

Chemical Control Actions



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Office of Diversion Control

Drug Enforcement Administration

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ODE Section Functions



Activities:

- **Scientific evaluations pertaining to drug control and chemical regulations under CSA**
 - Control status determinations
 - Drug scheduling
 - Exemptions
 - Schedule I Researcher Registration

- **Generate reports regarding drug abuse, chemical diversion and emergent/changing trafficking trends**

- **Provide technical and regulatory control information and trending to federal, state, and local public health and law enforcement officials**

ODE Functions



▶ Control Status Determinations

▶ Scheduling actions

- FDA approvals
- Petitions
- DEA initiated actions
- Chemical controls
- Legislation

▶ Exemptions

- Anabolic steroid products
- Anabolic steroid veterinary implants
- Chemical mixtures
- Chemical preparations

▶ Schedule I Researcher Registration

Control Status Determinations



- ▶ **Substances are evaluated as to their control status under the CSA**
 - Is the substance named?
 - Is it defined?

- ▶ **A written response is generated as to the control status**

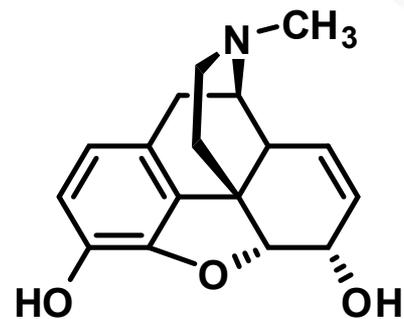
- ▶ **If controlled , a drug code is provided**

Control Status



► Is the substance named or defined under the CSA?

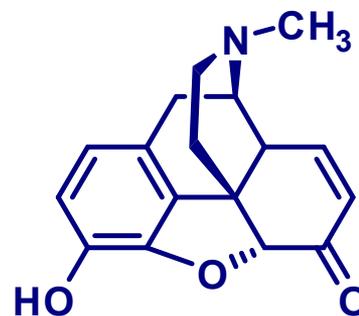
- ODE provides drug code
- ODE establishes new drug codes
- ODE provides conversion factors



Morphine
Schedule II, 9300

► Letter of No Objection (LONO)

- ODE provides internal support as to control status
- ODG generates the LONO



Morphinone
Schedule II, 9300

Control Status Inquiry



- ▶ A control status inquiry can be placed directly with ODE. Include:
 - Chemical name
 - Chemical structure
- ▶ Mailing address can be found on the Office of Diversion Control's website

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

Home
Registration
Reporting
Web & Legal Resources
Media/Division Control

Controlled Substance Schedules

Information and Legal Resources at your fingertips

Controlled Substance Schedules

- List of Controlled Substances
- Exempted Lists

List of Controlled Substances

- Disclaimer
- Abbreviations
- Definition of Controlled Substance Schedules
- Lists of Scheduling Actions, Controlled Substances, Regulated Chemicals (May 2012)

This document is a general reference and not a comprehensive list. This list describes the basic or parent chemical entities and does not describe the salts, isomers and salts of isomers, esters, ethers and derivatives which may also be controlled substances.

Scheduling Actions	Controlled Substances	List I and II Regulated Chemicals
Alphabetical Order	Alphabetical Order	Alphabetical Order
Chronological Order	DEA Drug Code Number	DEA Number
	USA Schedule	List Number

[Click Here to View and Download Lists](#)

Exempted Lists

- Exempt Anabolic Steroid Products Procedures
- Exempt Anabolic Steroid Products List PDF (December 14, 2012)
- Exempt Chemical Preparations Procedures
- Exempt Chemical Preparations List PDF (May 3, 2012)
- For Application dates through 06/02/2012
- Exempted Prescription Products Application
- Exempted Prescription Products List PDF (January 14, 2012)

List of Controlled Substances
Disclaimer

Section 012 of the Controlled Substances Act (21 U.S.C. §901 et seq.) (CSA) lists substances which were controlled in 1970 when the law was enacted. Since then, approximately 160 substances have been added, removed, or transferred from one schedule to another. The current official list of controlled substances can be found in sections 1308 of the most recent issue of Title 21 Code of Federal Regulations (CFR) Part 1300 to and (21 CFR §1300) and the final rules which were published in the Federal Register subsequent to the issuance of the CFR.

This list describes the basic or parent chemical and do not describe the salts, isomers and salts of isomers, esters, ethers and derivatives which may be controlled substances. These lists are intended as general references and are not comprehensive listings of all controlled substances. Please note that a substance need not be listed as a controlled substance to be treated as a Schedule I substance for criminal prosecution. A controlled substance analogue is a substance which is intended for human consumption and is structurally or pharmacologically substantially similar to or is represented as being similar to a Schedule I or Schedule II substance and is not an approved medication in the United States. (See 21 U.S.C. §902(32)(A) for the definition of a controlled substance analogue and 21 U.S.C. §812 for the schedule.)

(http://www.deadiversion.usdoj.gov/21cfr/cfr/1321/1321_01.htm)

Chemical Control



▶ **Controlled Substances Act (1970)**

the principal federal law directed at combating the illicit manufacture and distribution of controlled drugs in the United States. Since its passage in 1970, the CSA has been amended on a number of occasions

▶ **Chemical Diversion and Trafficking Act (CDTA, 1988)**

- **regulated 12 precursor chemicals, eight essential chemicals, tableting machines, and encapsulating machines**
- **resulted in the incorporation of Article 12 into the U.N. Convention Against Illicit Drug Traffic of 1988 (the Vienna Convention)**

Chemical Control Background



- ▶ Chemical Diversion and Trafficking Act of 1988 (CDTA)
- ▶ Domestic Chemical Diversion Control Act (DCDCA, 1993)
 - Eliminated single entity ephedrine tablet loophole
 - No controls on Combination EPH, PSE, PPA
- ▶ Comprehensive Methamphetamine Control Act (MCA 1996)
 - Control drug products containing EPH, PSE, PPA
- ▶ Methamphetamine Anti-Proliferation Act (MAPA, 2000)
 - Reduce transaction threshold from 24g to 9g of PSE and PPA
 - Blister pack exempted
- ▶ Combat Methamphetamine Epidemic Act (CMEA, 2005)
- ▶ Methamphetamine Production Prevention Act of 2008 (MPPA)
- ▶ Combat Methamphetamine Enhancement Act of 2010 (MEA)

Chemical Control Background



- ▶ Total of 41 List I and List II chemicals
- ▶ List I chemical handlers (Importers/Exporters/Manufacturers/Distributors) must:
 - registration
 - maintain records
 - report suspicious orders
- ▶ Through industry outreach and voluntary compliance measures, DEA strives to control chemical diversion in partnership with industry and the public.
- ▶ DEA routinely inspects records and required controls

Listed Chemicals Regulated Under the Controlled Substances Act

See 21 C.F.R. §§ 1309, 1310, 1313 and 1314 for details

January 2016

Reagent ■
Precursor = ▲
Solvent ●

CONTROLLED SUBSTANCE PRODUCED

LIST I

LIST II

	Amphetamine	Cocaine	N,N-Dimethylamphetamine	Ethylamphetamine	Fentanyl & analogues	GHB	Heroin	LSD	MDA	MDE	MDMA	Methamphetamine	Methaqualone	Methcathinone	4-Methylaminorex	Phencyclidine (PCP)	Phenyl-2-propanone	THRESHOLDS	
1. N-Acetylanthranilic acid ²													▲					40	40
2. Anthranilic acid ²													▲					30	30
3. Benzaldehyde	▲																▲	4	4
4. Benzyl cyanide																	▲	1	1
5. Ephedrine ^{3&7}												▲		▲				0	0
6. Ergocristine ¹								▲						▲				0	0
7. Ergonovine ¹								▲										0.010	0.010
8. Ergotamine ¹								▲										0.020	0.020
9. Ethylamine ¹				▲						▲								1	1
10. gamma-Butyrolactone (GBL)						▲				▲								0	0
11. Hydriodic acid												■						1.7	1.7
12. Hypophosphorous acid ¹	■											■						0	0
13. Iodine	■											■						0	0
14. Isosafrole									▲	▲	▲							4	4
15. Methylamine ¹											▲	▲						1	1
16. 3,4-Methylenedioxyphenyl-2-propanone									▲	▲	▲	▲						4	4
17. N-Methylephedrine ³			▲															1	1
18. N-Methylpseudoephedrine ³			▲															1	1
19. N-phenethyl-4-piperidone (NPP)					▲													0	0
20. Nitroethane	▲								▲								▲	2.5	2.5
21. Norpseudoephedrine ³	▲														▲			2.5	2.5
22. Phenylacetic acid ²																	▲	1	1
23. Phenylpropanolamine ^{3&7}	▲														▲			0	0
24. Phosphorus (red)	■											■						0	0
25. Phosphorus (white or yellow)	■											■						0	0
26. Piperidine ¹																▲		0.500	0.500
27. Piperonal (heliotropin)									▲	▲	▲							4	4
28. Propionic anhydride					▲													0.001	0.001
29. Pseudoephedrine ^{3&7}												▲		▲				0	0
30. Safrole									▲	▲	▲	▲		▲				4	4
31. Acetic anhydride							▲						▲				▲	1,023	1,023
32. Acetone		●					●	●	●	●	●	●	●					150	1,500
33. Benzyl chloride												▲						1	4
34. Ethyl ether	●	●			●		●	●	●	●	●	●	●	●			●	135.8	1,364
35. Hydrochloric acid ^{5&6}	■	■	■	■	■		■	■	■	■	■	■	■	■		■		N/C	222.3
35a. Hydrogen chloride gas ^{5&6}	■	■	■	■	■		■	■	■	■	■	■	■	■		■		0	27
36. Methyl ethyl ketone (2-Butanone)		●					●		●	●	●	●	●					145	1,455
37. Methyl isobutyl ketone ⁴		●					●		●	●	●	●	●					N/C	1,523
38. Potassium permanganate		■																55	500
39. Sodium permanganate		■																55	500
40. Sulfuric acid ^{5&6}	■	■							■	■	■	■					■	N/C	347
41. Toluene		●			●								●				●	159	1,591

¹ and its salts

² and its salts and esters

³ and its salts, optical isomers, and salts of optical isomers

⁴ Exports only, to all Western Hemisphere except Canada

⁵ Exports to all South American countries & Panama - Domestic for HCl gas

⁶ Threshold for HCl acid and sulfuric acid is 50 gallons, the equivalent weight in kilograms is shown

⁷ For pseudoephedrine, phenylpropanolamine and ephedrine drug products, see 21 USC § 802(45)(A) and 21 C.F.R. Part 1314

N/C = Not Controlled

DOMESTIC
IMPORTS &
EXPORTS
KILOGRAMS





301

4-1 GALLON

9 16 '94



Forane 11

Altitude (ft)	Forane 11 (vol %)	Oxygen (vol %)
0	10.0	21.0
1000	10.0	21.0
2000	10.0	21.0
3000	10.0	21.0
4000	10.0	21.0
5000	10.0	21.0
6000	10.0	21.0
7000	10.0	21.0
8000	10.0	21.0
9000	10.0	21.0
10000	10.0	21.0

Forane 11 is a non-flammable, non-toxic, non-irritant, and non-corrosive gas mixture of 10% Forane 11 and 90% oxygen. It is used for the induction and maintenance of general anesthesia. Forane 11 is not suitable for use in patients with severe hypoxemia or severe respiratory acidosis.







aiwa

MODEL NO.
RX-N858

FOR SYSTEM OF
NSX-D858

THIS CARTON CONTAINS:

- RX-N858
- PD-N858
- RC-F852
- SX-N858
- SX-C850
- SX-R870

RECEIVER (PC)

ACT. DISC/STEREO CAS.

(PC)

(MPCS)

RX-N858

VENO
BROC

33 OZ.
FLINT-PLAIN



#238
1085
0-46



BUFFET RANGE











2 15 95





Laws Amending Chemical Control Provisions of the CSA



- Chemical Diversion and Trafficking Act of 1988 (CDTA)
- Domestic Chemical Diversion Control Act of 1993 (DCDCA)
- Comprehensive Methamphetamine Control Act of 1996 (CMCA)
- Children's Health Act of 2000/Methamphetamine Anti-Proliferation Act of 2000 (MAPA)
- Combat Methamphetamine Epidemic Act of 2005 (CMEA)
- Methamphetamine Production Prevention Act of 2008 (MPPA)
- Combat Methamphetamine Enhancement Act of 2010 (MEA)

Chemical Diversion and Trafficking Act of 1988 (CDTA)



- First Chemical Legislation
- Controlled 20 Chemicals and certain equipment
 - 12 Precursor and 8 Essential Chemicals
 - Tableting and Encapsulating Machines
- Imposed recordkeeping and Import/Export reporting Requirement
- Controlled Only Bulk Material
- Tablet Exemption Loophole

Domestic Chemical Diversion Control Act of 1993 (DCDCA)



- Eliminated the Tablet Exemption Loophole for Single-entity Ephedrine OTC's
- Eliminated Terms Precursor and Essential Chemicals and Replaced with List I and List II
- Imposed Registration Requirement on Handlers of List I Chemicals
- Established Annual reporting requirements for Manufacturers of List I and II Chemicals

Comprehensive Methamphetamine Control Act of 1996 (CMCA)



- ▶ Controlled Ephedrine Combo, Pseudo and PPA OTC Products
- ▶ Created Exemption for Blister Packs
- ▶ Placed a 24 gram limit on retail Sales of Non-blister pack products
- ▶ Created the Special Surveillance List
- ▶ Created Reporting requirements for Mail Order Transactions
- ▶ Controlled Iodine and HCl gas as List II chemicals

Children's Health Act of 2000

Methamphetamine Anti-Proliferation Act of 2000 (MAPA)



- Reduced Retail Threshold for Single Transactions of Pseudo and PPA to 9 gram (from 24 grams) for Non-blister pack products
- Package size may not exceed 3 grams
- Enhanced Penalties for Methamphetamine production and Trafficking in List I Chemicals*

Ephedrine/ Pseudoephedrine Exemptions



Final Rulemaking [68 FR 23195] published on May 1, 2003-

- ▶ created an exemption for all chemical mixtures containing five percent or less total ephedrine/pseudoephedrine.
- ▶ created an exemption for chemical mixtures consisting of unaltered harvested plant material containing ephedrine alkaloids (e.g. ephedra).

Ephedrine/ Pseudoephedrine Concerns



- Ephedra and dietary supplements containing ephedra used as the source of the precursor material for the illicit production of methamphetamine.
- FDA has taken action to eliminate ephedra dietary supplements from the U.S. market
- increase in importation of below 5% ephedra chemical mixtures from China to circumvent regulations

Changes in Ephedrine/Pseudoephedrine Controls



Implement the CMEA, Interim Final Rule effective August 24, 2007:

- **originally set at 5% to capture bulk ephedra (ma huang) that historically at concentration of 6-8% ephedrine**
- **Chemical Mixtures containing <5% total ephedrine /pseudoephedrine become regulated**

Examples of List I and List II Chemicals



- **Acetic anhydride → heroin synthesis**
- **Benzaldehyde → amphetamine synthesis**
- **Ergotamine → LSD synthesis**
- **Phenylacetic acid → P2P synthesis**
- **Hypophosphorus acid → am/meth synthesis**
- **Safrole → MDA/MDMA synthesis**
- **Potassium permanganate → cocaine purification**

Recent Chemical Controls Actions

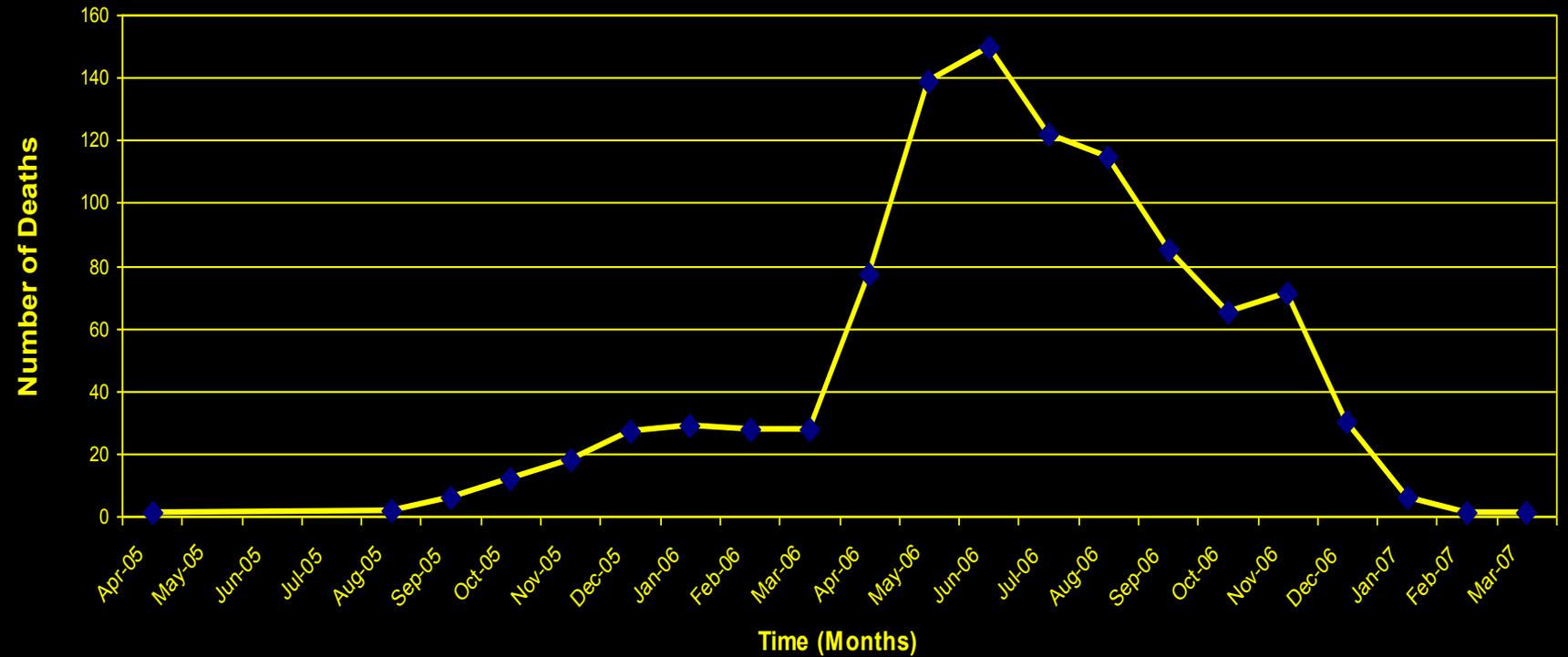


- ▶ **Removal of Ephedrine/Pseudoephedrine Mixture Exemptions**
- ▶ **Recent Controls Fentanyl Precursors**
 - **NPP (List I, April 23, 2007)**
 - **ANPP (proposed Schedule II, comment period ended June 9, 2008)**
- ▶ **Iodine and Mixture Regulations**
- ▶ **Under consideration:**
 - **L-Phenylacetylcarbinol** **Ephedrine**
 - **alpha-Phenylacetoacetonitrile (APAAN)** **P2P**

Illicitly Manufactured Fentanyl-Related Deaths



Illicit Fentanyl Death Database
n=1013



Fentanyl Lab in Toluca, Mexico



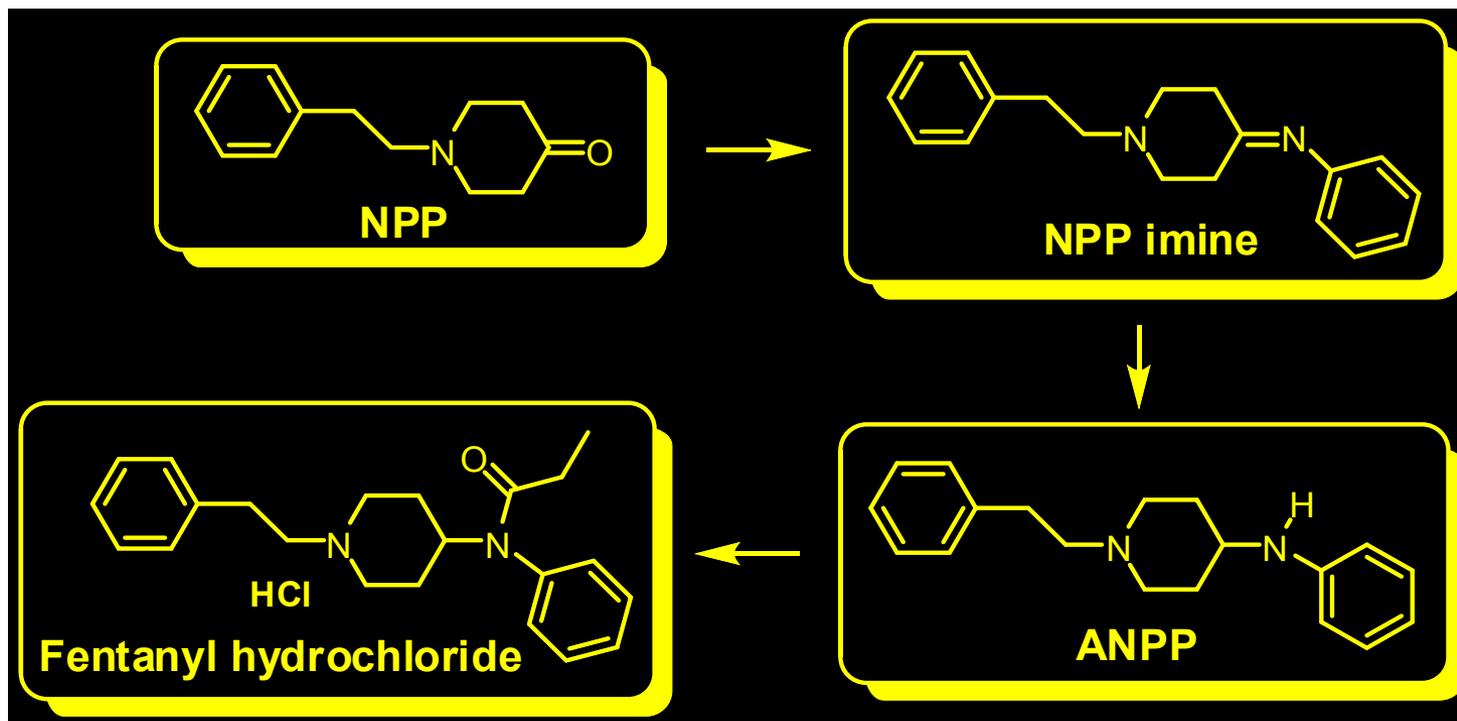
LA Area Fentanyl / MDA Lab



- November 2005, law enforcement seized a lab in the LA area suspected to be Fentanyl lab.
- Chemists analyzed the samples submitted and confirmed fentanyl and MDA present.
- A 5 kilogram bag of “NPP” (1-phenethyl-4 piperidone) precursor was seized.



Fentanyl Synthesis - Siegfried Method



N-Phenethyl-Piperidone (NPP)

4-Anilino-N-Phenethyl-4-Piperidine (ANPP)



N-Phenethyl-4-piperidone (NPP)

77 FR20039 effective April 23, 2007

- NPP becomes List I chemical
- Chemical mixtures containing NPP are not exempt from regulatory requirements at any concentration
- All transactions (domestic & International) involving NPP, regardless of size, shall be regulated

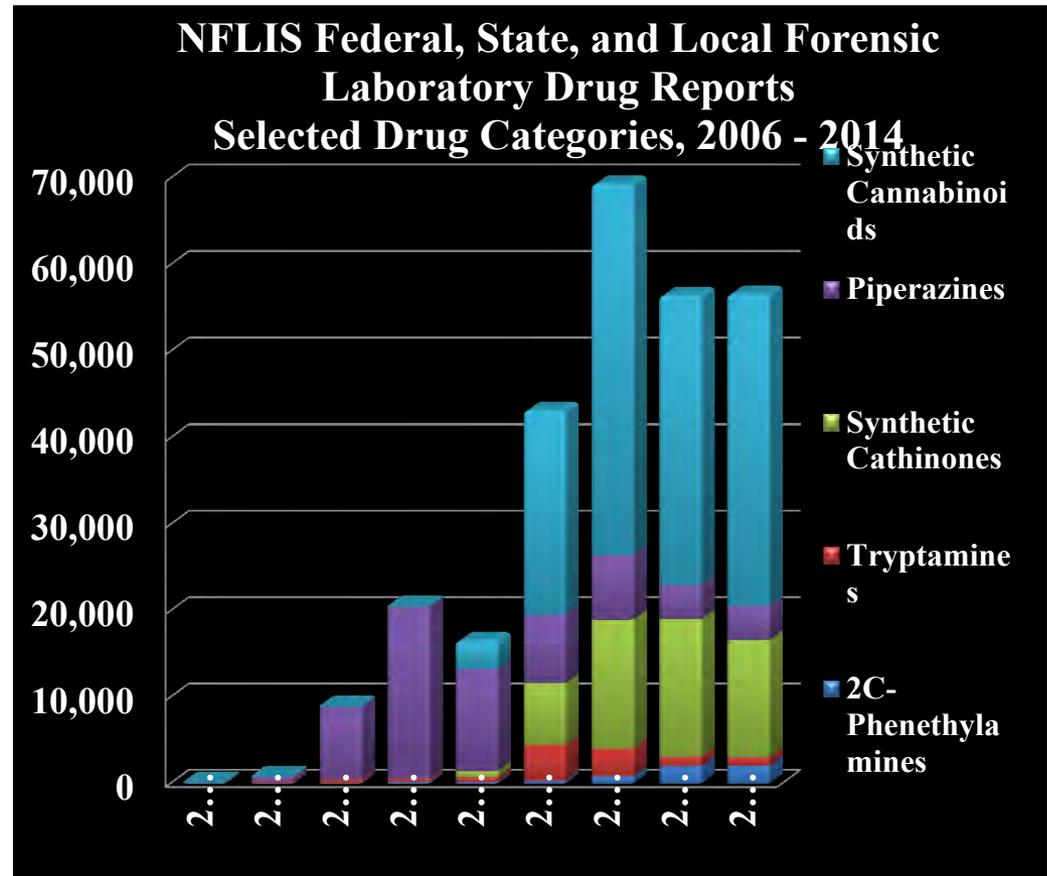


- Federal Register Notice of Proposed Rulemaking closed June 9, 2008
- Designates 4-anilino-N-phenethyl-4-piperidine (ANPP) as an **immediate precursor** to a schedule II controlled substance
- ANPP controlled as schedule II substance, subject to quota requirement

Designer Drug Phenomenon



- ▶ Unprecedented introduction of new substances on the designer drug market
- ▶ Devastating consequences
 - Short and long term adverse health effects
 - Abuser presenting at Emergency Department to an unknown drug
 - Significant impact to others connected to the pattern of abuse



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

▶ Abuse of designer drugs:

- New abuser population
- Evade regulatory controls and detection
 - Drug screen
- Lack of safety information, acute toxicity and lethality



▶ Drug's negative effects felt beyond the abuser:

- Communities
- Health providers
- Law enforcement

Emergency Control



Since 2011, DEA has temporarily controlled 35+ NPS

July 2012
Congressional Control

March 2011
JWH-018; JWH-073;
JWH-200; CP-47,497;
cannabicyclohexanol

May 2013
UR-144,
XLR-11,
AKB-48

February 2014
PB-22; 5F-PB-22; AB-
FUBINACA; ADB-
PINACA

January 2015
AB-CHMINACA;
AB-PINACA; THJ-
2201

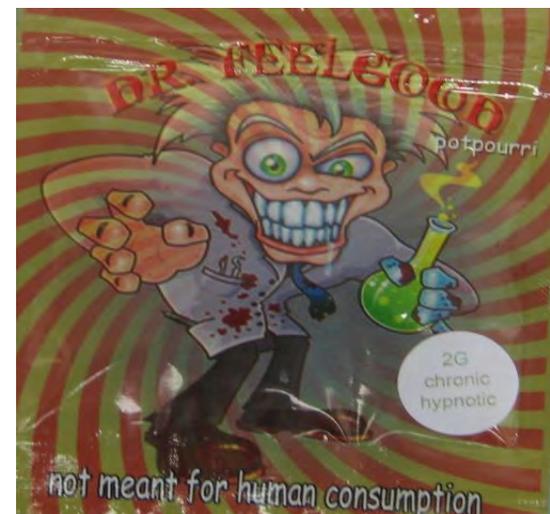
October 2011
MDPV;
methyldone;
mephedrone

November 2013
25I-NBOMe; 25C-
NBOMe; 25B-
NBOMe

March 2014
4-MEC; 4-MePPP; α -PVP;
butylone; pentadone;
pentylone; flephedrone, 3-FMC;
naphyrone; α -PBP

June 2015
Acetyl
fentanyl

Synthetic Cannabinoids Containing Products



PB-22



ADB-PINACA



AB-FUBINACA



**AB-FUBINACA
AB-PINACA**

AB-FUBINACA



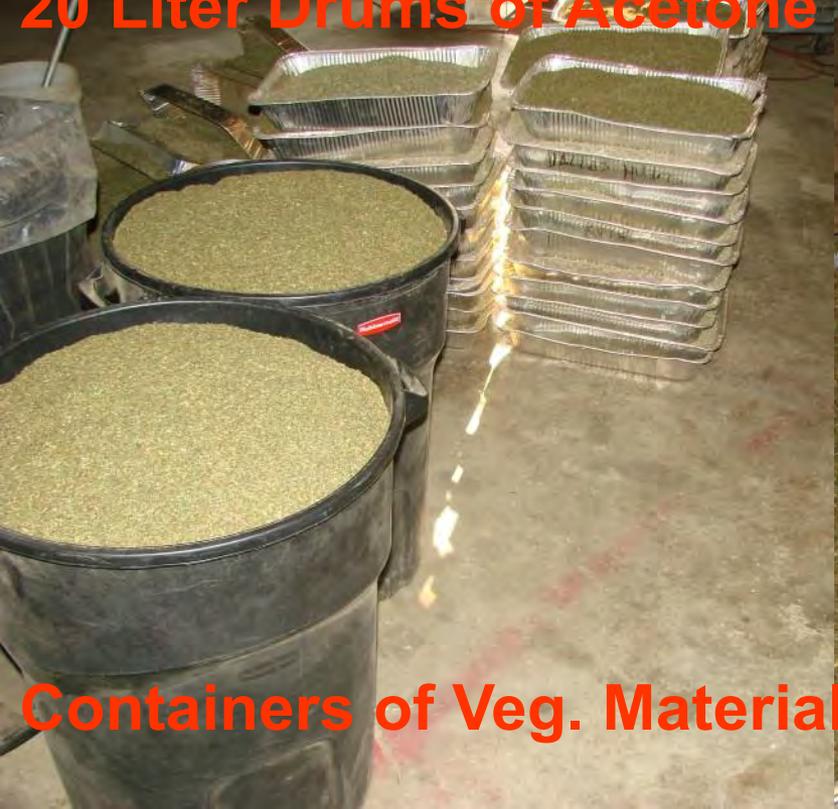
AB-CHMINACA



20 Liter Drums of Acetone



Cement Mixer w/ Veg. Material



Containers of Veg. Material



Tins Containing Mixed Product

Flavoring







Contact Us



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