



SYNTHETIC DRUGS 101: TRAFFICKING & ABUSE TRENDS



February 19, 2013

Synthetic Drugs Symposium, Substance Abuse & Mental
Health Services Integrated Task Force, Washington, D.C.

Alan G. Santos, Associate Deputy Assistant Administrator,
Operations Division, Office of Diversion Control,
U.S. Drug Enforcement Administration



Outline

- Synthetic Cannabinoids
- Synthetic Cathinones
- Other Synthetic Compounds
- Scope of the Problem
- Control Efforts: State, Federal, & International



Designer Drugs

These drugs are perceived as being ‘legal’ alternatives to marijuana, cocaine, methamphetamine, and MDMA.



Designer Drugs: Where did they come from ?

A highly regarded Medicinal Chemist Dr. F. Ivy Carroll and colleagues stated in a recent publication:

Throughout the drug discovery process, pharmaceutical companies, academic institutions, research institutions, and other organizations publish their studies in scientific journals, books, and patents. This information exchange, which is essential to the legitimate scientific enterprise, can be, and is, used by clandestine chemists who duplicate the technical sophistication used by the research community to manufacture and market a seemingly endless variety of analogs of so-called designer drugs.



Designer Drugs: Novel Psychoactive Substances

- Clandestinely produced to mimic the effects of a controlled substance (a substance with an abuse potential)
- Scientific literature excavated to identify substances
- No industrial or medical use for these substances
 - Substances rejected due to poor therapeutic potential
 - Characterization as being “research chemicals,” the only research being undertaken is to their abuse liability and toxicity
- Challenge
 - Change public misperception as to legality and hazards
 - Minimize appeal, a result of devious and aggressive marketing





Proliferation of Designer Drugs

- Increasingly popular among recreational drug users
- Internet sales
- Head shops/Smoke shops
- Promoted by discussion boards – self studies



**Armed with medical research and fueled by Chinese factories
And YouTube, a band of outlaws has
Created a dangerous multibillion-dollar industry**



Synthetic Cannabinoids

*U.S. Drug Enforcement Administration / Operations
Division / Office of Diversion Control*



Synthetic Cannabinoids:

- A “cannabinoid” is a class of chemical compounds in the marijuana plant that are structurally related.
- “Synthetic cannabinoids” are a large family of chemically unrelated structures functionally (biologically) similar to THC, the active principle of marijuana.
- They may have less, equivalent or more pharmacologic (psychoactive) activity than THC.



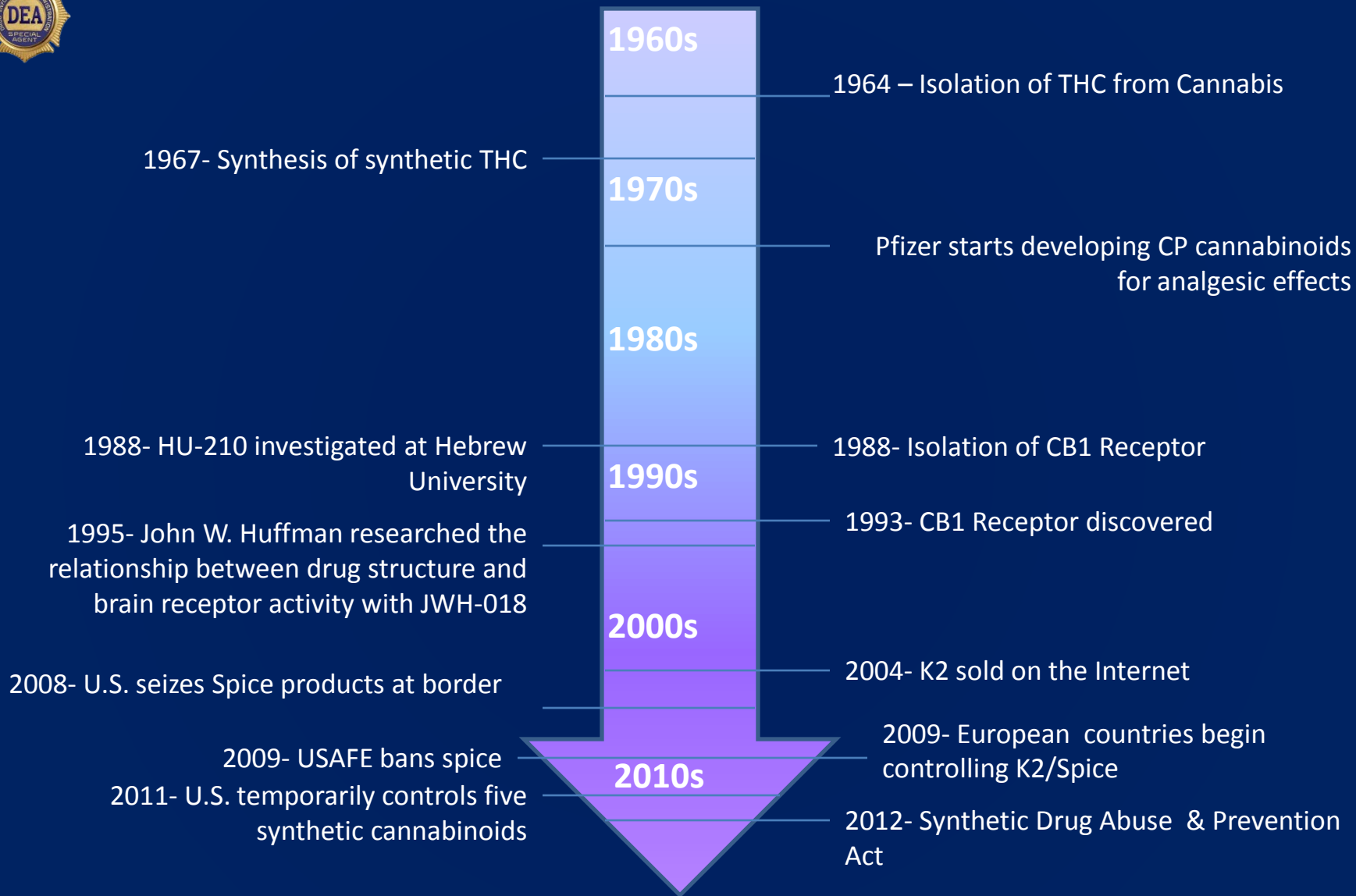
Synthetic Cannabinoids

- Synthetic Cannabinoids are sold in retail stores, on the internet, and in “head shops” as “Herbal Incense” or “Potpourri”
- Smoked alone or as a component of herbal products
- Abusers report a potent cannabis-like effect





Cannabinoid Timeline





Adverse Health Effects: Cannabinoids

Abusers are presenting at Emergency Departments and also seeking treatment for dependence and withdrawal.

Multiple deaths have been connected to the abuse of these substances alone and with other substances on-board.

Psychological	Anxiety, aggressive behavior, agitation, confusion, dysphoria, paranoia, agitation, irritation, panic attacks, intense hallucinations
Neurological	Seizures, loss of consciousness
Cardiovascular	Tachycardia, hypertension, chest pain, cardiac ischemia
Metabolic	Hypokalemia, hyperglycemia
Gastrointestinal	Nausea, vomiting
Autonomic	Fever, mydriasis
Other	Conjunctivitis



Synthetic Cannabinoids

- Unregulated and unlicensed industry (many manufacturers)
- Full disclosure of ingredients typically not present
- Batch to batch variance (i.e. “Hot Spots”)





Synthetic Cathinones

*U.S. Drug Enforcement Administration / Operations
Division / Office of Diversion Control*



Synthetic Cathinones

- Structurally and pharmacologically similar to amphetamine, Ecstasy (MDMA), cathinone, and other related substances.
- Are central nervous system (CNS) stimulants and have stimulant and psychoactive properties similar to schedule I and II amphetamine type stimulants.
- Synthetic cathinones are sold in retail stores, on the internet, and in “head shops” as “bath salts”, “plant food”, or “jewelry cleaner”



Adverse Health Effects: Cathinones

Synthetic cathinone users commonly report cardiac, psychiatric, and neurological signs and symptoms with death.



Cardiovascular	palpitations, tachycardia, chest pain, vasoconstriction, myocardial infarction
Psychological	Aggressive behavior, anger, anxiety, agitation, auditory and visual hallucinations, depression, dysphoria, empathy, euphoria, fatigue, formication, increased energy, concentration, panic attacks, paranoia, perceptual disorders, restlessness, self-mutilation, suicidal ideation
Neurological	Seizures, tremor, dizziness, memory loss, cerebral edema, headache, lightheadedness
Musculoskeletal	Arthralgia, extremity changes (coldness, discoloration, numbness, tingling), muscular tension, cramping
Gastrointestinal	Abdominal pain, anorexia, nausea, vomiting
Pulmonary	Shortness of breath
Ear Nose Throat	Dry mouth, nasal pain, tinnitus



Synthetic Cathinones

- Like the cannabinoids, unregulated and unlicensed industry (many manufacturers)
- Full disclosure of ingredients typically not present
- Significant batch to batch variances “Hot Spots”





Other Synthetic Compounds

*U.S. Drug Enforcement Administration / Operations
Division / Office of Diversion Control*



Categories

- 2C Series
 - Category of phenethylamines
 - Contain 2,5-dimethoxy
- Piperazines
 - Used as industrial chemicals
- Tryptamines
 - Occur naturally in plant species
 - Produced synthetically
- Arylcylhexamines



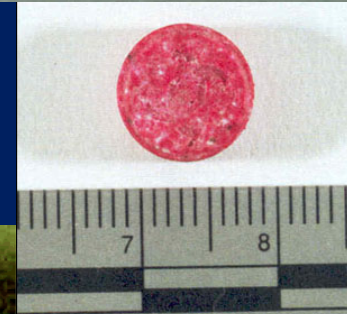
25I-NBOMe and 25C-NBOMe

- Hallucinogens, abused orally
- Encountered on blotter paper and in dropper bottles
- Possibly mistaken for LSD
- Linked to recent deaths
- “N-BOMB”, “Smiles”



Piperazines

- Stimulant and hallucinogenic properties
- Often referred to as amphetamine-like
- Examples:
BZP, TFMPP, mCPP, and MeOPP
- Tableted
- BZP-TFMPP combination abused to mimic the effects of ecstasy





Tryptamines

- Hallucinogenic
- “reality distorting”
- Powders, tablets, or blotter paper
- Examples: 5-MeO-DALT, 5-MeO-DIPT, AMT and many more.....



Methoxamine (MXE)

- Dissociative (mind altering effects) and depression of pain
- Sold as a “ketamine derivative” (Ketamine- schedule III)
- Effects similar to PCP
- Effects range 5-7 hours
- First reported to NFLIS in 2011
- Deaths attributed to the substance

CBP Photo



Methylhexanamine (DMAA)

- Stimulant
- Encountered on designer drug market as a cathinone replacement. Also found on the dietary supplement market
- Deaths attributed to the substance
- April 27th, FDA challenges marketing of DMAA products for lack of safety evidence





Problems with All Synthetic / Designer Drugs

- Marketed to teens and young adults
- Easily attainable in retail environments and via the internet
- Unknown ingredient(s)
- No consistency in manufacturing process
- Not tested for human consumption / Unknown short & long term effects!!
- No known dosage – not FDA approved
- Synergistic effects likely when mixed with other drugs or alcohol





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Scope of the Problem

*U.S. Drug Enforcement Administration / Operations
Division / Office of Diversion Control*



Identified Synthetic Compounds in the U.S.

As of January 31, 2013, the NFLIS system shows U.S. law enforcement encountering :

- 51 cannabinoids
- 31 cathinones
- 76 “other” compounds (i.e. amphetamines, tryptamines, piperazines, etc.)



‘Spice’ makers alter recipes to sidestep state laws banning synthetic marijuana



Rob Ostermaier/Daily Press - Police show what they suspect is “spice,” confiscated during a raid on Outer Edge Gifts in Hampton, Va., on April 5.



“I told the police straight up what we were selling was legal,” the man said. “We had results from a DEA-registered lab.”

A raid in which \$10,000 worth of synthetic marijuana was seized from a Newport News hookah bar has not resulted in charges, either. The owner did not return calls, but he told a local newspaper in September that he was selling a new version of spice.

State Sen. Mark R. Herring (D-Loudoun), who wrote Virginia’s spice law, said it has helped educate people about the dangers of the drug and encouraged reputable retailers to stop selling it. But he said that more needs to be done. He said legislation is being written that would add six compounds to the banned list.

Lawmakers on the federal level are also taking a more comprehensive approach by seeking to ban spice compounds, as well as classes of chemical structures on which synthetic marijuana compounds are commonly built.

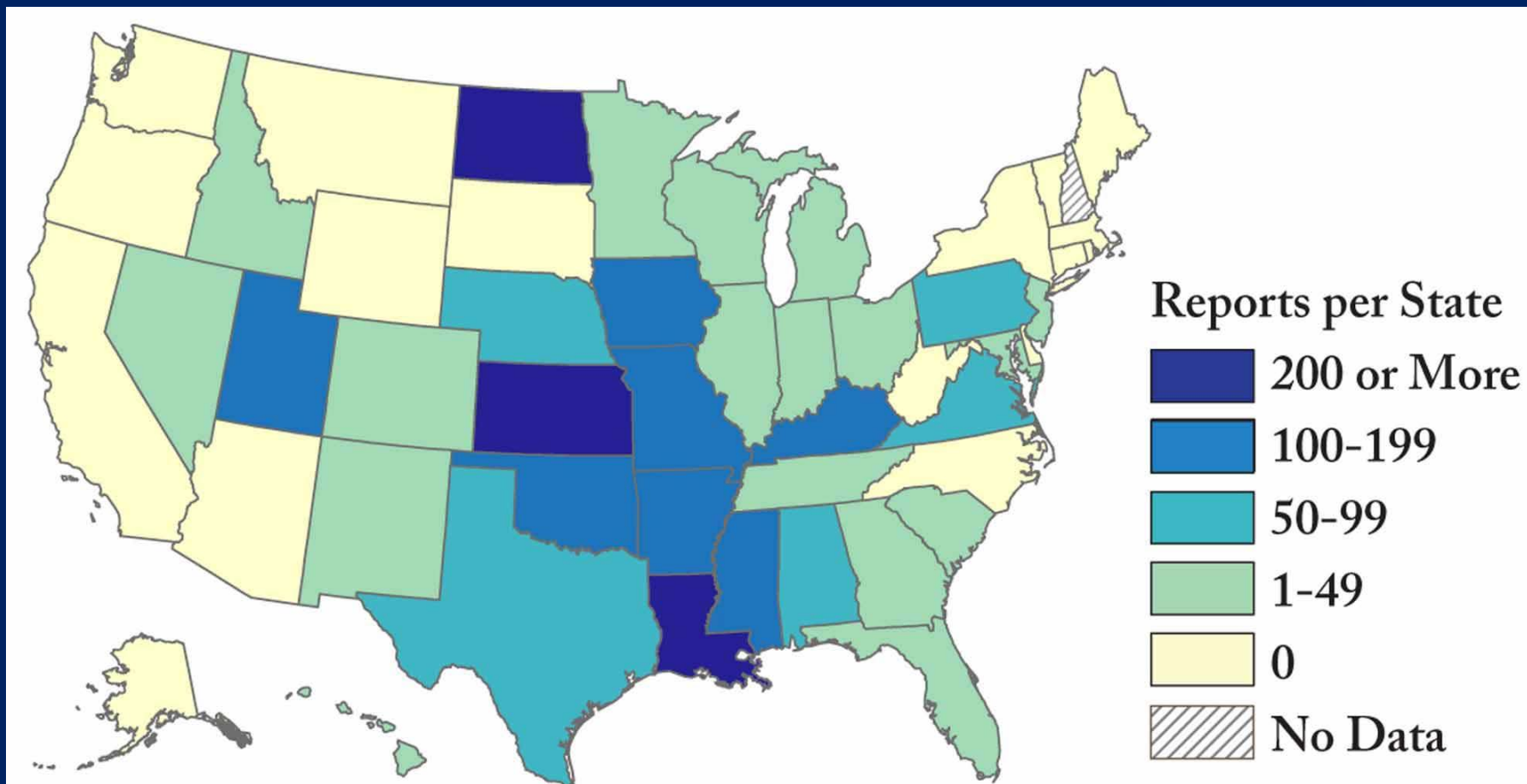
The initial appeal of spice was as a legal high, but it remains popular because most drug tests will not pick it up and it is readily available from dozens of Web sites.

“We had guys with Pentagon security clearance badges coming in to buy it,” said Alan Amsterdam, co-owner of Capitol Hemp in Adams Morgan. Although he stopped selling spice, he is dubious about efforts to control it.

“The government is one step behind science,” Amsterdam said. “It’s here to stay.”



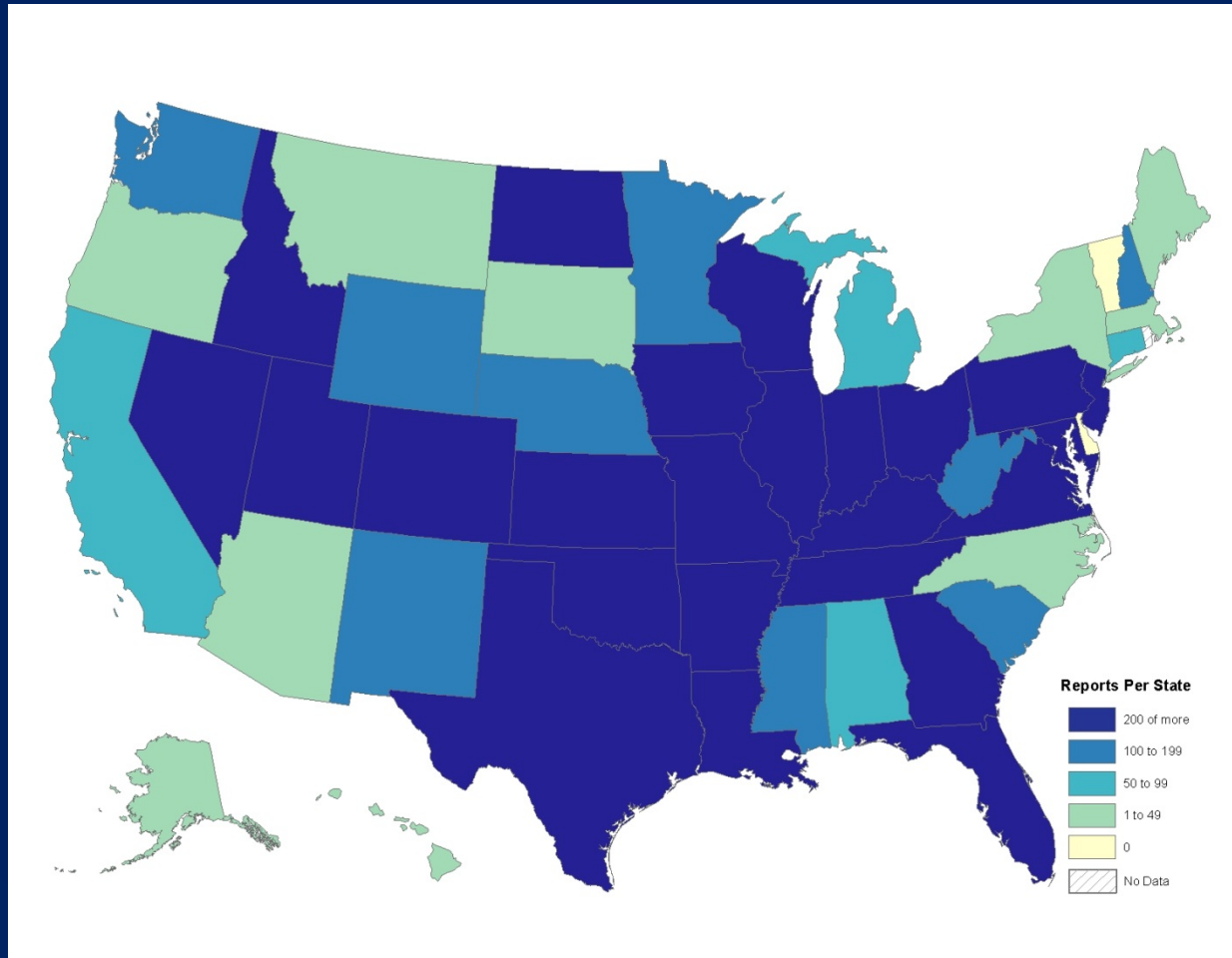
Synthetic Cannabinoids, by State, 2010







Synthetic Cannabinoids, by State, 2012





AM-2201 Public Health and Safety Concern

- Many products encountered found to be laced with AM-2201
- These products are being abused by adolescents
- Emergency department presentations:
 - Agitation
 - Anxiety
 - Intense hallucinations
 - Psychosis
 - Seizures
 - Unresponsive
- Toxic effects are a medical concern



AM-2201 laced on plant material

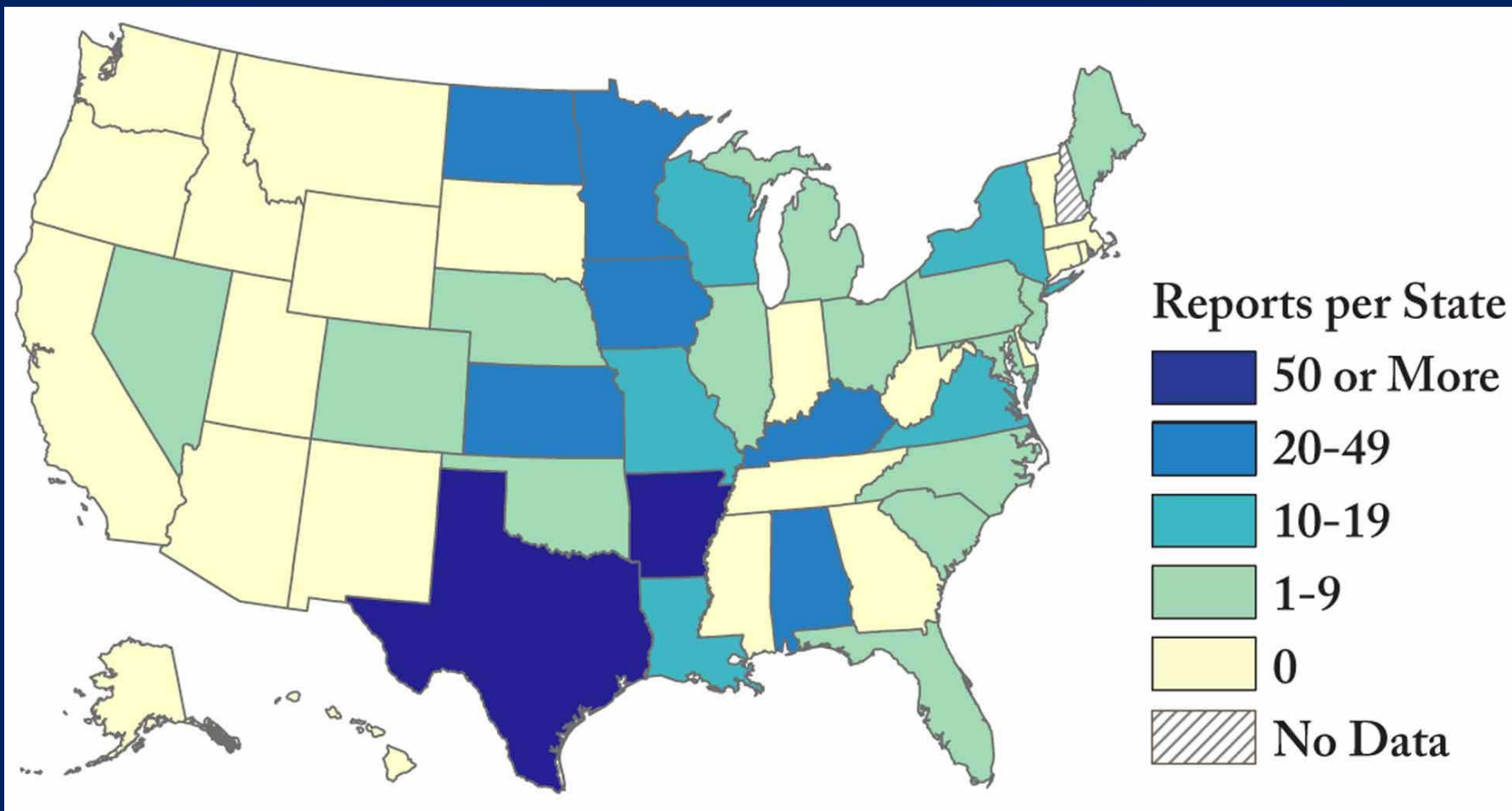


Synthetic Cathinones

- 3,4-DMMC
- 3-MEC
- 4-FLUOROISOCATHINONE
- 4-MEC
- 4-MePPP
- 4-METHYLBUPHEDRONE
- alpha-PBP
- alpha-PVP
- BUPHEDRONE
- BUTYLONE
- DIBUTYLONE
- DIMETHYLONE
- ETHYLCATHINONE
- ETHYLONE
- FLUOROMETHCATHINONE
- MABP
- MDPBP
- MDPPP
- **MDPV**
- **MEPHEDRONE**
- METHEDRONE
- **METHYLONE**
- MOPPP
- MPHP
- NAPYRONE
- N-ETHYLBUPHEDRONE
- PENTEDRONE
- PENTYLONE
- ISOPENTEDRONE

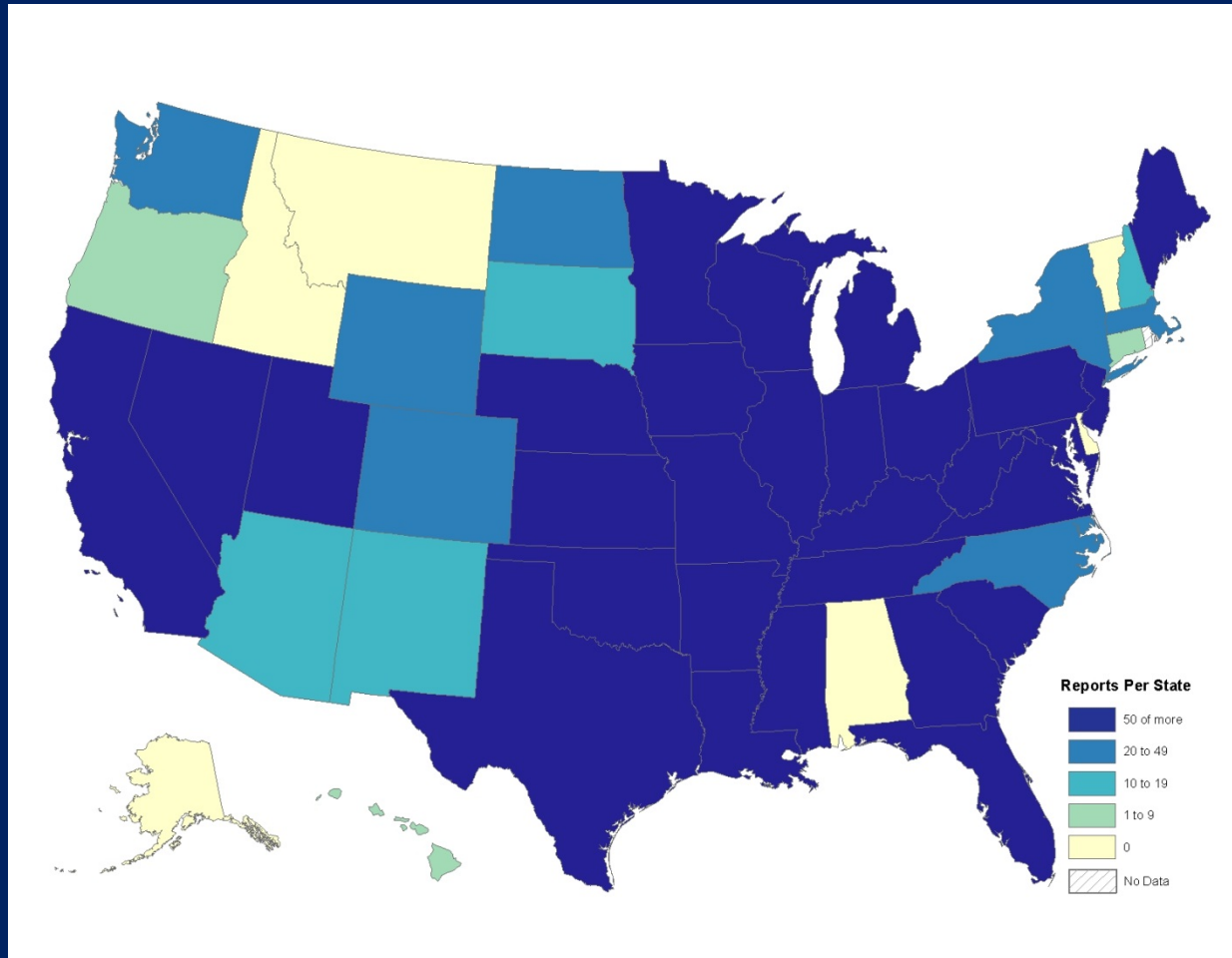


Synthetic Cathinones, by State, 2010



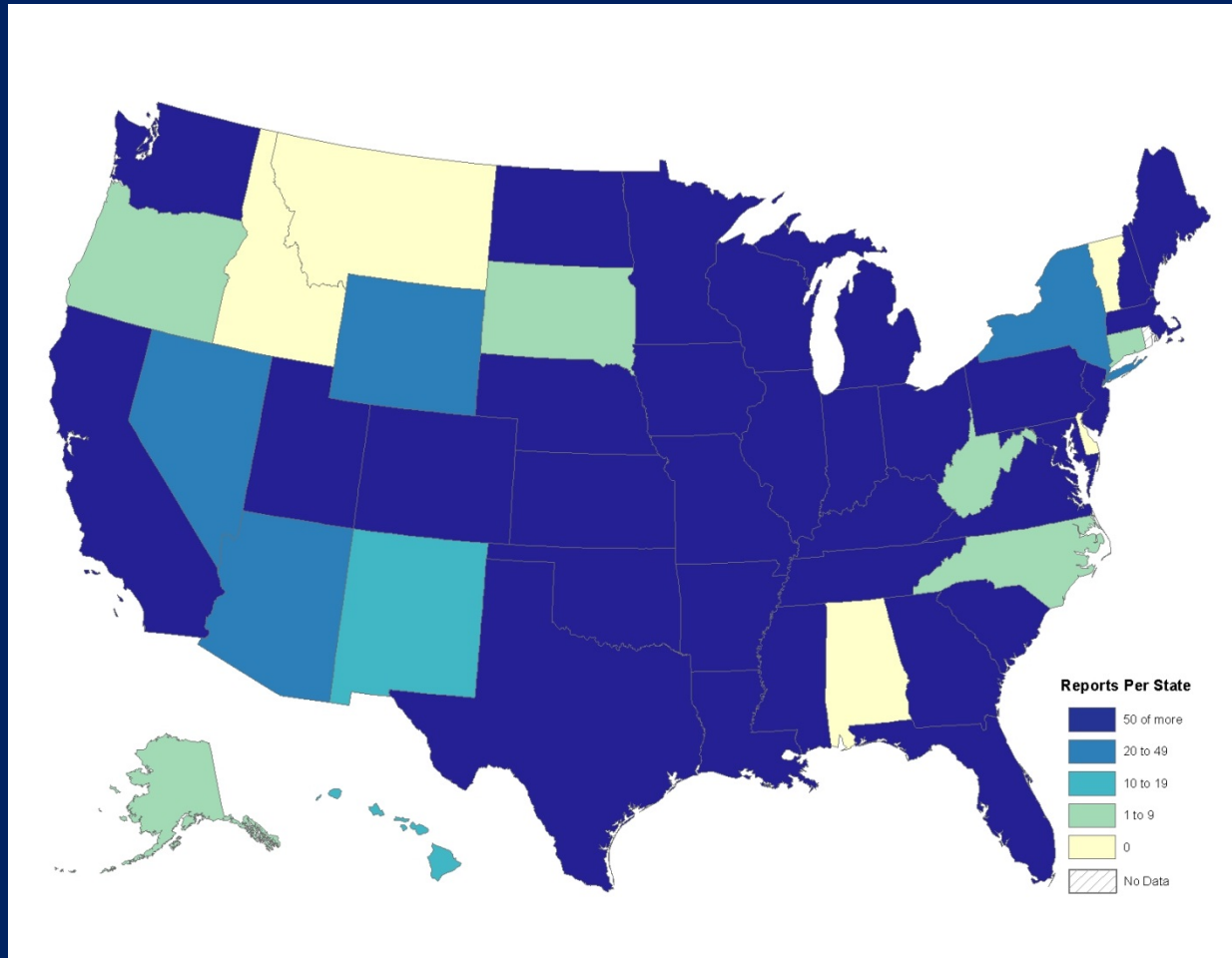


Synthetic Cathinones, by State, 2011





Synthetic Cathinones, by State, 2012



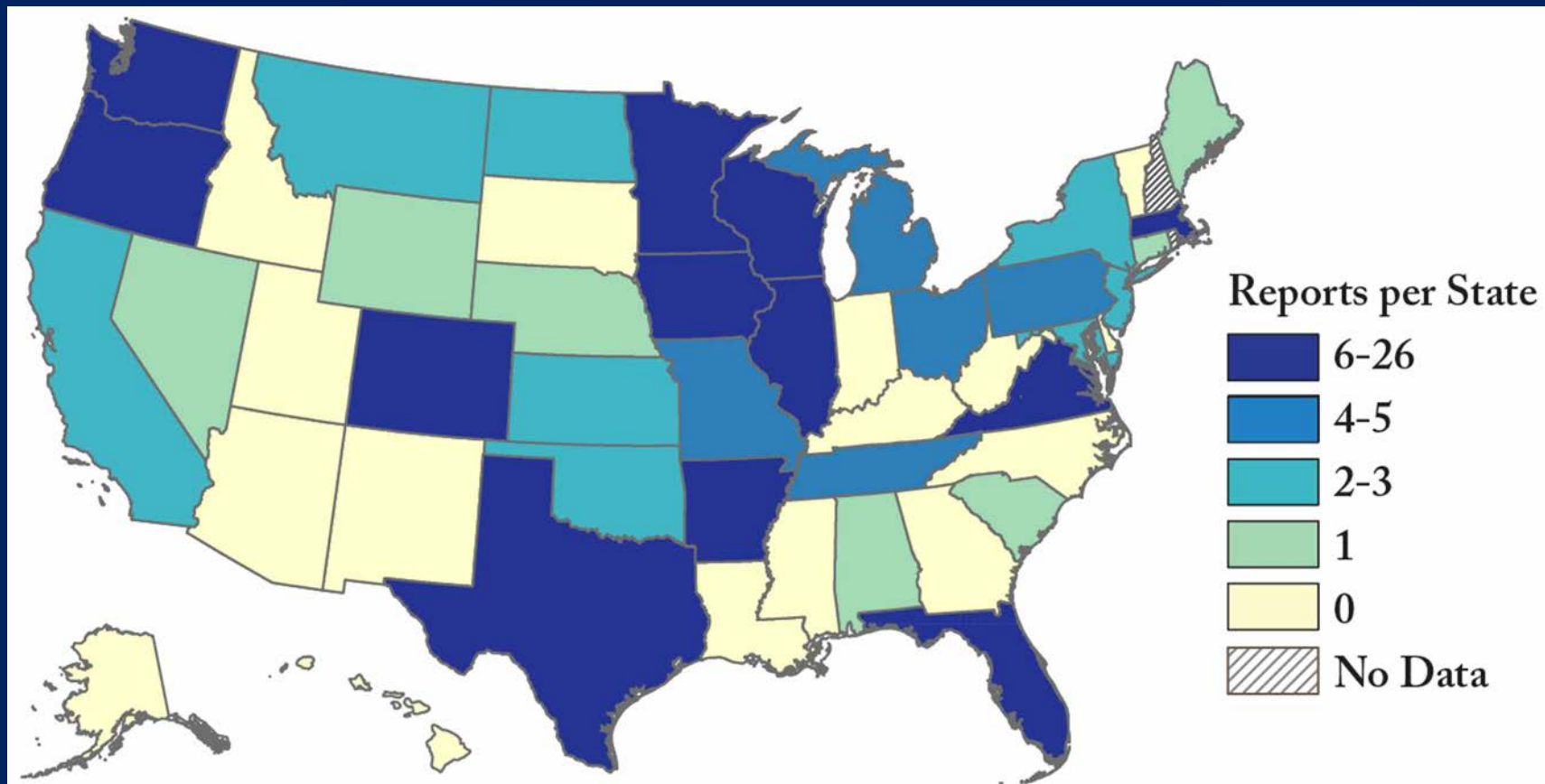


2C/25 Series

- 2C-B
- 2C-B-Fly
- 2C-C
- 2C-D
- 2C-E
- 2C-G
- 2C-H
- 2C-I
- 2C-N
- 2C-P
- 2C-T-4
- 2C-T-7
- 2C-T-21
- 25B-NBOMe
- 25C-NBOMe
- 25D-NBOMe
- 25E-NBOMe
- 25G-NBOMe
- 25H-NBOMe
- 25I-NBOMe

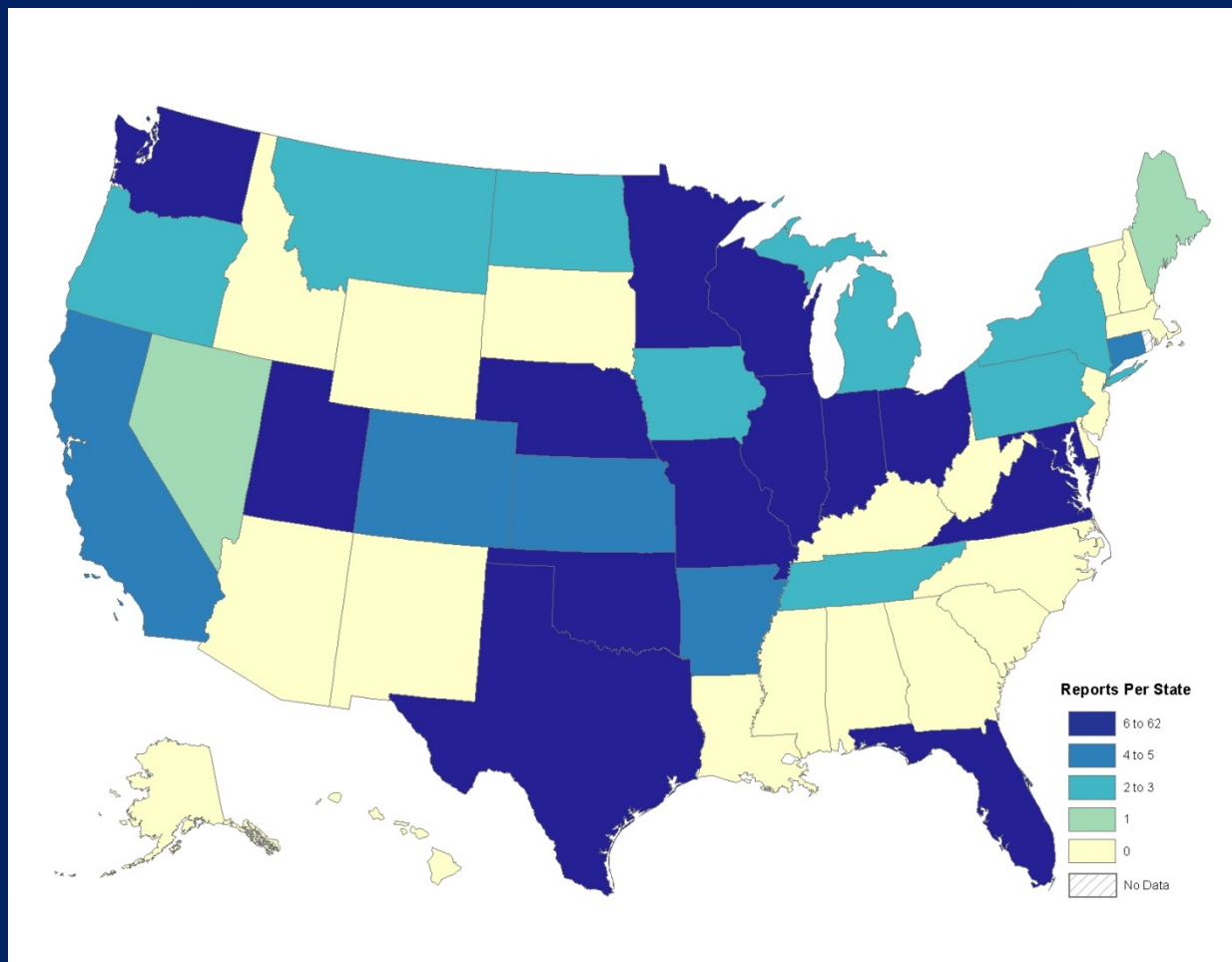


2C-Phenethylamine Reports, by State, 2010



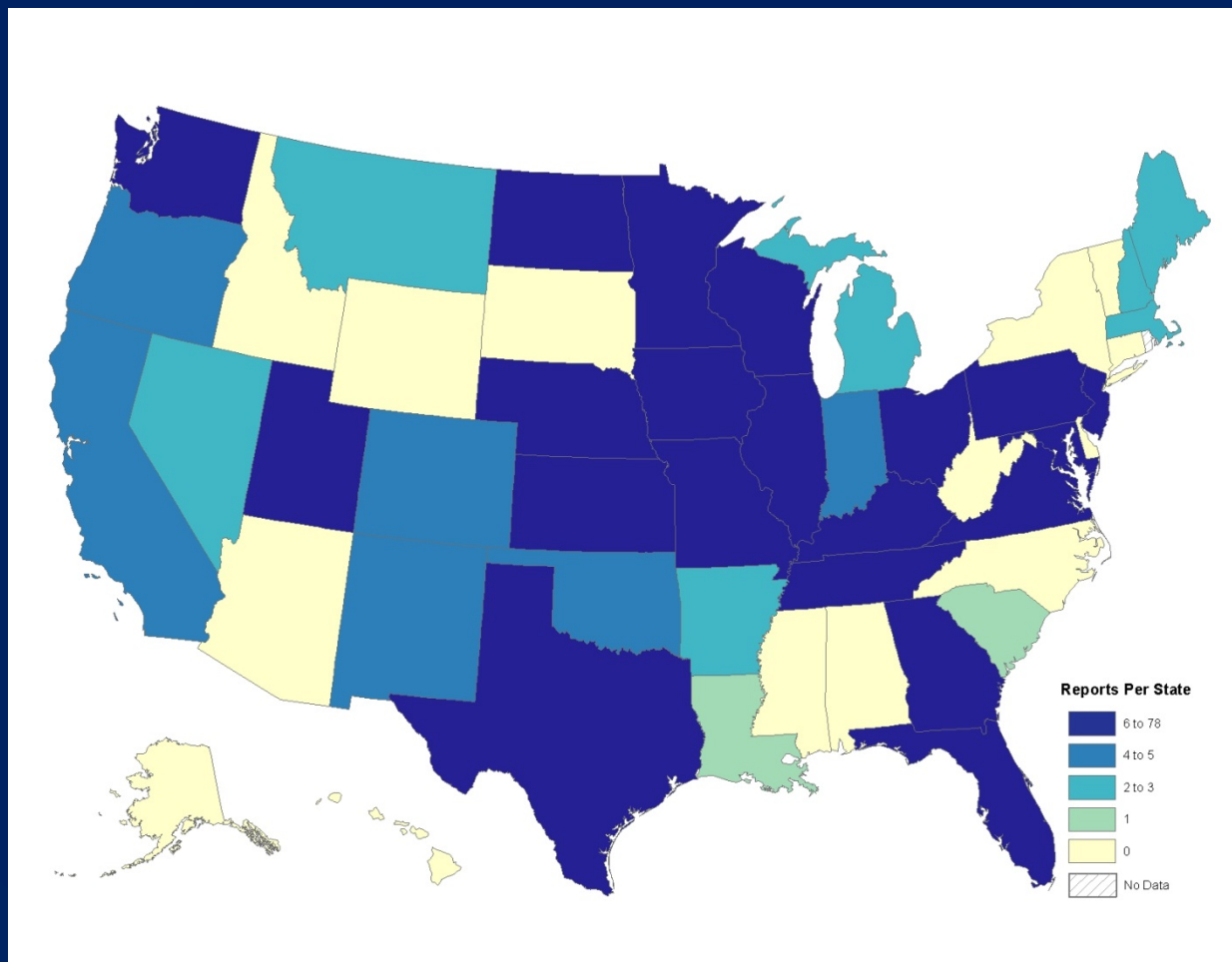


2C-Phenethylamine Reports, by State, 2011





2C-Phenethylamine Reports, by State, 2012

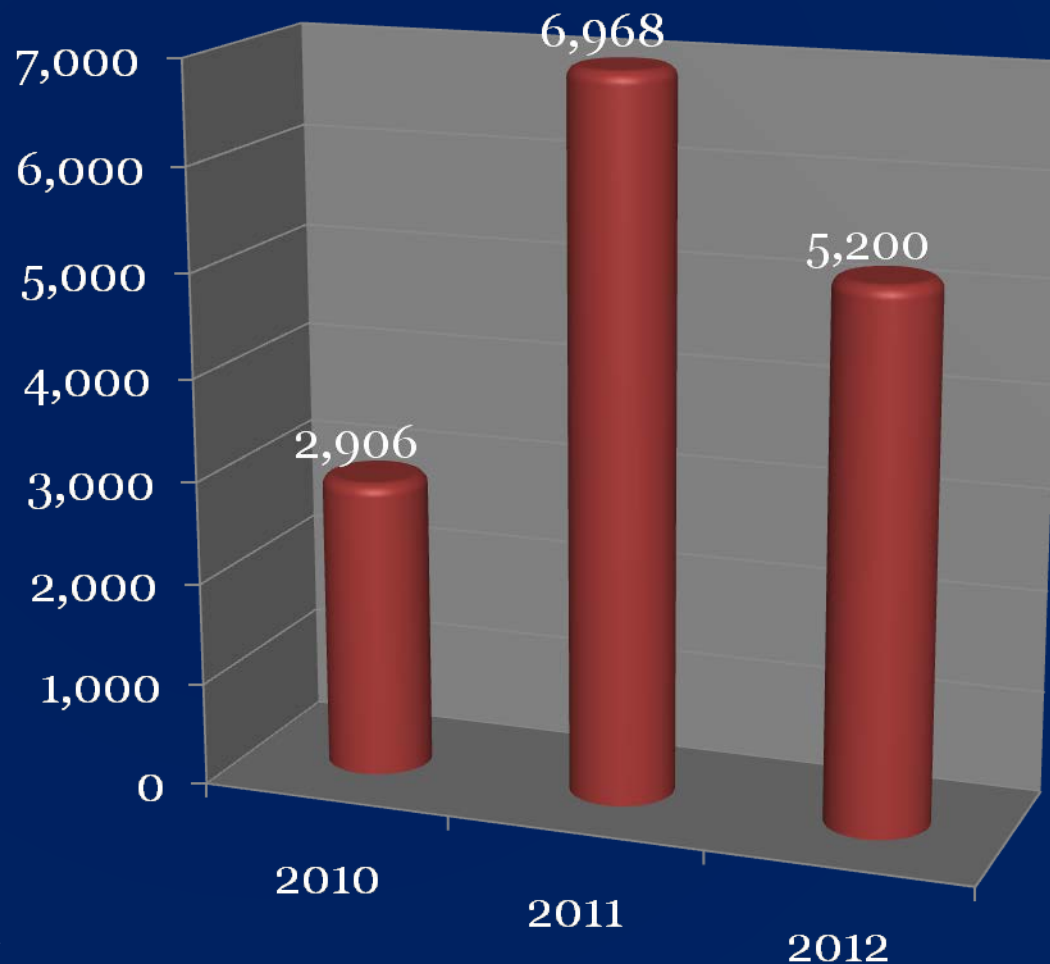




Calls to U.S. Poison Control Centers

American Association
of Poison Control
Centers (AAPCC)
Reporting

Calls to poison
centers for human
exposures to synthetic
marijuana (synthetic
cannabinoids)

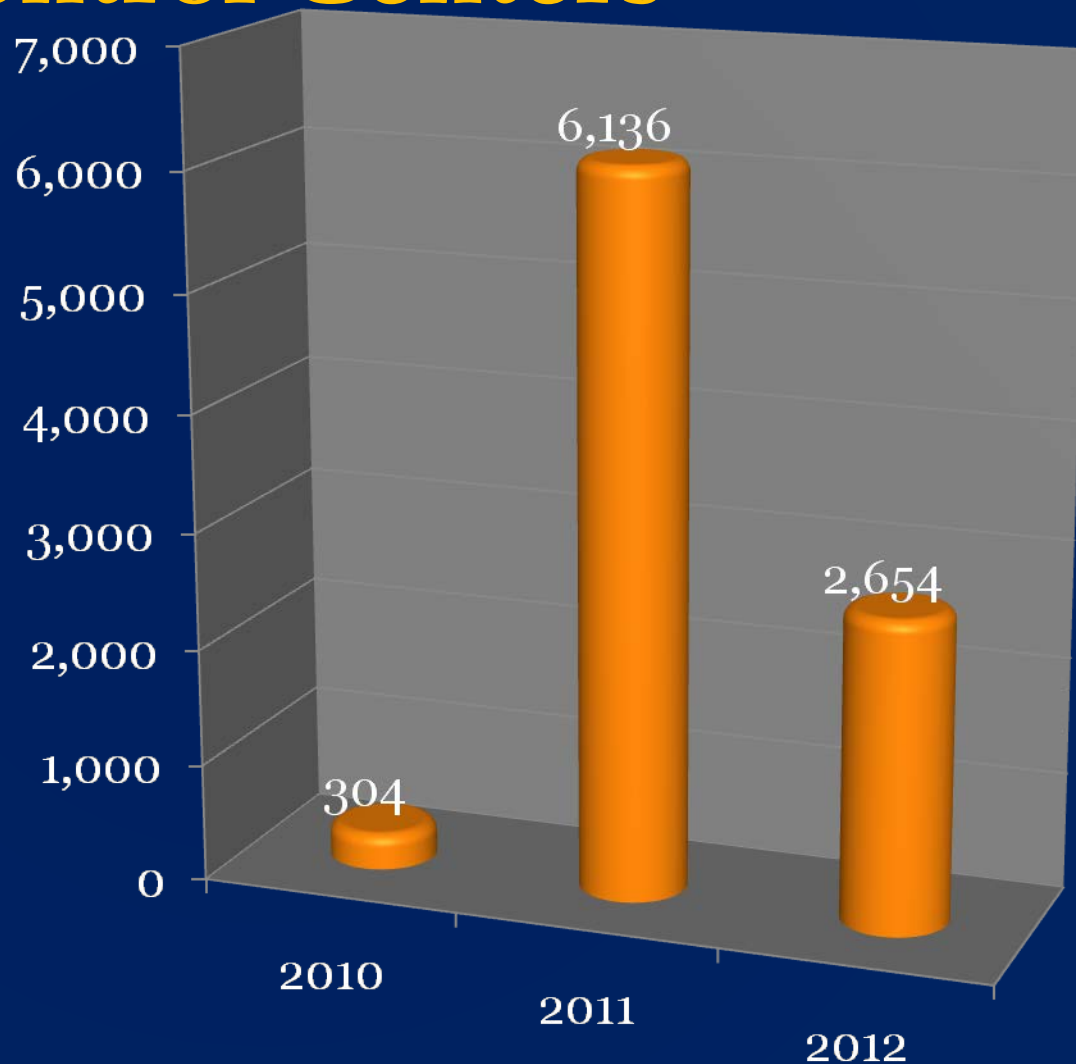




Calls to U.S. Poison Control Centers

American Association
of Poison Control
Centers (AAPCC)
Reporting

Calls to poison centers
for human exposures
to bath salts (synthetic
cathinones)





K2 SUMMIT spice products, buy K2 SUMMIT spice products from alibaba.com - Windows Internet Explorer

http://www.alibaba.com/product-free/108901865/K2_SUMMIT_spice.html

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About 23 results: Spices & Herbs (4) Advanced Search

Home > Products > Food & Beverage > Seasonings & Condiments > Spices & Herbs (73108) Language Options

There are 23 K2 SUMMIT spice from 3 suppliers on Alibaba.com

Related Searches: K2 SUMMIT spice, smoke spice, herb spices, organic spices, Wholesale K2 SUMMIT spice

K2 SUMMIT spice

Other products by Type: Blended

FOB Price: US \$12 - 14 [Negotiable](#)

Port: Longla

Minimum Order Quantity: 100 Pack/Packs

Supply Ability: 100 Kilogram/Kilograms per Week

Payment Terms: T/T, Western Union, MoneyGram

Mr. smoke wholesale Offline

[Contact Supplier](#)

Send a Message to this Supplier

Supplier Details

smoke wholesale
[Cameroon]
Business Type:
Distributor/Wholesaler
[Contact Details](#)

Online Showroom: 42 Products
Other Similar Products from this Supplier
[View this Supplier's Website](#)

See larger image: K2 SUMMIT spice

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http://www.alibaba.com/product-free/108901865/K2_SUMMIT_spice/showimage.html

Internet 100%

Start Disabled - BlackBerry De... My Documents K2 SUMMIT spice pro... 9:29 AM



“The Plant Feed Shop”

Mephedrone Plant Food, 4-MMC Plant Food - Mozilla Firefox

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http://www.plantfeedshop.com/

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Mephedrone Plant Food, 4-MMC Plant...

PLANT FEED SHOP

No.1 Supplier of Mephedrone/4-MMC plant food



HOME ABOUT US PRODUCTS CONTACT US ARTICLES

OUR PRODUCT

HIGHEST GRADE :
4-Methylmethcathinone
Mephedrone / 4-MMC
Methyldrone / RICAT (Haze know)

Wholesale Price:

Select Language

Powered by Google Translate

Welcome to PLANTFEEDSHOP

We are one of international premium providers of 4-MMC/Mephedrone, bk-MDMA/Methylone, and MDPV.

We are proud of offer high quality product, one of most reliable company on the market and get satisfied feedback from our customers.

Our price include registered air mail delivery. Delivery time 4- 10 days. Courier delivery cost 65 usd plus, delivery time 2-4 days.

QUICK INQUIRY

For a quote on delivery charge please send the following:

Name *

E-mail *

Address

Country

Message

Submit

Payment:

We accept bank transfer, moneygram and western union.

Please email us for order:
info@plantfeedshop.com

We can supply following research chemical :

- 3-MMC/Mephedrone
- MDPV
- bk-MDMA/methylone powder
- bk-MDMA/methylone crystal
- 4-MMC/Mephedrone
- 3-MMC crystal
- MDMA
- 3-UB
- jwh-019
- jwh-081
- jwh-122
- jwh-210
- jwh-290
- jwh-015
- jwh-251
- WIN-48090
- WIN-55212-2
- AM-694
- jwh-073
- jwh-038
- 2C-5, 2C-6, 2C-6-2, 2C-6-4,
- 2C-4-7, 2C-9,
- 2C-4 and 2C-8

Translating data from translate.google.com...

1:25 PM 2/3/2011



“PREMIUM BLEND HERBAL.COM”

Pure Ivory Bath Salts (Superior to Ivory Wave) - Moolia Feroz

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http://www.premiumblendherbal.com/products/PURE-IVORY.html

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Pure Ivory Bath Salts (Superior to Ivory Wave)

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Categories

- Herbal Incense ***NOT FOR HUMAN CONSUMPTION***
- Bath Salts ***NOT FOR HUMAN CONSUMPTION***
- Aromatherapy Oils
- Incense Burners

New Products

SYN HQ LIBRE

SYN HQ LIBRE

\$9.99

★★★★★

Choose Options

BATH SALT SAMPLER

Bath Salt Sampler

\$49.99 \$59.99

Not Added

Berry Bliss 57 gram PARTHYNA (2 OUNCES)

\$500.00

★★★★★

http://www.premiumblendherbal.com/pages/Shipping-&-Returns.html

PURE IVORY


Price: **\$24.99**

SKU: IVORY-250

Rating: ★★★★★ (12 product reviews)

Shipping: Calculated at checkout

Quantity: 1



Product Description

WE DO NOT SHIP BATH SALTS TO LOUISIANA OR FLORIDA !!

ORDERS FROM LOUISIANA AND FLORIDA WILL BE CANCELLED!!

If you like IVORY WAVE, VANILLA SKY, RECHARGE etc.. you are going to LOVE PURE IVORY !!!

It has taken over a month but we finally received our shipment of Bath Salts. We will be adding "PURE IVORY" and "BOLIVIAN BATH" to our line. We were originally going to add "IVORY WAVE" but experienced major inconsistencies in quality from that product not to mention the fact that it is being heavily counterfeited in the UK and here in the USA...


PLEASE NOTE: Due to the concentrated nature of this product we strongly recommend that you purchase the 250mg size if you have never purchased this product before and that for the first few hours you only use one application (10-12mg). You will be surprised by how long it lasts - there really is no need for a second application for hours. Once you have experienced PURE IVORY bath salts you will know how to apply in future.

It is also strongly recommend that you do not mix these bath salts with other similar products and for health and safety reasons its always best to stay away from alcohol and prescription medication, or to be intoxicated when bathino using PURE IVORY or any other bath salts products.

Add to Wish List

Click the button below to Add the PURE IVORY to your wish list.

You Recently Viewed...



PURE IVORY

\$24.99

★★★★★

6:28 PM 2/3/2013



Public Safety Concerns

- Driving Under the Influence of Drugs (DUIDs) with fatalities
- Suicides
- Homicide-Suicide
- Overdoses
 - Emergency Department visits
 - First Responders
- Drugs abused to evade drug screens



Warning!

Bangor Daily News

Bangor man on bath salts carried assault-style rifle through city, police say

By [Nok-Noi Ricker](#), BDN Staff
Posted July 27, 2011, at 12:50 p.m.

the man's ex-girlfriend told police at about 7:30 p.m. Tuesday that he had used bath salts and was "stating that people were coming out of his mattress,"

When Bangor police found the man on Wednesday at the Walter Street apartment, police searched the area. Police searched the area a few minutes later. "When questioned, he stated that the two pieces wrapped in plastic were .223 [caliber] ammunition. He did not tell police about the gun."

A local agent of the FBI interviewed the suspect.

The man was released Tuesday evening. The case is being reviewed for possible state and-or federal charges, Edwards said.



[Edwards](#), went into the man's

born found the man on Buck

did in fact find an M4 rifle in the car and 18 separate rounds of

said, adding, "we did confiscate

ing with [Bangor](#) police,



First Responder Encounters

- Altered mental status presents as severe panic attacks, agitation, paranoia, hallucinations, and violent behavior (e.g., self-mutilation, suicide attempts, and homicidal activity). (Spiller *et al.*, *Clinical Toxicology* 2011)
 - climbing into the attic of the home with a gun to kill demons that were hiding
 - breaking all the windows in a house and wandering barefoot through the broken glass
 - jumping out of a window to flee from non-existent pursuers; requiring electrical shock (Taser) and eight responders to initially subdue the patient
 - repeatedly firing guns out of the house windows at “strangers” who were not there
- Bath salts use tied to three Bangor (Maine) deaths. (Richter, *JEMS* 2012)
- Bath salt abuse: new designer drug keeps EMS crews busy nationwide. (Nevin, *JEMS* 2011)



First Responders (Cont.)

Drug Endangered Children:

- Leaving a **2-year-old daughter** in the middle of a highway because she had demons (Spiller *et al.*, *Clinical Toxicology* 2011)
- A drug-intoxicated couple hallucinated they were being burglarized, began shooting into walls. Officers found weapons in every room, and a paranoid parent huddled inside the bathroom with **two young children** and a loaded .357 Magnum (Macher, *American Jails* 2011)
- Northeast PA, couple charged with multiple offenses for stabbing at “90-people living in their walls” with **5-year old present** (*Times-Leader.com*, Mar 21, 2011)



Incidents Involving Synthetic Cathinones and Cannabinoids

Oct-10	Missouri	29-yr old man commits suicide by gun shot to head
Nov-10	Louisiana	21-yr old man cuts throat then shoots himself
Dec-10	Louisiana	Man gets lost in attic; tries to shoot his way out with .38 revolver
Dec-10	Louisiana	Woman in tub thinks she trapped in cage; young child unattended
Dec-10	Mississippi	Deputy Sheriff shot and killed
Dec-10	Mississippi	Man repeatedly stabs his face and stomach; survives
Dec-10	New Jersey	Marine falls from 2 nd story window with sword; Woman about to jump holding child
Dec-10	Kansas	University student killed after running into head-on traffic



Jan-11	Florida	Daughter attacks sleeping 71- yr old mother with machete in attempt to behead her
Jan-11	Florida	Man tears radar unit out of police cruiser with his teeth
Feb-11	Florida	Man arrested for battering girlfriend
Feb-11	Louisiana	Overdose death of 47-yr old woman
Feb-11	Pennsylvania	Two overdose deaths including former State Trooper
Feb-11	West VA	Man violates domestic violence protective order
Mar-11	Kentucky	Mother leaves 2-yr old on busy interstate; found wandering in median carrying 5-yr old
Mar-11	Kansas	50-yr old man found in pajamas out of gas along interstate threatening to harm girlfriend



Mar-11	Texas	Man enters police station, believes someone hiding under car
Mar-11	NJ	Rutgers student murdered by longtime boyfriend
Mar-11	PA	25-yr old man breaks into monastery and stabs priest
Mar-11	PA	Man jumps from 3 rd story window fleeing from non-existent person
Mar-11	PA	Couple destroy home walls trying to stab imaginary people; Arrested for endangering 5-yr old child
Mar-11	PA	Man arrested 3 times in 3 days; chased and entered cars
Mar-11	PA	Man flees car, believes it was melting and that he was being chased by electricity



Mar-11	Pennsylvania	2 women arrested after reckless driving with 1 and 3 yr old children in vehicle
Mar-11	West VA	19-yr man arrested for pointing 3 rifles at family members
Apr-11	Pennsylvania	Two men found dead in Allegheny National Forest
Apr-11	Pennsylvania	Man arrested carrying machete in public
Apr-11	Pennsylvania	Woman driving with toddler arrested for traffic violations after driving erratically and repeatedly banging head against steering wheel
Apr-11	Pennsylvania	Man arrested in knifepoint robbery
Apr-11	Pennsylvania	Man who believed he was riding a train arrested after breaking into a community college



Apr-11	Pennsylvania	45-yr old man subdued by taser arrested, believed demons were after him
Apr-11	Pennsylvania	Man arrested on burglary charges after breaking into a house during early morning hours while the family was there
Apr-11	Illinois	Overdose death of woman
Apr-11	Illinois	Man arrested for disorderly conduct eats dirt while handcuffed
Apr-11	Ohio	3 arrested after shot is fired with infant and 3-yr old in house
Apr-11	Washington	Man shoots and kills wife then self during high speed car chase; 5-yr old son later found dead with plastic bag over head at their home



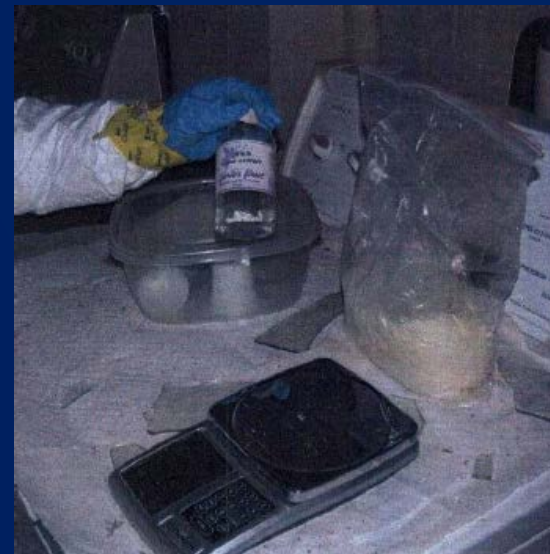
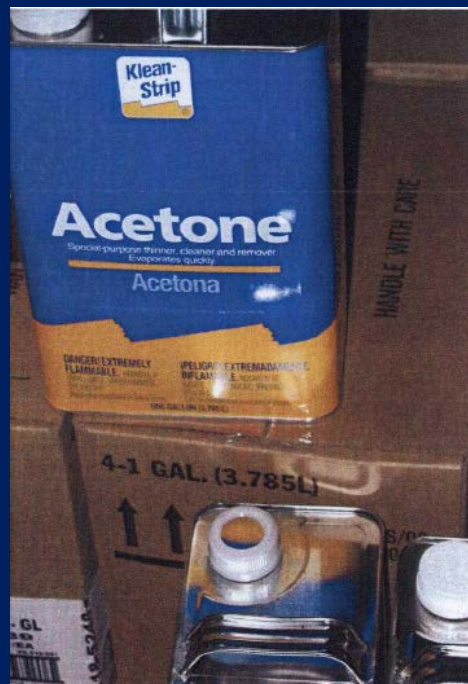
May-11	West VA	Teenager sexually assaults and kills neighbor's goat with knife
May-11	N. Carolina	Man rams stolen car through front door of convenience store; Steals packets of bath salts
May-11	Pennsylvania	Over 50 rounds fired during shootout by 3 high on bath salts and a man who came to steal their bath salts
May-11	Kentucky	Man arrested at grocery store after damaging merchandise and drinking hand sanitizer
Jun-11	West VA	Man breaks into house at 1:30 a.m.; Breaks police vehicle window on way to jail
Jun-11	Indiana	36-year old commits suicide; Lost 50 pounds in 2 months



Jun-11	Pennsylvania	3 arrested after robbing taxi driver and restaurant for money to buy bath salts
Jul-11	West VA	Woman scratches herself “to pieces”
Jul-11	Maine	Woman breaks into house and locks herself in bathroom
Jul-11	Maine	Man makes series of 911 calls; thought he was being chased by people with rifles
Jul-11	Maine	Man attempts “suicide by cop” wanting police to shoot him



Synthetic Drug “Manufacturing Facility”?





Control Efforts

*U.S. Drug Enforcement Administration / Operations
Division / Office of Diversion Control*



Synthetic Drugs: State Controls

- 
- A light blue outline map of the United States, including the contiguous 48 states, Alaska, and Hawaii, is positioned in the background. The map is centered behind the list of state control entities.
- Legislation
 - Department of Health
 - Pharmacy Board
 - Consumer Affairs Dept.



Federal Scheduling & Rescheduling Procedures

Placement of a substance into one of the CSA schedules can be done by statute or through the administrative process.

- **Statute:** Congress may designate a substance a controlled substance or reschedule a drug within the scheduling hierarchy by passing legislation. This, by far, is the easiest method in which to add, remove or transfer a substance between schedules.
- **Administrative Process:** The Attorney General, by rule, (using his administrative authority) to add, remove or transfer a substance between schedules. **The legal definition of control, “...means to add a drug or other substance, or immediate precursor, to a schedule...whether by transfer of another schedule or otherwise”. 21 USC 802(5)**



Federal Temporary Scheduling

- Because of the lack of effective legislative controls to combat the synthetic problem early on, federally we looked to temporary scheduling as a solution
- Requires an AG finding (delegated down to DEA) that the scheduling of a substance in schedule I on a temporary basis is necessary to avoid an imminent hazard to the public safety
- ...and the substance is not listed in any other schedule in Section 21 USC 812 or no exemption or approval is in effect under the FDCA



Federal Temporary Scheduling (Comprehensive Crime Control Act of 1984)

As set forth under 21 U.S.C 811(h), three factors (4, 5 & 6) under the CSA (21 U.S.C. 811(c)) are to be considered in the evaluation

1. Its actual or relative potential for abuse
2. Scientific evidence of its pharmacological effects
3. The state of current scientific knowledge regarding the substance
4. Its history and current pattern of abuse
5. The scope, duration, and significance of abuse
6. What, if any, risk there is to the public health
7. Its psychic or physiological dependence liability
8. Whether the substance is an immediate precursor of a substance already controlled



Federal Temporary Scheduling Actions to Date Relative to Synthetic Drugs

- 5 Synthetic Cannabinoid Compounds

Notice of Intent – November 24, 2010

- 3 Synthetic Cathinone Compounds

Notice of Intent – September 8, 2011



Synthetic Drug Abuse Prevention Act of 2012

- On July 9, 2012, the President signed the Synthetic Drug Abuse Prevention Act of 2012 (Public Law 112-144), into effect

The law controlled 26 compounds into schedule I

- Provides language which defined the term “Cannabimimetic Agent” [the term means any substance that is a cannabinoid receptor type 1 (CB1 receptor) agonist as demonstrated by binding studies and functional assays within any of the five structural classes named in the statute]



Synthetic Drug Abuse Prevention Act of 2012

- The legislation also extends the maximum time that DEA may temporarily control a substance pursuant to 21 U.S.C. 811(h), which is often referred to as the "emergency scheduling" provision.
- Under the new law, the initial time period for temporary scheduling has been increased from 12 months to 24 months, and the extension period has been increased from 6 months to 12 months.
- The maximum total amount of time a substance may remain temporarily scheduled is now three years



Synthetic Drug Abuse and Prevention Act 2012

Cannabinoids

- | | |
|--------------------------------|-------------|
| 1) AM2201 | 8) JWH-200 |
| 2) AM694 | 9) JWH-019 |
| 3) CP-47,497 | 10) JWH-250 |
| 4) CP-47,497 –
C8 homologue | 11) JWH-122 |
| 5) JWH-018 | 12) JWH-203 |
| 6) JWH-073 | 13) JWH-398 |
| 7) JWH-081 | 14) SR-19 |
| | 15) SR-18 |

Cathinones

- 1) Mephedrone
- 2) MDPV

Phenethylamines

- 1) 2C-E
- 2) 2C-D
- 3) 2C-C
- 4) 2C-I
- 5) 2C-T-2
- 6) 2C-T-4
- 7) 2C-H
- 8) 2C-N
- 9) 2C-P



Why are these synthetic compounds marketed the way they are (i.e. not for “Human Consumption”)?

- Synthetic cannabinoids are sold as “potpourri” or “incense” products at retail outlets and on the Internet
- Synthetic cathinones are sold as “bath salts”, “jewelry cleaner” and “plant food” at retail outlets and on the Internet



To Try to Defeat the Controlled Substance Analogue Act !!

21 USC 813 – A Controlled Substance Analogue, shall, to the extent intended for human consumption, be treated for the purposes for any Federal law as a controlled substance in Schedule I

21 USC 802(32) – chemical structure is substantially similar to a controlled substance in schedule I or II and has a similar pharmacologic effect.





Proving Substantial Similarity

- Requires proof of substantial similarity both with respect to *chemical structure* and actual or represented *pharmacological effect*. The “intended for human consumption” requirement is often demonstrated by law enforcement investigations.
- The substantial similarity standard often results in a battle of the experts, which is resource intensive and highly unpredictable.
- Constitutional issues (e.g., vagueness) also often come into play.



OPERATION LOG JAM

Results of Operation

- 97 Arrests
- 265 Search warrants
- 73 Consent/Knock-talk contacts
- 1,085 Pounds raw synthetic cathinones
- 167,712 Packets of synthetic cathinones
- 5.3 million Packets of synthetic cannabinoids
- 1,909 Pounds Raw synthetic cannabinoids
- 10,487 Pounds of treated plant material
- 48,253 Pounds of untreated plant material
- More than \$40,000,000 US Currency/bank accounts
- Vehicles/value 57/\$1,973,500
- Other Assets \$5,688,500
- Firearms 47
- 1096 gallons of acetone seized



The Way Forward on the International Front

- Working to identify major foreign based sources (*Obscure middlemen, trading companies, & exporters*)
- Working to sensitize source countries regarding the threat and the need for international controls (*Insufficient regulations & legislation*)
- Working through the UN process to look at coordinated global outreach and cooperation (expanding upon UN CND Resolution 55/1 “*Promoting international cooperation in responding to the challenges posed by new psychoactive substances*”)



Thank You / Questions



*U.S. Drug Enforcement Administration / Operations
Division / Office of Diversion Control*