and the UK. It’s commonly sold under the package names “Spice” and “K2” in head shops and herbal stores as an “herbal incense.” Users often comment that it has marijuana-like effects.

Many have heard of the new phenomenon, but most are unaware of its true nature: what it’s made of, where it comes from, and what its effects may be.

### What Spice/K2 is Made Of

The packaging on the products will have a list of herbs such as Baybean and Maconna Brava, but will not list the primary active ingredients. The manufacturers are under no obligation to do so, as products not sold for human consumption (remember, these are sold as “incense”) do not require a precise ingredients list.

The primary ingredients in these compounds are synthetic cannabinoids; either JWH-018 or CP-47,497 (or both). These compounds were created by science labs to mimic THC to test the pharmacological effects of THC on human receptor cells. Some variants were also made as low-cost options for testing some electronic drug sniffing equipment.

JWH-018 is one of over 100 synthesizations of THC that were created by Professor John W. Huffman (whose initials name the compounds), a Clemson University organic chemist. Most of these compounds were used to find the physiological function of some mysterious receptors humans have for cannabinoids: the CB1 and CB2 receptors.

CP-47,497 was formulated by Pfizer in the 1970s and 80s as a test drug for the same purpose. This compound is commonly found in Spice/K2 packets sold in Germany, but rarely anywhere else.

### What Effects Fake Pot Has

Users of this marijuana alternative have several claims as to its effects. Most agree that it gives “pot-like” highs, though relatively short-lived. Some also complain of more nefarious effects and emergency room doctors are saying they are seeing this becoming more common.

The high received, of course, is because the active compounds (specifically JWH-018) has THC-like reactions with neural cells, targeting the two cannabinoid receptors. It’s creator says that it shows an affinity for CB1, by about three fold (actual THC binds equally with both CB1 and CB2). CB1 is (by science’s best guess) where the psych-effects of marijuana happen while CB2 deals more with pain and inflammation.

The main problem with the unusual, non-THC effects that Spice/K2 seem to have is likely due to a combination of things inherent to the drugs and their manufacture.

The amounts of the active ingredient in each packet can vary widely with some having concentrations as low as 0.03% and others having upwards of 3% in one dose. Because the stuff is relatively cheap and easy to make, it’s a profit-maker for the manufacturers. Most of the drug is actually made in Asia and imported by various distributors around the world. This variations of ingredients, however, is where the trouble really begins.

The psychotropic effects are short lived, but even more so in lower concentrations. However, the side-effects that can be produced, which include “upper” type effects similar to caffeine or other stimulants and the psychosis that can occur are compounded with each new dose. Many users, when the high begins to wear down, use more synthetic marijuana to keep it going. Some doctors say this has lead to deaths, is often addictive, and has many long-term effects we may not yet realize.

Some users deny this, saying it has no real ill effects on them and they use it regularly as an alternative to getting arrested for possession of pot.

In which lies the rub.



### Why Synthetic Pot Exists

Why would an alternative to marijuana exist? Cannabis is one of the most widely-cultivated plants in the world and has been for much of human history. We have receptors believed to be specifically tuned to marijuana and marijuana only. So why do we need an obviously more complicated, less-studied, less-known alternative to cannabis?

Because marijuana is illegal. It was made illegal in the United States in 1937 and that prohibition has only recently been reconsidered in parts of this country.

via: <http://cannacentral.com/news/spice-k2-%E2%80%93-the-synthetic-marijuana-the-good-the-bad-and-the-deadly/>

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