



United States Encounters and Efforts against Synthetic Designer Drugs



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22nd National Conference on Pharmaceutical and
Chemical Diversion

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U.S. Drug Enforcement Administration



Presentation Outline

**Synthetics Drugs
Overview**

Looking Forward

**Chemical Trafficking
Trends (Meth, Cocaine &
Heroin)**

Questions?





Compounds Encountered in the U.S. since 2009

More than 233 new Synthetic Compounds
From 8 Classes of Drugs

U.S. law enforcement has encountered:

- 95 synthetic cannabinoids
- 51 synthetic cathinones
- 87 other compounds (2C compounds, tryptamine, piperazines, etc.)



CHANGE

Change is the only
constant in the drug
world.



Synthetic Designer Drugs

- These drugs are perceived as being ‘legal’ alternatives to marijuana, cocaine, methamphetamine, MDMA and LSD
- These drugs are being marketed and sold as:
 - incense and potpourri
 - bath salts
 - glass cleaner
 - shoe deodorizer
 - plant food
 - “Molly”
 - Research chemicals
 - And many other names
- Often **more dangerous** than the traditional illicit drugs they are purported to mimic



Synthetic Cannabinoids

(Spice, K2, legal weed)





What's in a Name?

- Developer/institution
 - JWH = John W. Huffman
 - AM = Alexandros Makriyannis
- Website
 - RCS-4 (SR-19, BTM-4)
 - RCS-8 (SR-18, BTM-8)
- Pharmaceutical companies
 - A = Abbott Laboratories
 - WIN = Sterling Winthrop
- Pop culture references
 - 2NE1
 - AKB48
 - STS135
 - XLR-11
 - BB-22
- Chemical names
 - QUPIC (PB-22)
 - AB-FUBINACA
 - AB-PINACA



Synthetic Cannabinoid Profit Margin

*One Kilogram
of Powder*

*Thirteen Kilograms of
Organic Leaf*

*\$20.00 each 1 to 2
Gram Package*

*Approximately \$250,000 Profit
per Kilogram*



Synthetics

*Cannabinoids by Generation**

- **Generation 1**
 - Includes: JWH-018, JWH-019, JWH-073
- **Generation 2**
 - Includes: AM 2201, RCS-4, JWH-122
- **Generation 3**
 - Includes: AKB48, STS-135
- **Generation 4**
 - Includes: UR-144, 5-Fluoro-UR-144
- **Generation 5**
 - Includes: PB-22, 5-fluoro-PB-22, BB-22
- **Generation 6**
 - Includes: AB-PINACA, AB-FUBINACA, ADB-PINACA
- **Generation 7**
 - Includes: THJ-018, FUB-PB-22

* Generations identified by DEA STRL



Synthetic Cannabinoids

- Unregulated and unlicensed industry
- Multiple manufacturers



- Sold in convenience stores, gas stations (often behind the counter), smoke and head shops and online
- Significant batch to batch variance (i.e. "hot spots", multiple or different drugs)
- Labeled "Not for Human Consumption"



SYNTHETIC CANNABINOID

- What does it look like?
- How is transformed/made into a usable form?



SYNTHETIC CANNABINOID

RCS **JWH-081**

*4-methoxynaphthalen-1-yl-
(1-pentylindol-3-yl)methanone*

For Research Purposes ONLY
Not for Human Consumption

1000g



ACETONE SOLVENT – 5 gallon cans





Bulk Plant Material





Dried Ground Plant Leaves





Mix the product





Add Flavoring





Cannabinoid Drying





Packaging Center





Packaging



Packaging can be done by hand or using automated tools. Commercial packages are typically 1g, 3g, 5g, and 10g sizes.



Other Processing Locations



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



“SPICE” MANUFACTURING SITE





CANNABINOID PROCESSING

May 2010 near Richmond, VA





Sold at Gas Stations, Convenience Stores, Head Shops and Online





Why Spice? - 18 year old's perception

- “Spice vs Marijuana”
 - Doesn't show up on urinalysis testing
 - More potent
 - “10Xs higher”
 - Less expensive
 - “10Xs cheaper”





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, <u>aggressive behavior</u> , agitation, confusion, dysphoria, <u>paranoia</u> , agitation, irritation, panic attacks, <u>intense hallucinations</u>
Neurological	Seizures, loss of consciousness
Cardiovascular	Tachycardia, hypertension, chest pain, cardiac ischemia
Metabolic	Hypokalemia, hyperglycemia
Gastrointestinal	Nausea, vomiting
Autonomic	Fever, mydriasis
Other	<u>Organ damage</u>



Cost Comparison – “potpourri”

12 Ounce Bag of Potpourri

[* Review this Item & Win \\$100!](#)

List Price: ~~\$32.99~~

Sale Price: **\$25.95**

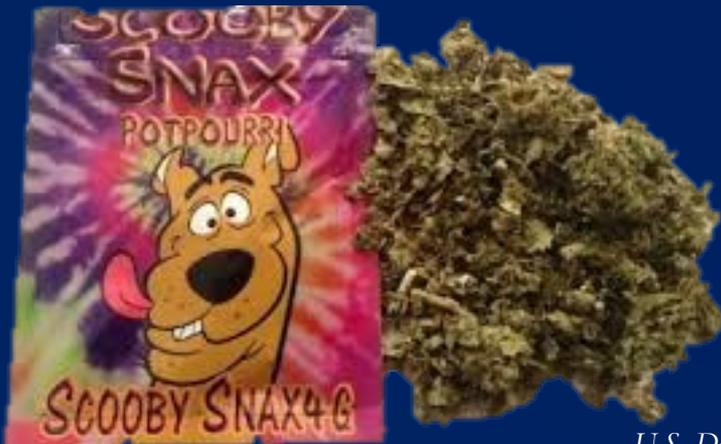
You Save: \$7.04 (21%)

In Stock. * Usually Ships Same Business Day.

[ADD TO CART](#)

- 12 ounce bag of potpourri
- Adds a pleasant scent to any hearth

[\(See Complete Product Description\)](#)



- Scooby Snax 4 gram = \$25
- 453 grams per pound
- 336 grams real potpourri above
- Equivalent Cost = \$2,100



Liquid Cannabinoid Delivery Method



E-cigarettes

**AB-PINACA and
nicotine**



5F-UR-144

**Brand:
Magic Juice
Watermelon**

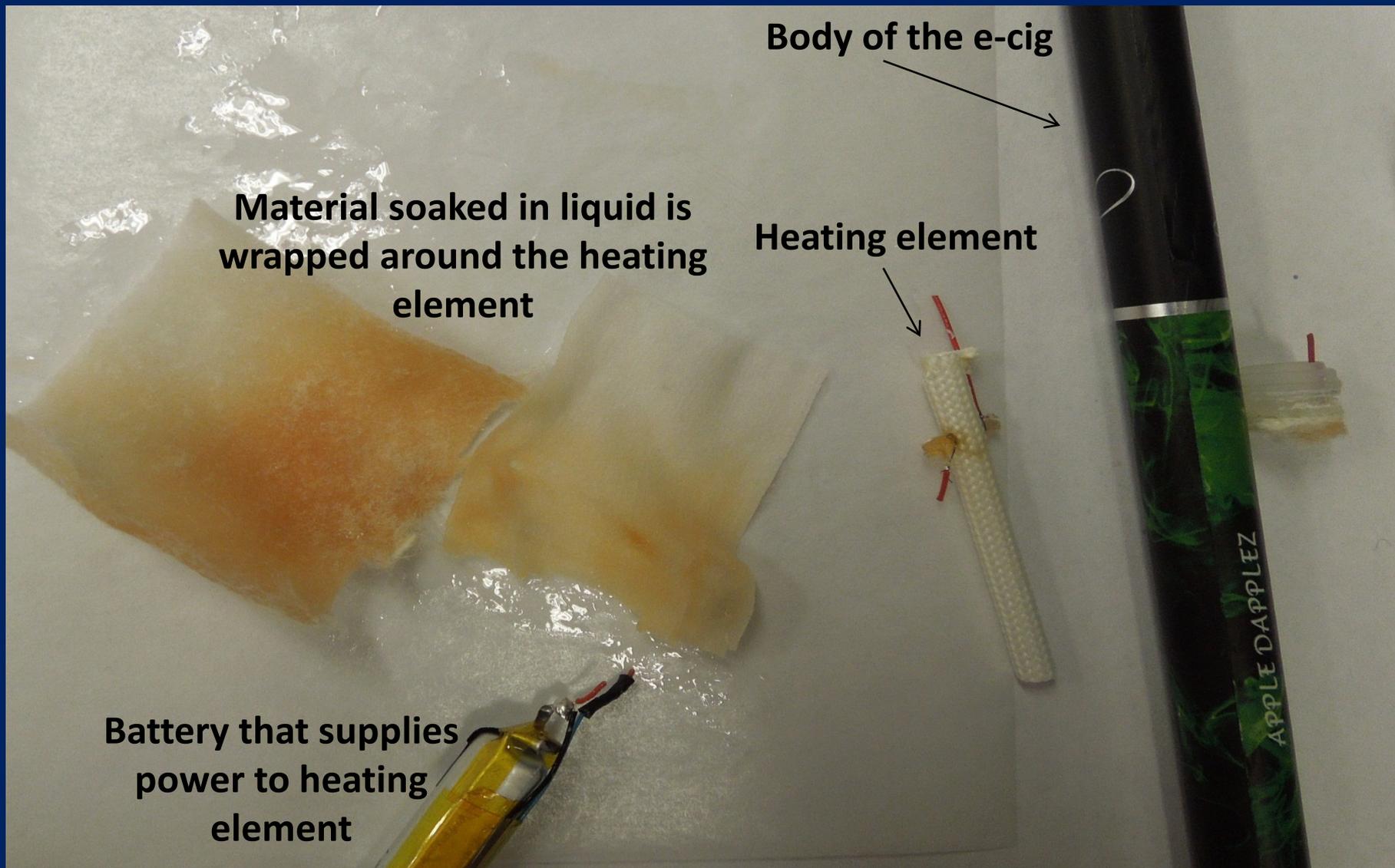


AB-FUBINACA





Components of disposable E-cigarette



Body of the e-cig

Material soaked in liquid is wrapped around the heating element

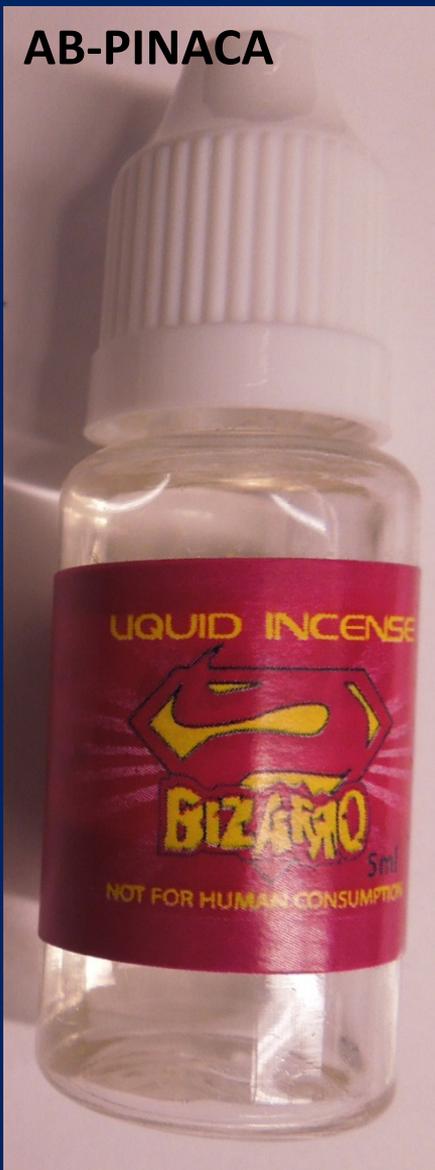
Heating element

Battery that supplies power to heating element

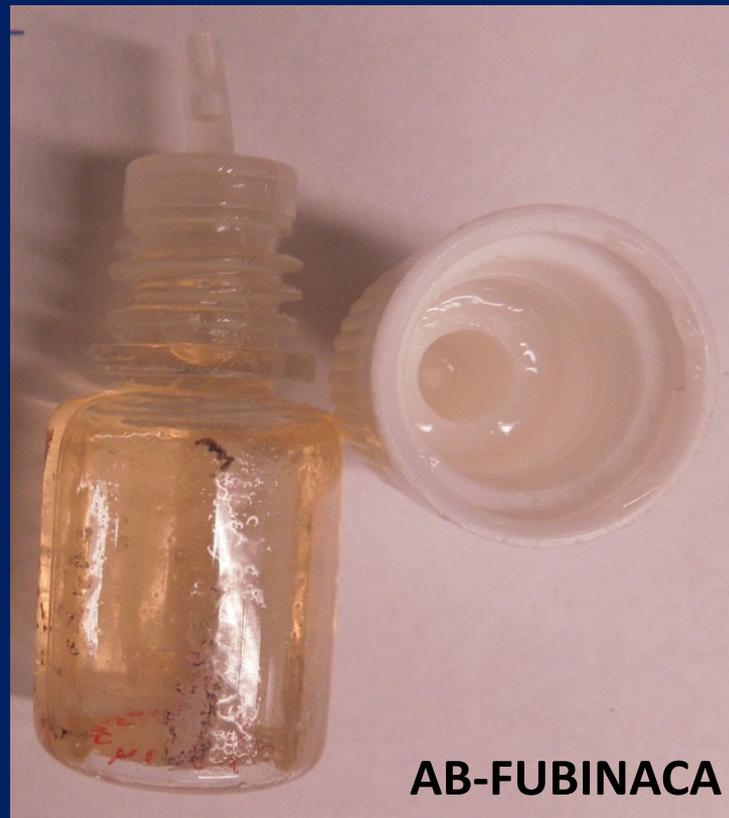


Dropper bottles used with refillable E-cigs

AB-PINACA



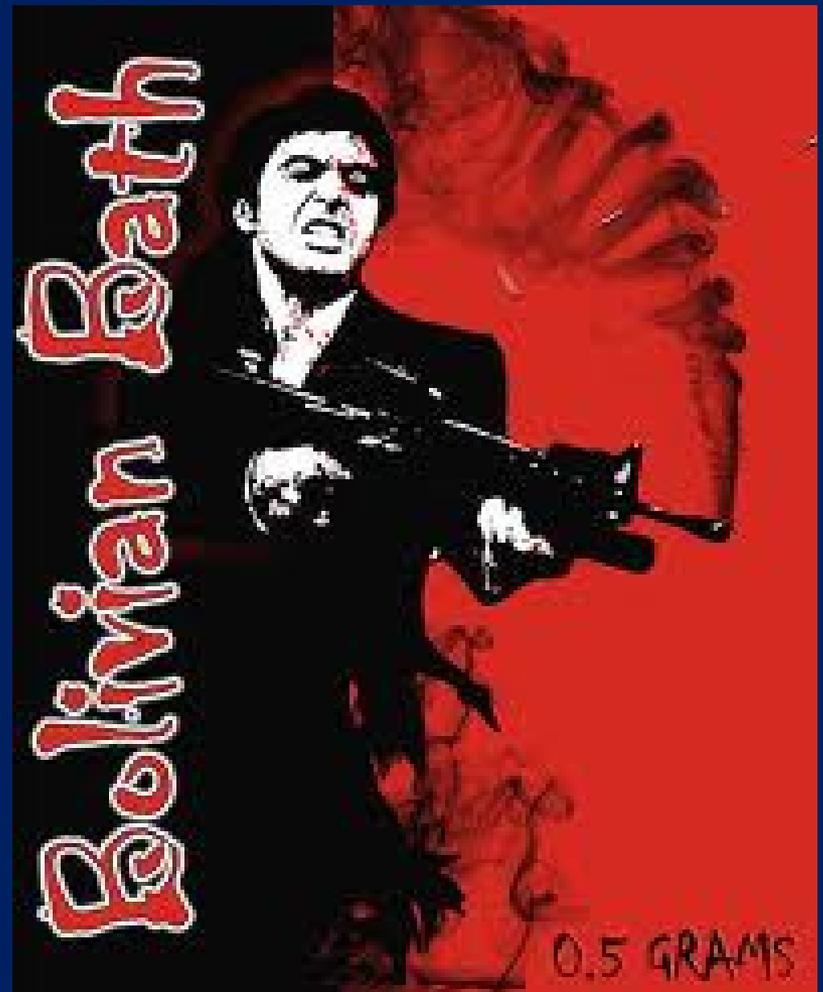
**AB-PINACA and
AB-FUBINACA**



AB-FUBINACA



BATH SALTS, PLANT FOOD, GLASS CLEANER, ETC.





Synthetic Cathinones

(bath salts, plant food, glass cleaner, “Molly”)

- Structurally and pharmacologically similar to amphetamine, Ecstasy (MDMA) 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”, “jewelry cleaner”, “lady bug attractant” and others.



Synthetic Cathinones

(bath salts, plant food, glass cleaner)

- Like the cannabinoids, unregulated and unlicensed industry
- Full disclosure of ingredients typically not present
- Significant batch to batch variances “Hot Spots”
- Sold in convenience stores, gas stations and online





Cost Comparison – plant food & “plant food”



1.5 lb. All-Purpose Plant Food

Model # 1001122 Internet # 100081891 Store SKU # 317179

★★★★★ (77) [Write a Review +](#)

\$5.98 / each

59 in Stock at Bethesda #2509
Aisle 50 Bay 017
(change pick up store)

PRODUCT SOLD : Online & In Store



- Blow – 1/2 gram = \$40
- 453 grams per pound
- 680 grams in above Plant Food
- Equivalent Cost = \$54,400



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	<u>Aggressive behavior</u> , anger, anxiety, agitation, <u>auditory and visual hallucinations</u> , depression, dysphoria, empathy, euphoria, fatigue, formication, increased energy, concentration, panic attacks, <u>paranoia</u> , perceptual disorders, restlessness, <u>self-mutilation</u> , <u>suicidal ideation</u>
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

- Also sold in pill form
- Popular at Clubs
- Available at Parties
- Mimics MDMA
 - Ecstasy/XTC
- Street name “Molly”





The Story of “Molly”

- Ecstasy tablets in the 1980’s – early 2000’s typically contained MDMA
- In approximately 2006, ecstasy tablets featured mostly BZP/TFMPP combinations
 - Users disliked the hangover with this combination
- Rise in crystal or powder MDMA
 - Called “Molly”
- Many current “Molly” investigations have been found to be methyldone or other substituted cathinones
 - Cost and easy to obtain





Molly

- Some of the Drugs found in “Molly” (Scheduled)
 - MDMA (1985)
 - Methylone (October 2011)
 - A-PVP (March 2014)
 - 4-MEC (March 2014)
 - Pentadrone (March 2014)
 - Butylone (March 2014)
 - Ethylone
 - others



Using Molly

- Users report that the drug takes effect approximately 15 to 30 minutes after ingestion and that the effects last approximately 2 to 4 hours.
- Molly can be ingested by sniffing or snorting, taken orally, smoked, or liquefied and injected.
- Others report swallowing molly-filled capsules, or dissolving it into a fluid and then drinking it.
- Some say Molly has a bitter taste and is better consumed by “parachuting”
 - A method whereby the molly powder is wrapped in a facial tissue and then swallowed.
 - The tissue then slowly dissolves and introduces molly into the stomach.



Effects of “Molly”

- The interest in taking these substances is a perception that it enhances visual, audio, and tactile senses.
- Synthetic cathinones act as CNS stimulants, which can cause rapid heart rate, chest pains, insomnia, sweating, and vomiting.
- People using these substances have reported paranoia, delusions, agitation, seizures, suicidal thoughts, and panic attacks. *Body temperature rising is a side effect.
- It is also believed that molly and other synthetic cathinones lower inhibitions and increase sociability.



Other Synthetic Drugs of Abuse

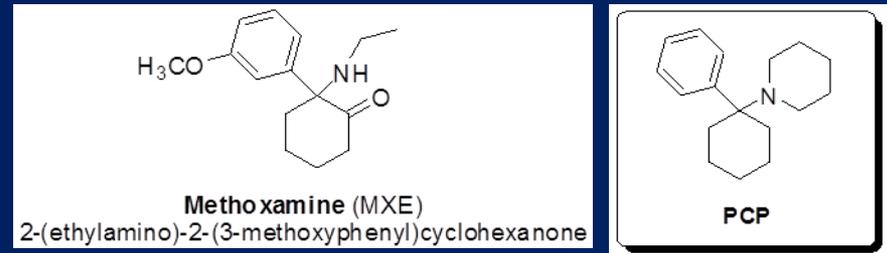


Other Synthetic Drugs of Abuse



MXE - Methoxamine

- Dissociative (mind altering effects) and depression of pain
- Effects similar to PCP
- Encountered on designer drug market
 - International increase in ketamine abuse
- Deaths attributed to the substance



CBP Photo



Acetylfentanyl

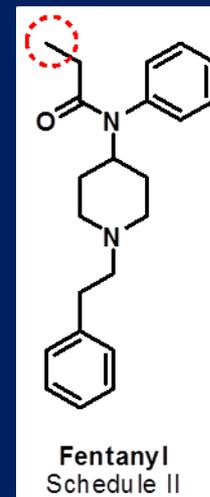
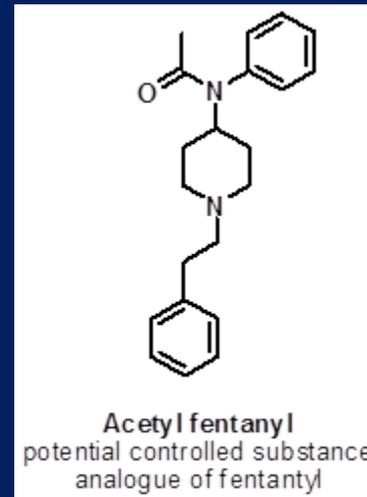
- Chemically-modified derivative of the powerful prescription painkiller Fentanyl
- is reportedly “50 times more potent than heroin and 100 times stronger than morphine
- May 2013 - 10,000 pills of “Desmethyl Fentanyl” intercepted in Montreal— hidden inside a microwave oven and a toaster destined for Colorado
 - Additional 1,500 kilograms of various raw materials; enough to make an additional 3 million pills seized





Acetylfentanyl

- RI Medical Examiner's Office regarding twelve (12) overdose deaths in March/April 2013
- Preliminary Lab/Toxicology reports attribute OD deaths to Acetylfentanyl
 - 5 of 12 overdose deaths occurred in Woonsocket, RI
 - May 16, 2013 two individuals arrested in Woonsocket, RI in possession of 28 grams of suspected Acetyl fentanyl
 - Attempts will be made to confirm link to OD deaths



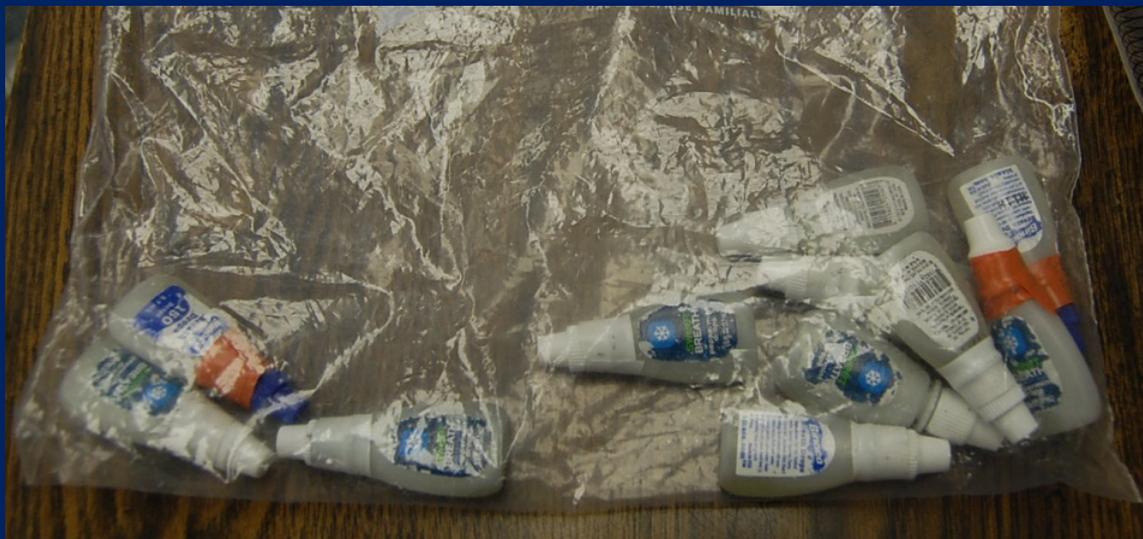


Phenethylamines

25I-NBOMe and 25C-NBOMe

“N-BOMB”, “2-5-I”, “Eye” and “Smiles”

- Hallucinogen, abused orally or through nasal passages
- Encountered on blotter paper and in dropper bottles
- Taken as a substitute for LSD
- Linked to several overdose deaths
- 11/2013 controlled 25I-NBOMe, 25B-NBOMe & 25C-NBOMe





Addressing through Legislation



U.S. 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

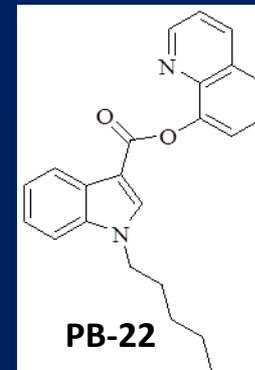
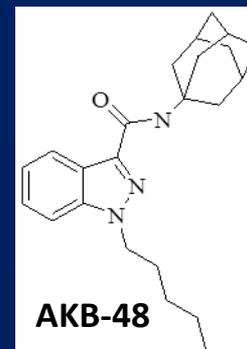
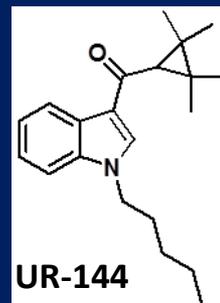
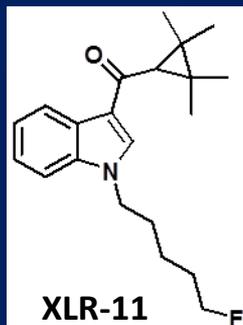
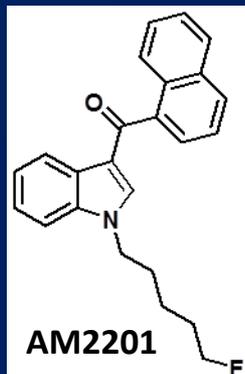
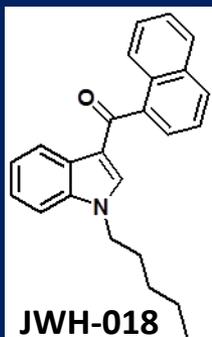
- 1) 2C-E
- 2) 2C-D
- 3) 2C-C
- 4) 2C-I
- 5) 2C-T-2
- 6) 2C-T-4
- 7) 2C-H
- 8) 2C-N
- 9) 2C-P



Why is it hard for law enforcement to keep up?



Designer Drug Market Encounters



Nov 2009

Apr 2011

Feb 2012

Mar 2012

Jun 2012

Feb 2013

Mar 2010

Oct 2010

Mar 2011

Jun 2012

Jul 2012

Dec 2012

State controls initiated

DEA notice to schedule published

Final Order placing 5 synthetic cannabinoids in Schedule I

Federal legislation signed, placing 15 synthetic cannabinoids in Schedule I

State controls UR-144 XLR-11

GA Pharmacy Board bans UR-144 & XLR-11

KS Board of Pharmacy bans UR-144



Synthetics

*Cannabinoids by Generation**

- **Generation 1**
 - Includes: JWH-018, JWH-019, JWH-073
- **Generation 2**
 - Includes: AM 2201, RCS-4, JWH-122
- **Generation 3**
 - Includes: AKB48, STS-135
- **Generation 4**
 - Includes: UR-144, 5-Fluoro-UR-144
- **Generation 5**
 - Includes: PB-22, 5-fluoro-PB-22, BB-22
- **Generation 6**
 - Includes: AB-PINACA, AB-FUBINACA, ADB-PINACA
- **Generation 7**
 - Includes: THJ-018, FUB-PB-22

* Generations identified by DEA STRL



PUBLIC SAFETY CONCERNS

- ▣ Overdoses
- ▣ Violent Behavior
- ▣ Assaults/Attacks
- ▣ Homicides
- ▣ Suicides
- ▣ DUIs with Fatalities and Severe Injuries
- ▣ Media Reports – bizarre behavior
 - MS - Self Mutilation
 - IA – Man Eats Dirt
 - NJ – Priest Stabbed
 - PA – Stabbing of Friend
 - ME – Man sees people coming out of mattress, arrested with rifle
 - TN – Couple hallucinates burglary and shoots up house
 - CO – Naked car chaser high on bath salts
 - LA - Suicide



Addressing through Legislation



Synthetic Drugs: U.S. State Controls

- 
- A light blue outline map of the United States is positioned in the background, showing the state boundaries. The map is centered on the continental United States, with Alaska and Hawaii shown in the bottom left corner.
- Legislation
 - Department of Health
 - Pharmacy Board
 - Consumer Affairs Dept.



U.S. Synthetic Drug Abuse and Prevention Act 2012

Cannabinoids

- | | |
|--------------------------------|-------------|
| 1) AM2201 | 8) JWH-200 |
| 2) AM694 | 9) JWH-019 |
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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
- 3) (Methylone)

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 is it hard for law enforcement to keep up?



In the U.S., why are 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



The U.S. 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.





Assessment of U.S. Analogue Act

- Many successful prosecutions
- 1986 – 2011: ~ 62 prosecutions
- 2011 – Present: ~ 400 prosecutions





Jury Conviction

- “Last Place on Earth” – October 8, 2013
 - Guilty on 51/55 counts
 - jury found drugs to be “controlled substance analogues”
 - AM2201, UR-144, XLR11, 5-MeO-DALT, 4-fluoro-amphetamine, and 4-MePPP





Recent Sentencing

- December 2013 – US v. Julias 12-cr-00043
(WDVA – Harrisonburg)
 - Three defendants sentenced in the distribution of synthetic cathinone drug a-PVP
 - Defendant 1 – 108 months in prison
 - Defendant 2 – 72 months in prison
 - Defendant 3 – 84 months in prison



Perceived Risk and Availability



2012 Monitoring the Future Survey

1 in 9 (11%)

High School Seniors

(synthetic cannabinoids)



Hospital Emergency Room Admissions

SYNTHETIC CANNABINOID ABUSE (Spice, K2, legal weed, synthetic marijuana)

- 2010: > 11,000
- 2011: > 28,000

SYNTHETIC CATHINONE ABUSE

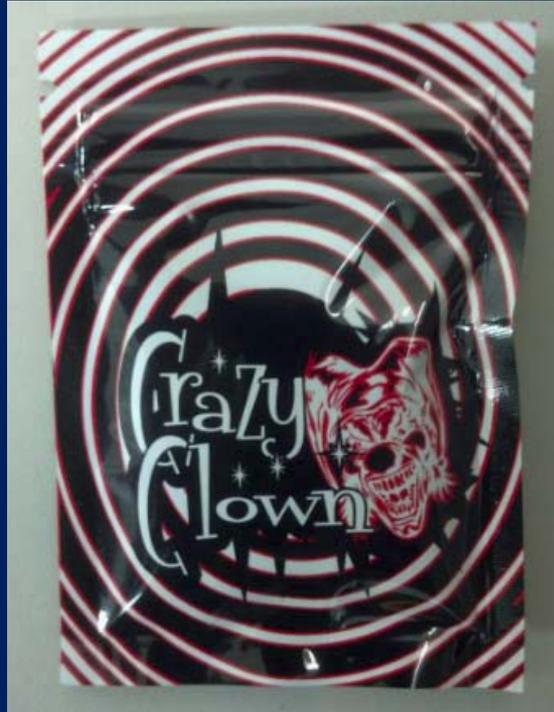
- 2010: No Data
- 2011: > 22,000



8 Teenagers in GA
Hospitalized - 8/22/13

Symptoms: Nausea,
Vomiting, Weakness, Dry
Mouth, Cardiac Problems,
Paralysis

Suspected Substance:
ADB-PINACA



Crazy Clown





Denver, CO

- * Reports of 3 overdose deaths
- * Smoking synthetic drug under the name of “Black Mamba”
- * CDC Reports that up to 221 people have been hospitalized

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Grand Junction Montrose Glenwood Springs
Grand Junction 65.0 °

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3 Dead, Cause Believed to be Synthetic Marijuana

by KREX News Room

by Amanda Brandeis
Story Created: Sep 7, 2013 at 7:14 PM MDT
(Story Updated: Sep 7, 2013 at 7:14 PM MDT)

DENVER, Colo. Officials believe synthetic marijuana has taken the lives of three people on the Front Range, and now experts from the Centers for Disease Control and Prevention are investigating.

"Spice," "K2" or "Black Mamba" are names for the drug, which is distributed in little packets.

Police believe that a bad batch is being spread around and has left more than 75 people in area emergency rooms, several of those are on life support.

The dangerous drug can be 800 times more potent than THC, the chemical in marijuana that makes you high.

Investigators are currently looking into where people are getting the drugs.



We will not arrest our way out of this problem!

- Enforcement is just as important as....
- Prevention/Education
- Treatment



2013 Monitoring the Future Survey

1 in 13 (7.9 %)

High School Seniors

(synthetic cannabinoids)



Control Efforts: Using all the “Tools” Available



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



Synthetic Drugs: U.S. State Controls

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U.S. Federal Scheduling & Rescheduling Procedures

Placement of a substance into one of the U.S. Federal Controlled Substance Act (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 Process

- DEA collects information from law enforcement and public health officials regarding encounters and evaluates this information relative to the three factors required for temporary scheduling.
- Once sufficient information has been collected, a letter is transmitted from DEA to the U.S. Department of Health & Human Services (DHHS) to communicate intention to temporary schedule [and to verify no active new drug applications (NDAs) or investigations drug applications (INDs) for the proposed substances filed].



Federal Temporary Scheduling Process

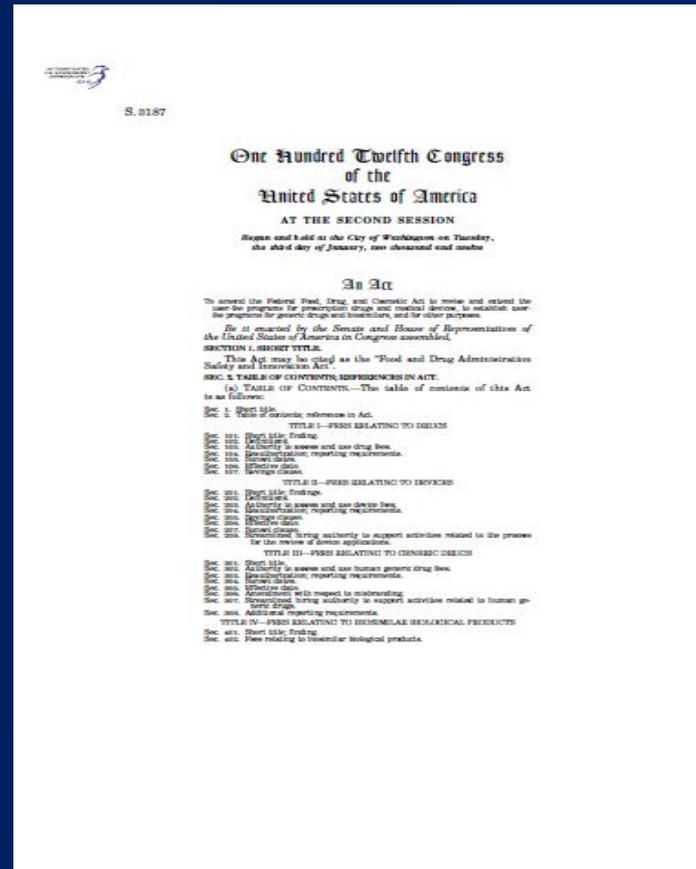
- DEA letter of intent to DHHS, solicits a comment to control these substances within 30 days. Based on the DHHS response, a “Notice of Intent” can be published in the U.S. Federal Register with a “Final Order” published at minimum 30-days after the “Notice of Intent”.
- As there is no “comment period” provided for temporary scheduling, civil and criminal sanctions applicable to the manufacture, possession, importation, and exportation are effective upon publication of the “Final Order”.



U.S. 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)

➤ The law controlled 26 compounds into schedule I





U.S. Synthetic Drug Abuse Prevention Act of 2012

- Defined the term “Cannabimimetic Agent” [any substance that is a cannabinoid receptor type 1 (CB1 receptor) agonist].
- Extends the maximum time that DEA may temporarily control a substance.
- Initial time period for temporary scheduling increased from 12 to 24 months / Extension period increased from 6 months to 12 months.



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- 8) 2C-N
- 9) 2C-P



In the U.S. why are 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



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.





The U.S. Controlled Substance Analogue Act

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



The Way Forward on the International Front

- Working to identify major foreign based sources
- Working to sensitize partner nations regarding the threat and the need for international controls
- Continue to work bilaterally and with international partners to look at coordinating global outreach and cooperation



The Way Forward on the International Front / CND Resolutions

Enhancing International Cooperation in the Identification & Reporting of NPS (E/CN.7/2013/L.2/ March 2013)

United Nations E/CN.7/2013/L.2/Rev.1
 **Economic and Social Council**
Distr.: Limited
14 March 2013
Original: English

Commission on Narcotic Drugs
Fifty-sixth session
Vienna, 11-15 March 2013
Agenda item 4
Implementation of the international drug control treaties

Australia, Croatia, El Salvador, Finland, Hungary, Israel, Japan, Mexico, New Zealand, Peru, Russian Federation, Thailand, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland and United States of America: revised draft resolution

Enhancing international cooperation in the identification and reporting of new psychoactive substances

The Commission on Narcotic Drugs,

Recalling its resolution 48/1 of 11 March 2005, on promoting the sharing of information on emerging trends in the abuse of and trafficking in substances not controlled under the international drug control conventions,

Recalling also its resolution 53/11 of 12 March 2010, on promoting the sharing of information on the potential abuse of and trafficking in synthetic cannabinoid receptor agonists,

Recalling further its resolution 53/13 of 12 March 2010 on the use of "poppers" as an emerging trend in drug abuse in some regions,

Recalling its resolution 55/1 of 16 March 2012, on promoting international cooperation in responding to the challenges posed by new psychoactive substances,

Reiterating its concern at the number of potentially dangerous new psychoactive substances that continue to be marketed as legal alternatives to internationally controlled drugs, circumventing existing controls,

Concerned that emerging new psychoactive substances may have effects similar to those of internationally controlled drugs and may pose risks to public health and safety, and noting the need for additional data on the effects of these substances to be collected and shared.

V.13-81852 (E)



Please recycle 



New Drugs, New Approaches The New Zealand Experience Enacted 7/18/13

- Ban all NPS not currently regulated
- Create pathway to the market for substances that can be shown to pose no more than a low risk of harm
- Those wishing to sell a NPS will first have to provide clinical data showing that product does not pose undue risk to user or society



New Drugs, New Approaches The New Zealand Experience

- Strict advertising control
- Can only be sold by licensed party pill shops
- Packaging must be approved and Ingredients must be listed
- Manufacturing practice standard Ingredients



DEA Web-based Resources

Office of Diversion Control

www.deadiversion.usdoj.gov

U.S. Department of Justice Drug Enforcement Administration
Office of Diversion Control

Home
Contact Us | Site Map | Search

Registration

Reporting

Info & Legal Resources

Inside Diversion Control

Got Drugs?

EMERGENCY

Disaster Relief

ALERT

Extortion SCAM

Regulations.gov

The voice in Federal decision making

Good Medicine, Bad Behavior

Drug Diversion in America

To view PDF documents

Get **ACRIS READER**

Report Illicit Pharmaceutical Activities

1-877-RX-ABUSE

1-877-792-2873

What's New

Leo A. Farnam, M.D., Decision and Order (May 13, 2013)

Ann G. Zavitsky, M.D., Decision and Order (May 15, 2013)

Schedules of Controlled Substances; Placement of Lorazepam into Schedule II (May 6, 2013)

Topix RX Pharmacy, Decision and Order (May 3, 2013)

Licenses (April 23, 2013)

Fisher Clinical Services, Inc. (April 23, 2013)

Research Triangle Institute (April 23, 2013)

Waltco Laboratories, Inc. (April 23, 2013)

S.A. B. Pharma, Inc. (April 23, 2013)

Altech Associates, Inc. (April 23, 2013)

PCAS-Naxson, LLC (April 23, 2013)

Dayman Chemical Company (April 23, 2013)

Rhodes Technologies (April 19, 2013)

Canakit D.T.S., Inc. (April 19, 2013)

Ames Clinical Services, Inc. (ACSI) (April 19, 2013)

GE Healthcare (April 19, 2013)

Nebraska State Penitentiary (April 19, 2013)

Beck's Corporation (April 19, 2013)

Rhodes Technologies (April 19, 2013)

American Pharmaceutical Chemicals, Inc. (April 19, 2013)

Nadika, LLC (April 19, 2013)

National Center for Natural Products Research/NCA-M'Voiced (April 19, 2013)

Schedules of Controlled Substances; Temporary Placement of Topix Synthetic Cannabinoids into Schedule I (April 12, 2013)

Schedules of Controlled Substances; Placement of Methylenedioxymethamphetamine (April 12, 2013)

60-Day Notice - Comments Requested; National Drug Control Service; Submission With Change of a Priority Accession Collection (April 3, 2013)

60-Day Notice - Comments Requested; Importation Declaration for List I and List II Chemicals, DEA Form 482 and 482A (March 29, 2013)

Gary Alford Shearer, M.D., Decision and Order (March 29, 2013)

Registration Support

Registration Number Toll Free: 1-800-882-9539 (8:30 am-6:00 pm EST)

Save time by applying for and/or renewing your DEA Registration online. Data will be entered through a secure connection to the **CDMP** online web application system.

Minimum requirements: Credit Card and a web browser that supports 128-bit encryption.

[Complete Service Plan for Registrants](#)

Email Registration Questions to DEA.Registration.Help@usdoj.gov

[Email Offices with Registration Specialists](#)

[More](#)

Upcoming Meetings

[Pharmacy Division Awareness Conference](#)

[Manufacturers/Importers/Exporters Conference](#)

Hurricane Sandy

Message for New Jersey and New York Area Registrants - As you know, Hurricane Sandy impacted the New Jersey and New York areas particularly hard. Staff at the DEA's office in those two states have also been impacted by the storm. If you are not able to contact your local DEA Field Division you may direct any questions or problems with your registration to DEA's main call center at 1-800-882-9539. Hours of operation are from 8:30 to 6:00pm EST. Thank you for your patience.

Quick Links

[Renew Applications Online](#)

[New Application Online](#)

[Duplicate Certificate Request](#)

[Registration Validation](#)

[Registration Change Request](#)

[Order Forms](#)

[CSCS](#)

[DEA Form 106, Report Theft or Loss of Controlled Substances](#)

[Control Meth Act 2005 \(CMA\)](#)

[Cases Against Doctors](#)

[Mailing Addresses by Topics](#)

[Patient in Form 214FB](#)

[Electronic Prescriptions for Controlled Substances](#)

[Publications & Manuals](#)

[Meetings and Events](#)

[Drug Diversion - Get Crises](#)

[Chemical Control Program](#)

[Medical Missions](#)

[Submit a Tip](#)

FAQ

[ARCS](#)

[Controlled Substance Orders System \(COSCS\)](#)

[DEA Form 224 Order Forms](#)

[Electronic Prescriptions for Controlled Substances](#)

[Issuance of Multiple Prescriptions for Schedule II Controlled Substances](#)

[Lucien Tamara](#)

[Manufacturers Questions](#)

[Opioidcode](#)

[Prescription Drug Monitoring Programs](#)

[Shortcuts](#)

[Specializations](#)

[Registration Procedures](#)

External links included in this website should not be construed as an official endorsement of the views contained therein.



DEA Web-based Resources

www.GetSmartAboutDrugs.com

The screenshot shows the homepage of the GetSmartAboutDrugs.com website. At the top left is the DEA logo with the text "DEA SPECIAL AGENT". The main header features the "GetSmartAboutDrugs" logo and the tagline "A DEA Resource for Parents". A navigation menu includes links for Home, Identify, Prevent, Help, Hot Topics, DEA in the Community, and Communities of Practice. A search bar is located on the right side of the menu. The main content area is divided into several sections:

- Communities of Practice:** A large section with a blue and white grid icon. Text reads: "The new Communities of Practice section includes three PowerPoint presentations about drug abuse and awareness and an online Train the Trainer module that provides presenters with techniques to effectively deliver the presentations." Below this is a "Learn more" link with a blue arrow icon. A navigation bar with "BACK", "STOP", and "NEXT" buttons is visible below the text.
- DEA Publications:** A purple box with the text "Download or request Drugs of Abuse and Prescription for Disaster." and a "READ MORE" link with a blue arrow icon.
- Watch the Videos:** A yellow box with the text "View videos to learn how to keep your family safe, including ways to avoid prescription drug abuse." and a "VIEW" link with a blue arrow icon. An image of a pill labeled "dispose" and "unused Rx" is shown.
- Latest News:** A section with the heading "Latest News" and a link "See All News Stories". It contains two news items:
 - Drug Court Offers Hope for the Future:** "Jan 22, 2013 The Columbia River Partnerships for Change, a nonprofit in Oregon, is seeing tremendous success with its three drug court programs: adult treatment, juvenile treatment, and families restored."
 - ER Visits Tied to Energy Drinks Double Since 2007:** "Jan 16, 2013 Hospitals around the country have seen a gradual uptick in the number of emergency room visits involving energy drinks."
- Voices:** A yellow box with the heading "Voices" and a link "Irma Perez's Story". The text below reads: "Irma was a 14 year old girl from Belmont, California who took an Ecstasy pill on April 23, 2004. She became sick immediately---vomiting and writhing in pain---yet her friends did not seek medical help for her. Instead, they gave..."
- Inside DEA:** A white box with the heading "Inside DEA" and text: "The men and women of DEA aren't just drug enforcement agents---we're parents, grandparents, brothers and sisters. We've seen how drugs rob young people of their promise and dreams, and how entire families are affected by a child's drug abuse..."



DEA Web-based Resources

www.JustThinkTwice.com

The screenshot shows the homepage of the Just Think Twice website. At the top, there is a navigation bar with links for "HOME", "DRUG FACTS", "FACTS & FICTION", "CONSEQUENCES", "TEENS TO TEENS", and "INSIDE DEA". Below this is a large banner for "THINK YOU KNOW WHAT METHAMPHETAMINE IS MADE OF" featuring a young woman's face. To the right of the banner are two smaller promotional boxes: "IT'S TIME TO SHATTER THE MYTHS ABOUT DRUGS AND DRUG ABUSE" and "FACTS & FICTION Get the Facts". Below the banner are three buttons for "MARIJUANA", "COCAINE", and "METH". At the bottom, there is a "Did You Know?" section about "meth mouth".

JUST THINK TWICE
YOU'VE HEARD THE FICTION. NOW LEARN THE FACTS.

Parents & Educators | Drug Glossary

SEARCH

HOME *return home* | **DRUG FACTS** *learn the truth* | **FACTS & FICTION** *know the difference* | **CONSEQUENCES** *life changing events* | **TEENS TO TEENS** *sharing our experience* | **INSIDE DEA** *find out more*

THINK YOU KNOW WHAT METHAMPHETAMINE IS MADE OF?

Maybe you've heard it's made of the same stuff as cold medicine. Well, that's not all. Some of the ingredients used to make meth include battery acid, gasoline, and drain cleaner.

[GET THE FACTS ABOUT METHAMPHETAMINE »](#)

MARIJUANA | COCAINE | METH

IT'S TIME TO SHATTER THE MYTHS ABOUT DRUGS AND DRUG ABUSE

[Learn More](#)

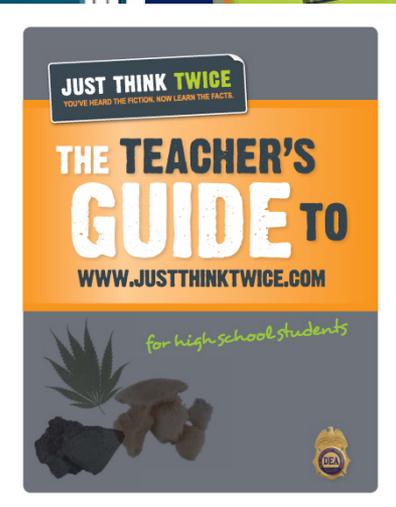
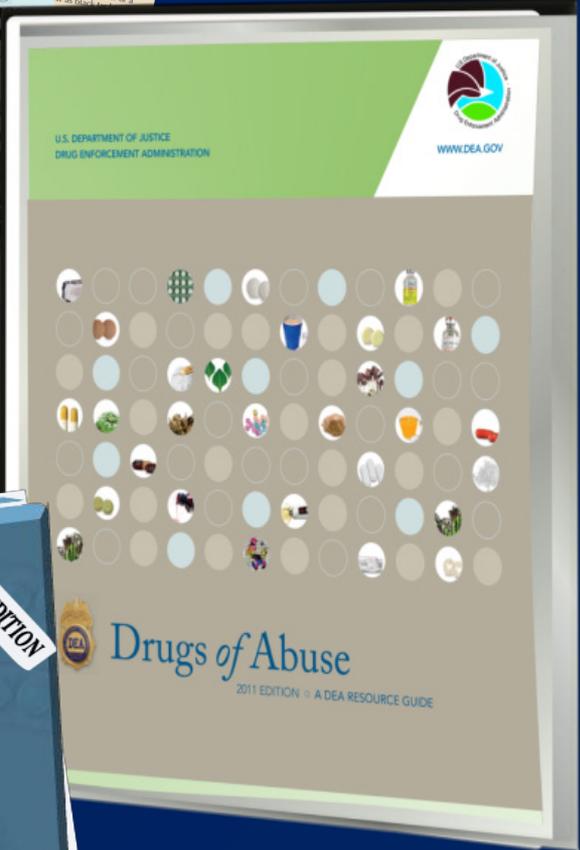
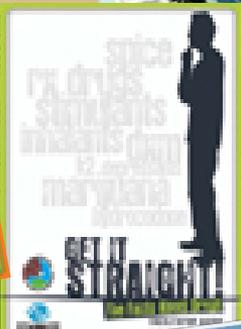
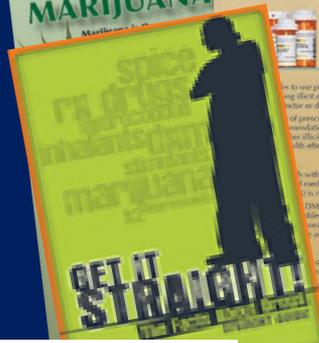
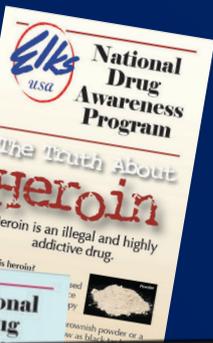
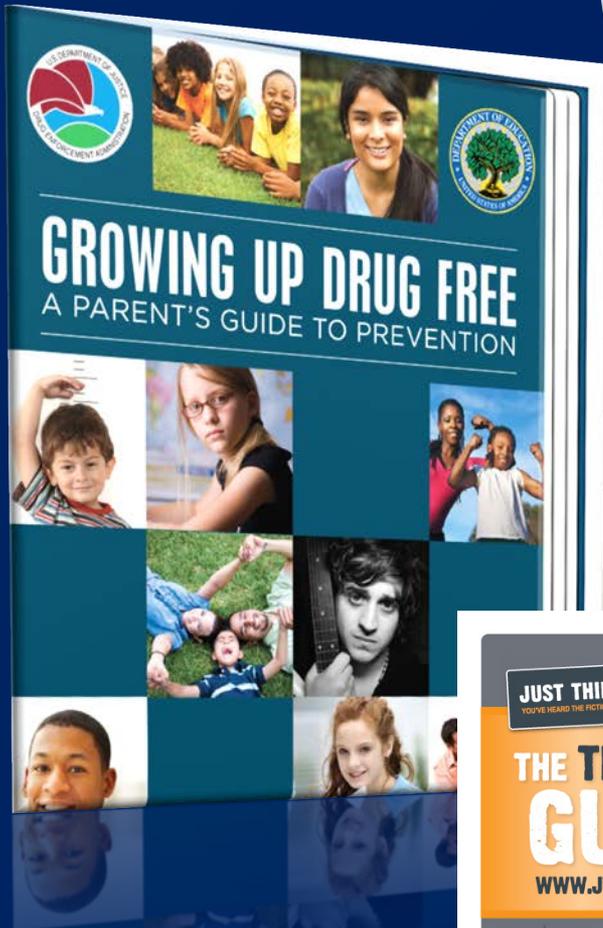
FACTS & FICTION
Get the Facts

TEENS TO TEENS
Advice from teens on the D.A.R.E. Youth Advisory Board
[READ MORE »](#)

Did You Know? Combine toxic chemicals with neglected hygiene, and you get a condition called "meth mouth"—rotten and decaying teeth.

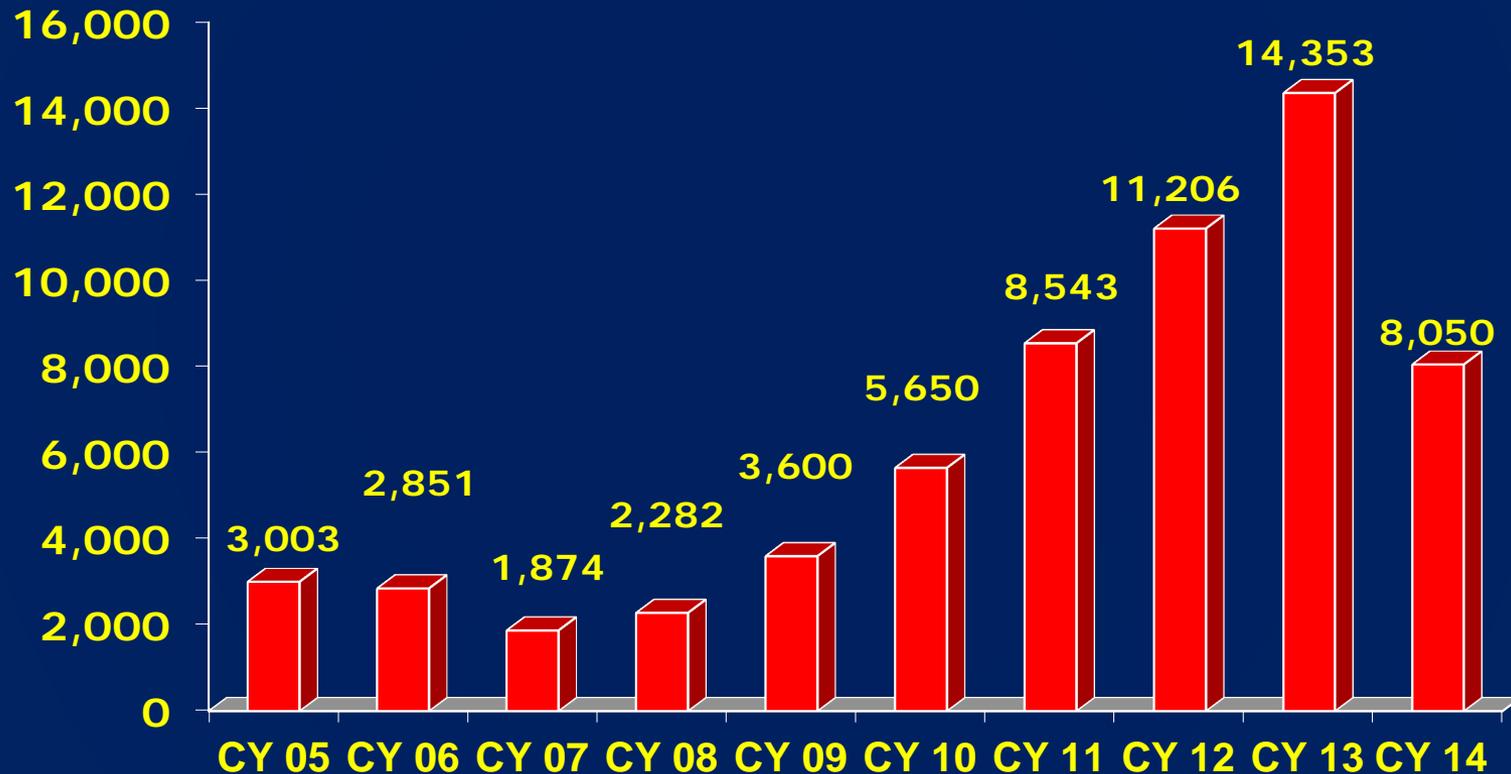


Publications





Methamphetamine Seizures Along the U.S. SW Border (Kilograms)



Source: NSS-EPIC

Query Date: July 1, 2014

Statistics are for Texas, New Mexico, Arizona and California.

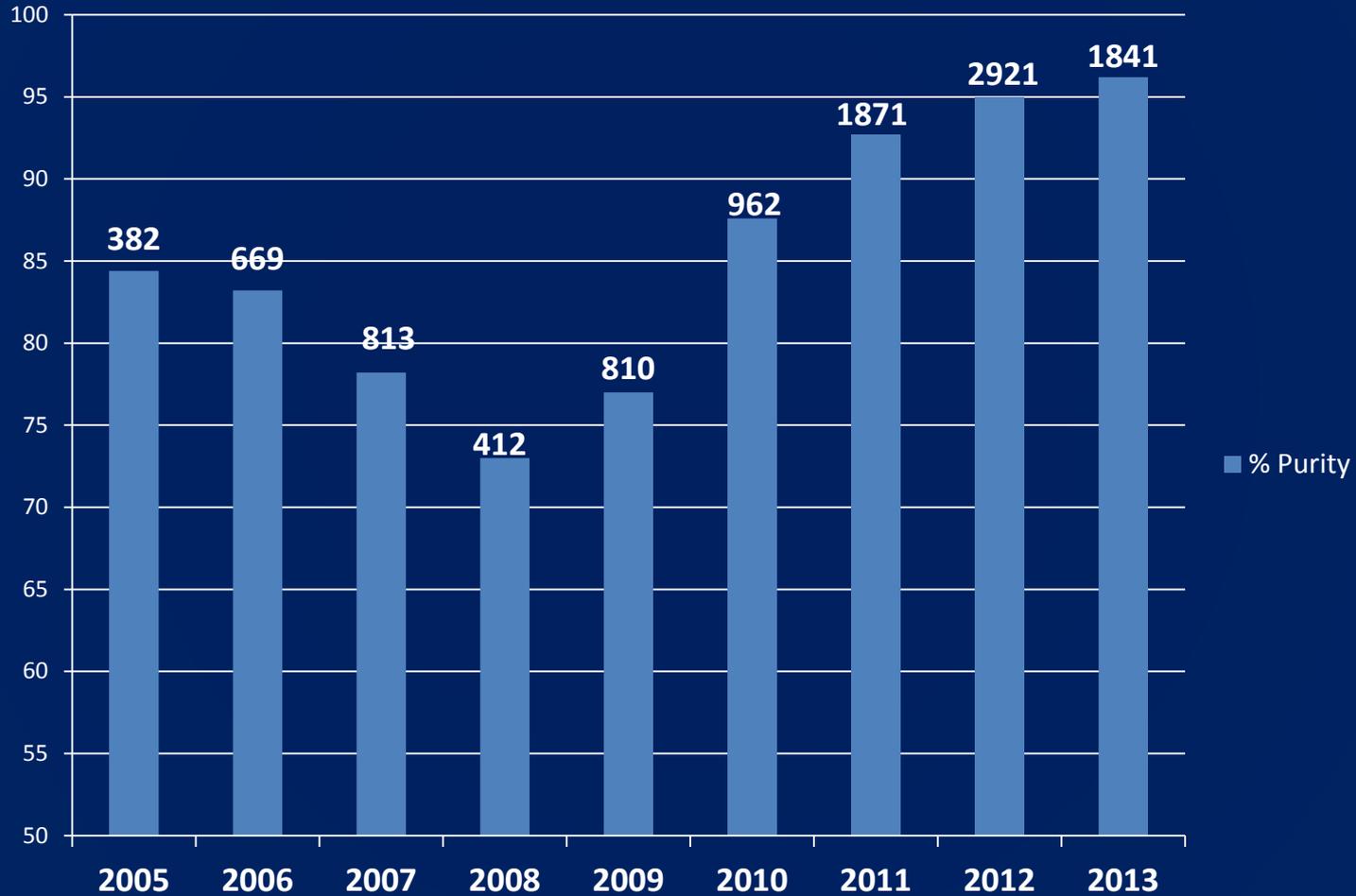


P2P Production Area Jalisco, Mexico





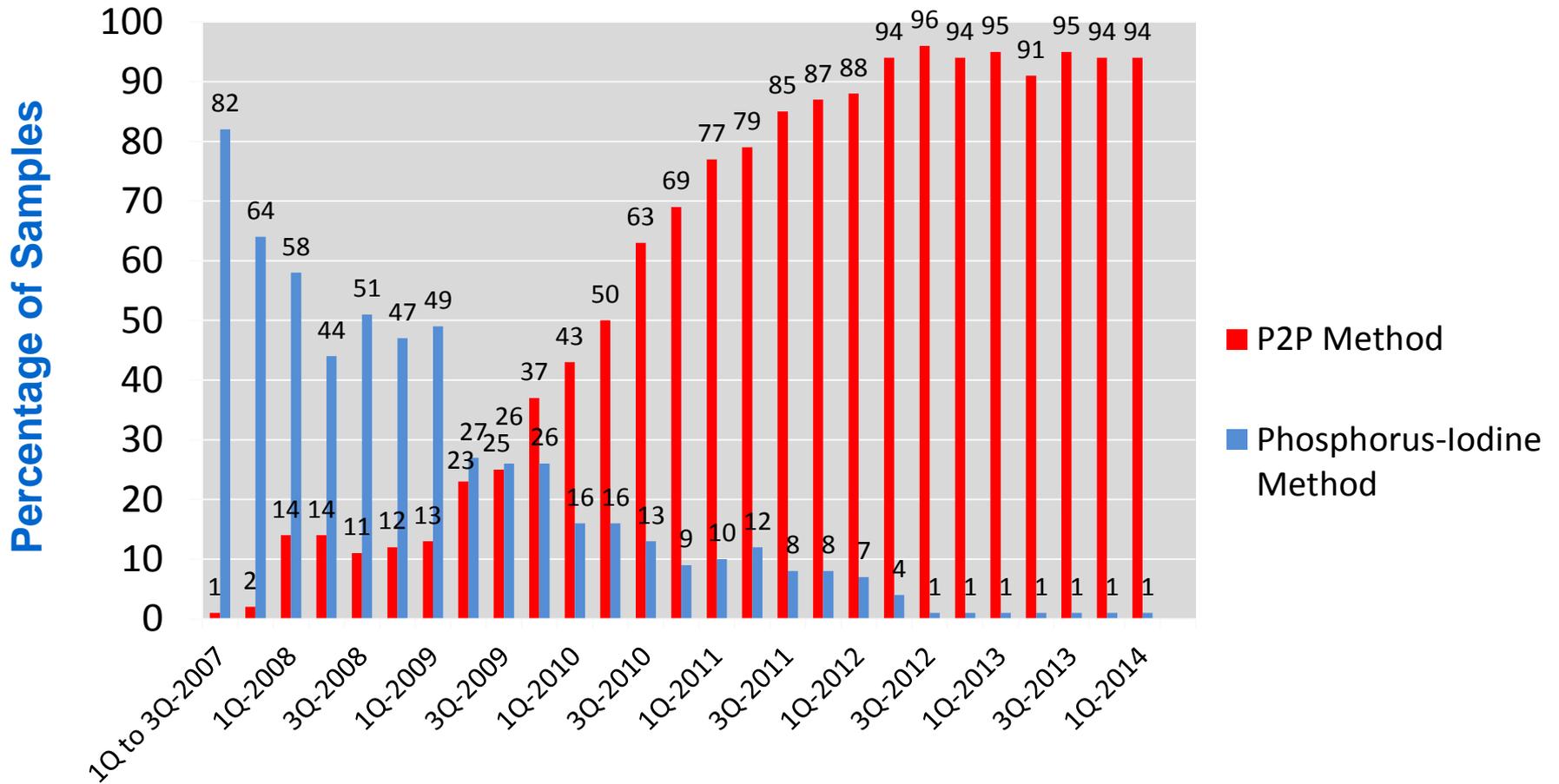
Yearly Purity Results



Number of samples analyzed above each data point



P2P vs. PSE/EPH





Precursors in Mexico

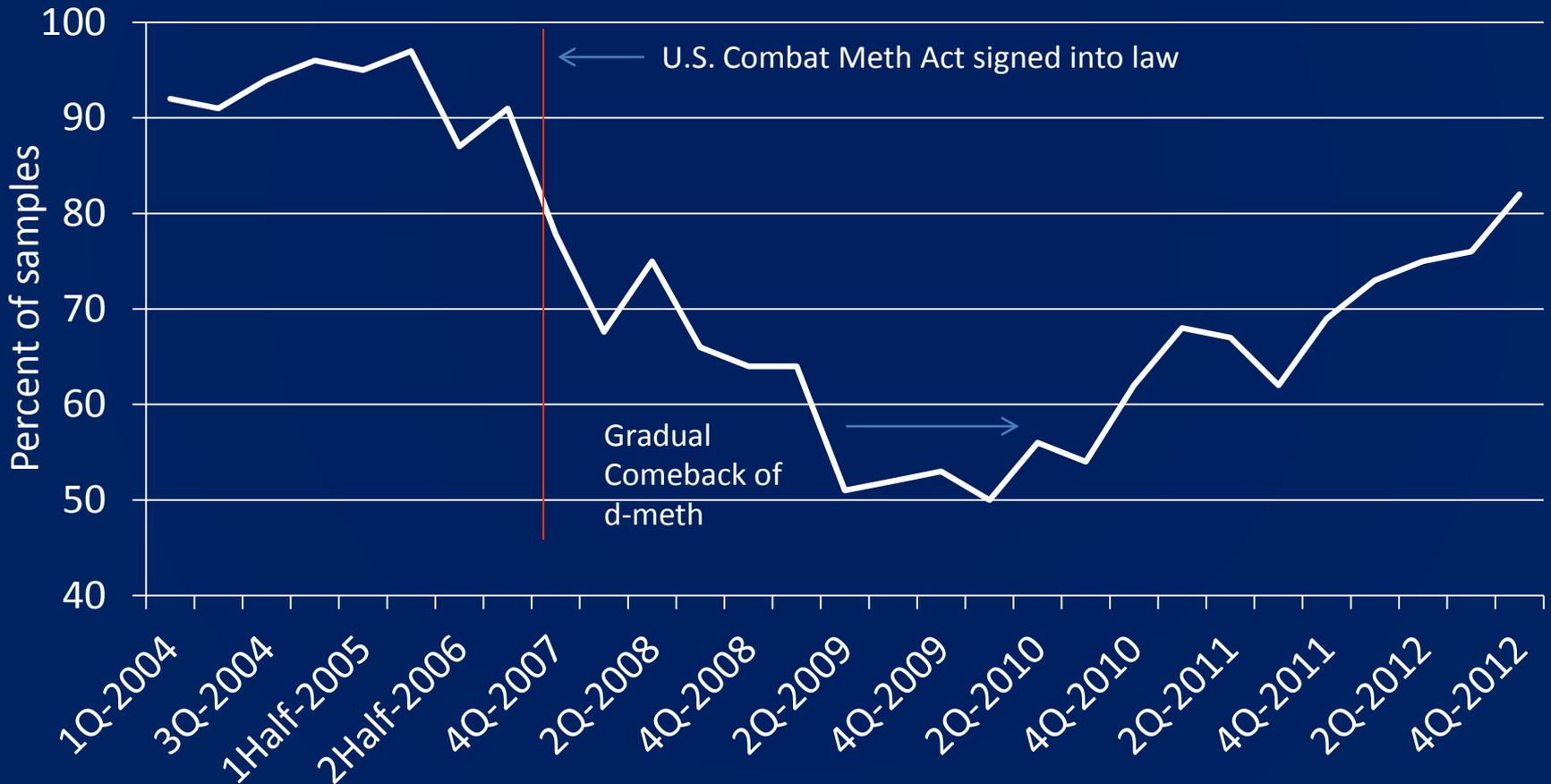
- Phenylacetic Acid (PAA) regulated
- Esters of PAA now being used
 - Ethylphenyl Acetate (EtPAA)
 - Methylphenyl Acetate (MePAA)
 - MePAA → PAA → P2P → Methamphetamine
- Recent Seizures of EtPAA
 - Guatemala
 - El Salvador
 - Nicaragua
- Potential to manufacture many metric tons per shipment





d-Methamphetamine Trends

d-isomer only





COCAINE & PHARMACEUTICALS

LEVAMISOLE – (Ergamisol)- an old drug once used to treat parasitic worm infections

*Over 80 % of cocaine seized in US is laced w/ levamisole (avg concentration approx 10 %)

*Can lead to severe reduction of white blood cells, a problem called agranulocytosis.

*Cutting agent or modifies pharmacological properties of cocaine

*ID of synergism for cocaine/levamisole interaction
(Neuropharmacology, 1/2014 Temple Univ Sch of Med)



HEROIN & PHARMACEUTICALS

WITHDRAWAL FROM OPIATES

"One patient said to me, 'Imagine the worst flu when you're shivering, you're vomiting, you can't eat, you have diarrhea, every atom in your body hurts, you can't sleep, you lie on the floor just shivering ... and multiply that times a million,'" Fallieras recounted. "And you know if you can just take the pill or inject yourself with heroin, that it just all goes away."



Thank You for your Attention

**Antonio R. Guzman
Staff Coordinator**

Synthetic Drugs and Chemicals Section

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