

SPICE/K2; Sweet Leaf in 2010

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SPICE

- Contains JWH-018/073
- Synthetic cannabinoid
- Effects CB1 and CB2 receptors
- Sold as incense



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- DEA has identified eight (8) synthetic cannabinoids thus far in herbal blends

- HU-210 [(6aR,10aR)-9-(hydroxymethyl)-6,6-dimethyl-3-(2-methyloctan-2-yl)-6a,7,10,10a-tetrahydrobenzo[c]chromen-1-ol]
- CP 47,497 [2-[(1R,3S)-3-hydroxycyclohexyl]-5-(2-methyloctan-2-yl)phenol]
- Cannabicyclohexanol (CP 47,497 C8 homologue) [2-[(1R,3S)-3-hydroxycyclohexyl]-5-(2-methylnonan-2-yl)phenol]
- JWH-018 [1-pentyl-3-(1-naphthoyl)indole]
- JWH-073 [1-butyl-3-(1-naphthoyl)indole]
- JWH-200 [1-[2-(4-morpholinyl)ethyl]-3-(1-naphthoyl)indole]
- JWH-250 [1-pentyl-3-(2-methoxyphenylacetyl)indole]
- JWH-081 [1-pentyl-3-[1-(4-methoxy)naphthoyl]indole]

6

- SPICE
- Spice Silver
- Spice Gold
- Spice Diamond
- Spice Tropical Synergy
- Spice Artic Synergy
- Smoke Plus
- ChillinMix
- Buddha Melt
- Budda Blend
- Smoke X. XX and XXX
- Chillin XXX
- Spicey XXX
- ZoHai SX
- Eclipse
- Bonzai fertilizer





STUDENT VOICE

October 23, 2018 www.uwrfvoice.com Volume 97, Issue 6

University studies turbine feasibility

John Long
Journalism

A study to explore if wind turbines are feasible for the University is currently half way complete, said Director of Facilities Management Mike Wilton.

Wilton, a member of the University's Energy Management Committee, is currently leading the study. The study, among other things, is looking into the wind turbine's ability, supporting and providing information for the proposed use of the Main Valley Laboratory Park. Located just east of Forest Park, the 100-acre site is used for general research and is the Center of Agriculture, Food and Environment of Research.

The study is a collaborative effort with several energy companies, as well as the state and UW System. If the study finds that wind turbines are feasible and the project is approved, then there could be over 1.5 megawatts installed in the next year by a fall at the site. Once installed, which would occur in the next year by 18 months, the turbines would produce around 10 percent of the campus' energy demand, Wilton said.

The turbines would be around 17.5 meters tall and the blades would be about 40 meters long. The site is in the

Facilities replaces concrete

CHALMER DAVEE LIBRARY

The new fundamental question going into the new concrete was how to make it better. The study was done by the University's Energy Management Committee, which is currently leading the study. The study, among other things, is looking into the wind turbine's ability, supporting and providing information for the proposed use of the Main Valley Laboratory Park. Located just east of Forest Park, the 100-acre site is used for general research and is the Center of Agriculture, Food and Environment of Research.

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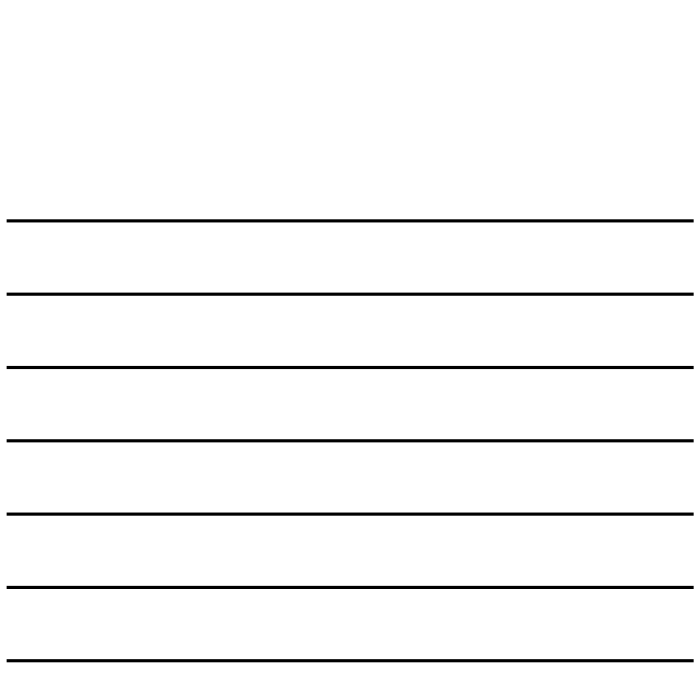
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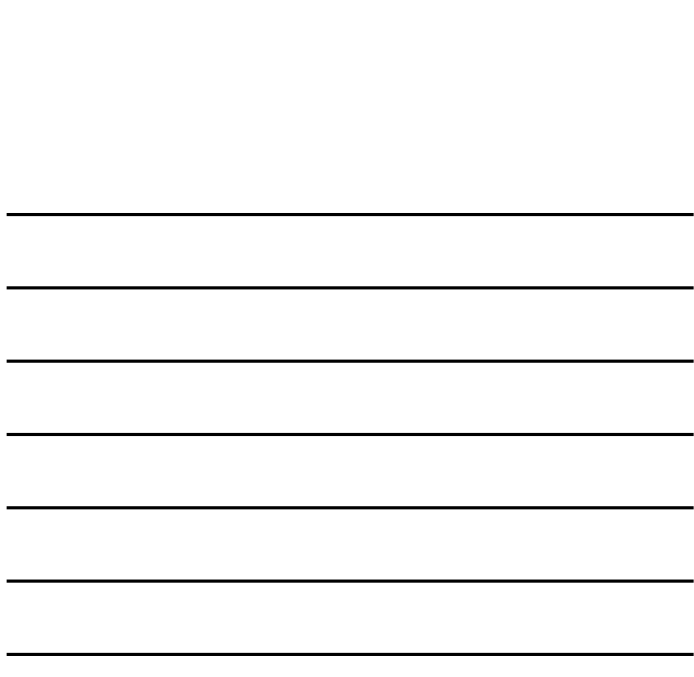
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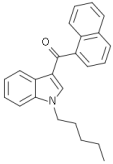
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- http://www.researchchemicalz.com/research-chemicals/bonsai-18.html?gclid=ClaF2KkT5qMCFel55wo_d9jmObQ
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JWH-018: (1-pentyl-3-(1-naphthoyl)indole)



- Created in 1995 for experimental purposes in animal and cell cultures, not humans, by Dr. John Huffman, PhD at Clemson University

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- Analgesic of the aminoalkylindole family, is a full agonist to both CB1 and CB2 cannabinoid receptors in brain and spleen, some selectivity to CB2
- Five times the affinity for CB1 than Δ^9 -tetrahydrocannabinol
- Not structurally related to THC, but has longer duration of action.
- Sold commercially since 2002 as "SPICE" and as its parent compound

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CB1

- Mainly found in the brain (CNS), also in lungs liver and kidneys
- Increase lipogenesis
- Inhibit gastrointestinal motility
- Creates hypotension
- Hypoanalgesia

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CB2

- Mainly found in the immune system and hematopoietic cells
- Plays a role in the autoimmune system and response

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- Usual dosage for varies greatly per individual;
- Between 3 and 20 milligrams (orally).
- As little as 1mg or lower (smoked), however the observed effects have a shorter duration.
- Effects seem stronger but similar to cannabis intoxication

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- Is water soluble, can be found in UDS for about three days post use
- The drug does not show up in drug test for cannabis, but its metabolites can be detected in human urine by GC-MS-screening and LC-MS/MS
 - Extensively conjugated with glucuronide and sent out the body
 - Main metabolite is hydroxylated N-desalkyl along with indole-N-dealkyl

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Route of administration

- Usually dissolved from powder; 10mg/ml in 95% EtOH, mixed in 1mg of inert material
- Smoked: most common
- Inhalation: vaporisation through oil pipe or cigarette
- Oral: as granule (onset in hours); If dissolved onset < hour
- Insufflation: unknown
- IV: some reports, little info
- Average dose: 2-5mg smoked, 3-15 ingested
- Starting 0.5-1mg smoked
- High dose/OD: 6-10mg smoked

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- Peak effect almost instantly (when smoked); 2-5 minutes
- Duration; 3-5 hours
- Metabolized in CP55-940 pathway; plasma T_{1/2} is about 2 hrs.
- Carcinogenic/teratogenic: non in parent compound, varies with inert agent

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- JWH-018 has been shown to cause profound changes in CB1 receptor density following administration, causing desensitization to its effects more rapidly than related cannabinoids
- B.K. Atwood et. al., "JWH018, a common constituent of 'Spice' herbal blends, is a potent and efficacious cannabinoid CB1 receptor agonist." British Journal of Pharmacology, Vol. 160, No. 3. 585-593. 2010

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- JWH-018 produces a traditional tachyphylactic response in repeated dosing, notable decrease after 3 days of regular dosing
- Likely result of CB1 down regulation, similar to tolerance developed from cannabis
- Some short term memory loss associated with chronic use

- THC, which is a partial agonist at CB1 receptors, JWH-018 (and many of its analogues) are full agonists.
- Users may experience far more intense effects compared to smoking cannabis.
- THC has been shown to inhibit GABA neurotransmission in the brain
- Some concern about hyponkalaemia, resulting in Q-T prolongation, but argued in research

- JWH-018 may cause intense anxiety, agitation, and even seizures or convulsions by inhibiting GABA neurotransmission more efficiently than THC.
- Cannabinoid receptor full agonists may present serious dangers to the user when overdosed.

- March 2010 "Journal Of Occupational Medicine and Toxicology" have shown that JWH-018 has similar negative health effects of those found with standard Cannabis consumption because inhalation of smoke from burned organic materials can cause various health problems.
- JWH-018 produces effects very similar to cannabis but is considerably more potent than similar amounts of cannabis.

Desired psychoactive effects

- Visual changes
- Color enhancement
- Uncontrollable laughter
- Euphoria
- Talkativeness
- Sexual stimulation
- Time dialation
- Sedation
- Sleep aid
- Analgesia
- Anti-depressant

Intoxication

Conjunctival injection



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Xerostomia



29

anxiety



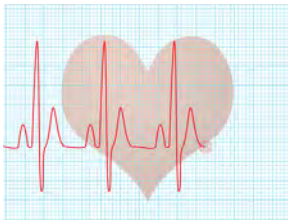
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agitation



31

tachycardia



32

nausea



33

hallucinations



34

Increased blood pressure



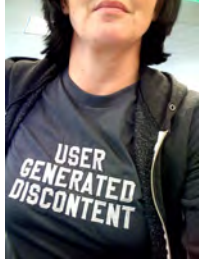
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Potential w/d sx



36

unrest



37

craving



38

nightmares



39

sweating



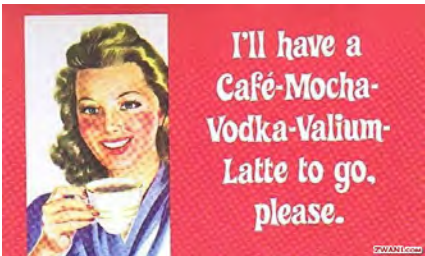
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neasea



41

tremor



42

headache



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Minnesota Board of Pharmacy
Proposed Permanent Rules Relating to Controlled Substances
NOTICE OF INTENT TO ADOPT RULES WITHOUT A PUBLIC HEARING
Proposed Amendment to Rules Governing Scheduling
Page 694 State Register, Monday 1 November 2010 (Cite 35 SR 694)

6800.4210 SCHEDULE I CONTROLLED SUBSTANCES.

Schedule I shall consist of the drugs and other substances, by whatever official name, common or usual name, chemical name, or brand name designated, listed in this part.

[For text of items A to F, see M.R.]

G. Cannabinoids. Unless specifically excepted or unless listed in another schedule, any natural or synthetic material, compound, mixture, or preparation which contains any quantity of a substance that is a cannabinoid receptor agonist, including but not limited to the following substances and their analogs (including homologues), isomers (whether optical, positional, or geometric), esters, ethers, salts, and salts of isomers, esters, and ethers, whenever the existence of such isomers, esters, ethers, or salts is possible within the specific chemical designation:

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- (1) 1-pentyl-2-methyl-3-(1-naphthoyl)indole (JWH-007)
- (2) (2-methyl-1-propyl-1H-indol-3-yl)-1-naphthalenylmethanone (JWH-015)
- (3) 1-pentyl-3-(1-naphthoyl)indole (JWH-018)
- (4) 1-hexyl-3-(naphthalen-1-oyl)indole (JWH-019)
- (5) 1-butyl-3-(1-naphthoyl)indole (JWH-073)
- (6) 4-methoxynaphthalen-1-yl-(1-pentylindol-3-yl)methanone (JWH-081)
- (7) 4-methoxynaphthalen-1-yl-(1-pentyl-2-methylindol-3-yl)methanone (JWH-098)
- (8) (1-(2-morpholin-4-ylethyl)indol-3-yl)-naphthalen-1-ylmethanone (JWH-200)
- (9) 7-methoxynaphthalen-1-yl-(1-pentylindol-3-yl)methanone (JWH-164)
- (10) 2-(2-chlorophenyl)-1-(1-pentylindol-3-yl)ethanone (JWH-203)
- (11) 4-ethylnaphthalen-1-yl-(1-pentylindol-3-yl)methanone (JWH-210)
- (12) 2-(2-methoxyphenyl)-1-(1-pentylindol-3-yl)ethanone (JWH-250)
- (13) 1-pentyl-3-(4-chloro-1-naphthoyl)indole (JWH-398)
- (14) (6aR,10aR)-9-(hydroxymethyl)-6,6-dimethyl-3-(2-methyloctan-2-yl)-6a,7,10,10a-tetrahydrobenzo[c]chromen-1-ol (HU-210)
- (15) (dexanabinol, (6aS,10aS)-9-(hydroxymethyl)-6,6-dimethyl-3-(2-methyloctan-2-yl)-6a,7,10,10a-tetrahydrobenzo[c]chromen-1-ol) (HU-211)
- (16) (R)-(+)-[2,3-dihydro-5-methyl-3-(4-morpholinylmethyl)pyrrolo(1,2,3-de)-1,4-benzoxazin-6-yl]-1-naphthalenylmethanone (WIN-55212-2)
- (17) 2-[(1R,3S)-3-hydroxycyclohexyl]-5-(2-methyloctan-2-yl)phenol (CP47,497)

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Drug Enforcement Administration

- Published in the Federal Register, Nov 24, 2010:

- The Deputy Administrator of the Drug Enforcement Administration (DEA) is issuing this notice of intent to temporarily place five synthetic cannabinoids into the Controlled Substances Act (CSA) pursuant to the temporary scheduling provisions under 21 U.S.C. 811(h) of the CSA. The substances are 1-pentyl-3-(1-naphthoyl)indole (JWH-018), 1-butyl-3-(1-naphthoyl)indole (JWH-073), 1-[2-(4-morpholinyl)ethyl]-3-(1-naphthoyl)indole (JWH-200), 5-(1,1-dimethylheptyl)-2-[(1 R, 3 S)-3-hydroxycyclohexyl]-phenol (CP-47,497), and 5-(1,1-dimethyloctyl)-2-[(1 R, 3 S)-3-hydroxycyclohexyl]-phenol (cannabicyclohexanol; CP-47,497 C8 homologue). This intended action is based on a finding by the DEA Deputy Administrator that the placement of these synthetic cannabinoids into Schedule I of the CSA is necessary to avoid an imminent hazard to the public safety. Finalization of this action will impose criminal sanctions and regulatory controls of Schedule I substances under the CSA on the manufacture, distribution, possession, importation, and exportation of these synthetic cannabinoids.

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HF 57

- Introduced Jan 10, 2011:

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- Subd. 6. Sale or possession of synthetic cannabinoids. (a) A person who
- 1.9unlawfully sells any amount of a synthetic cannabinoid is guilty of a gross misdemeanor.
- 1.10(b) A person who unlawfully possesses any amount of a synthetic cannabinoid is
- 1.11guilty of a misdemeanor.
- 1.12(c) For purposes of this subdivision, "synthetic cannabinoid" includes, unless
- 1.13specifically excepted or unless listed in another schedule, any natural or synthetic material,
- 1.14compound, mixture, or preparation that contains any quantity of a substance that is a
- 1.15cannabinoid receptor agonist, including, but not limited to, the following substances and
- 1.16their analogs, including homologues; isomers, whether optical, positional, or geometric;
- 1.17esters; ethers; salts; and salts of isomers, esters, and ethers, whenever the existence of the
- 1.18isomers, esters, ethers, or salts is possible within the specific chemical designation:
- 1.191-pentyl-2-methyl-3-(1-naphthoyl)indole (JWH-007),
- 1.202-Methyl-1-propyl-1H-indol-3-yl)-1-naphthalenylmethanone (JWH-015),
- 1.211-Pentyl-3-(1-naphthoyl)indole (JWH-018), 1-hexyl-3-(naphthalen-1-yl)indole
- 1.22(JWH-019), 1-Butyl-3-(1-naphthoyl)indole (JWH-073),
- 1.234-methoxynaphthalen-1-yl-(1-pentylindol-3-yl)methanone (JWH-081),
- 1.244-methoxynaphthalen-1-yl-(1-pentyl-2-methylindol-3-yl)methanone
- 2.1(JWH-098), 1-(2-morpholin-4-ylethyl)indol-3-yl)-naphthalen-1-ylmethanone
- 2.2(JWH-200), 7-methoxynaphthalen-1-yl-(1-pentylindol-3-yl)methanone
- 2.3(JWH-164), 2-(2-chlorophenyl)-1-(1-pentylindol-3-yl)methanone (JWH-203),
- 2.44-ethynaphthalen-1-yl-(1-pentylindol-3-yl)methanone (JWH-210),
- 2.52-(2-methoxyphenyl)-1-(1-pentylindol-3-yl)methanone (JWH-250),
- 2.61-pentyl-3-(4-chloro-1-naphthoyl)indole (JWH-398), (6aR,10aR)-
- 2.79-(Hydroxymethyl)-6,6-dimethyl-3-(2-methyloctan-2-yl)-6a,7,10,10a-
- 2.8tetrahydrobenzo[c]chromen-1-ol (HU-210), (dexanabinol), (6aS,10aS)-9-
- 2.9(hydroxymethyl)-6,6-dimethyl-3-(2-methyloctan-2-yl)-6a,7,10,10a-
- 2.10tetrahydrobenzo[c]chromen-1-ol (HU-211), (R)-(+)-[2,3-Dihydro-5-methyl-3-
- 2.114-morpholinylmethyl]pyrrolid[1,2,3-de]-1,4-benzoxazin-6-yl]-1-naphthalenylmethanone
- 2.12(WIN-55212-2), 2-[[1R,3S)-3-hydroxycyclohexyl]-5-(2-methyloctan-2-yl)phenol
- 2.13(CP47,497), dimethylheptylpyran
- 2.14EFFECTIVE DATE.This section is effective August 1, 2011, and applies to crimes
- 2.15committed on or after that date.

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SF 7

- Modified MS 152, Subp 2 as:

- (7) Unless specifically excepted or unless listed in another schedule, any natural
- 2.36or synthetic material, compound, mixture, or preparation that contains any quantity of
- 3.1a substance that is a cannabinoid receptor agonist, including, but not limited to, the
- 3.2following substances and their analogs, including homologues; isomers, whether optical,
- 3.3positional, or geometric; esters; ethers; salts; and salts of isomers, esters, and ethers,
- 3.4whenever the existence of the isomers, esters, ethers, or salts is possible within the specific
- 3.5chemical designation:
- 3.61-pentyl-2-methyl-3-(1-naphthoyl)indole (JWH-007),
- 3.7(2-Methyl-1-propyl-1H-indol-3-yl)-1-naphthalenylmethanone (JWH-015),
- 3.81-Pentyl-3-(1-naphthoyl)indole (JWH-018), 1-hexyl-3-(naphthalen-1-oyl)indole
- 3.9(JWH-019), 1-Butyl-3-(1-naphthoyl)indole (JWH-073),
- 3.104-methoxynaphthalen-1-yl-(1-pentylindol-3-yl)methanone (JWH-081),
- 3.114-methoxynaphthalen-1-yl-(1-pentyl-2-methylindol-3-yl)methanone
- 3.12(JWH-098), (1-(2-morpholin-4-ylethyl)indol-3-yl)-naphthalen-1-ylmethanone
- 3.13(JWH-200), 7-methoxynaphthalen-1-yl-(1-pentylindol-3-yl)methanone
- 3.14(JWH-164), 2-(2-chlorophenyl)-1-(1-pentylindol-3-yl)ethanone (JWH-203),
- 3.154-ethynaphthalen-1-yl-(1-pentylindol-3-yl)methanone (JWH-210),
- 3.162-(2-methoxyphenyl)-1-(1-pentylindol-3-yl)ethanone (JWH-250),
- 3.171-pentyl-3-(4-chloro-1-naphthoyl)indole (JWH-398), (6aR,10aR)-
- 3.189-(Hydroxymethyl)-6,6-dimethyl-3-(2-methyloctan-2-yl)-6a,7,10,10a-
- 3.19tetrahydrobenzo[*c*]chromen-1-ol (HU-210), (dexanabinol, (6aS,10aS)-9-
- 3.20(hydroxymethyl)-6,6-dimethyl-3-(2-methyloctan-2-yl)-6a,7,10,10a-
- 3.21tetrahydrobenzo[*c*]chromen-1-ol) (HU-211), (R)-(+)-[2,3-Dihydro-5-methyl-3-
- 3.22(4-morpholinylmethyl)pyrrolo[1,2,3-de]-1,4-benzoxazin-6-yl]-1-naphthalenylmethanone
- 3.23(WIN-55212-2), 2-[(1R,3S)-3-hydroxycyclohexyl]-5-(2-methyloctan-2-yl)phenol
- 3.24(CP47,497), dimethylheptylpyran.
- 3.25EFFECTIVE DATE: This section is effective June 1, 2011, and applies to crimes
- 3.26committed on or after that date.

Feb 28, 2011



Federal Register

- 5 substances made a schedule 1 for one year
- Schedule 1 substances are not legal for retail sale

Thank you