

# CONTROLLED SUBSTANCE SCHEDULING OVERVIEW

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Administrative Rules Coordinator, DSPS

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- ▶ Process Completed by the Controlled Substances Board
- ▶ Drug with the potential for abuse designated as a controlled substance in WI
- ▶ Analogs of a substance can also be scheduled

## WHAT IS SCHEDULING?

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- ▶ Legality of possessing a drug
- ▶ How a drug's distribution is penalized
- ▶ Ability of non-physician healthcare providers to prescribe

## WHAT CAN BE IMPACTED BY SCHEDULING?

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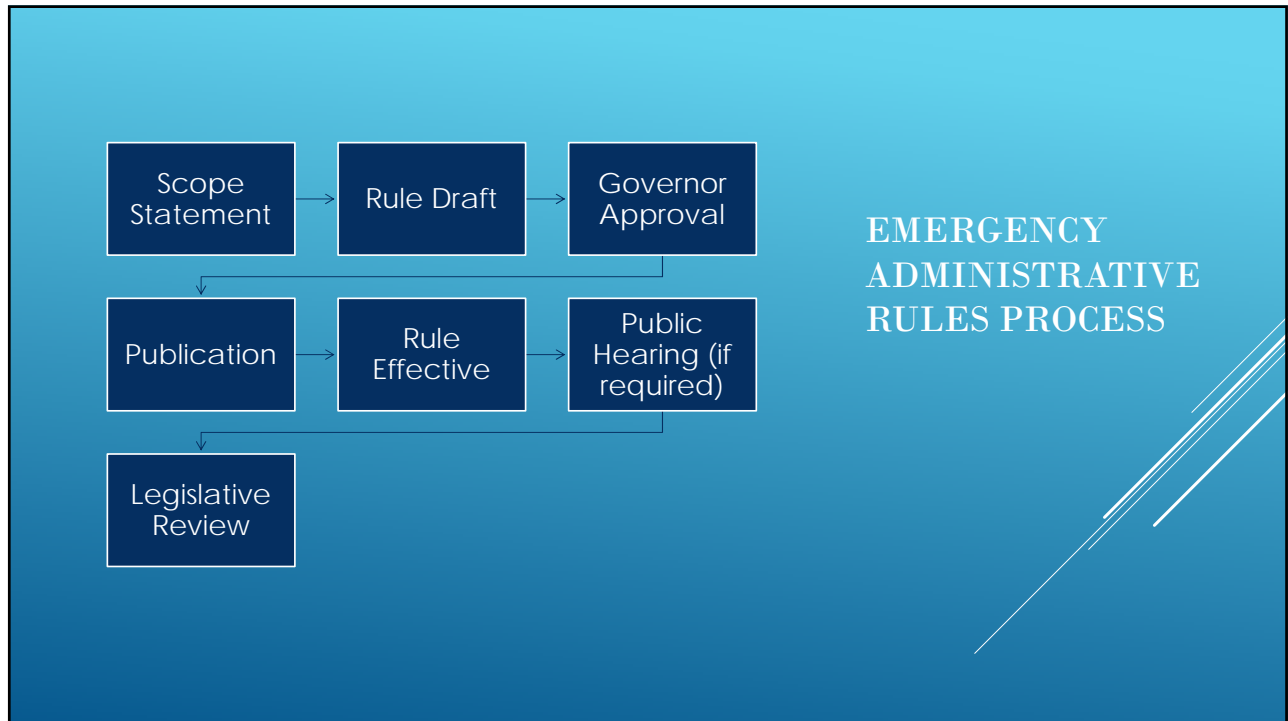
Schedule I	Heroin, PCP, LSD
Schedule II	Methamphetamine, Cocaine, Opiates
Schedule III	Barbiturates, Anabolic Steroids
Schedule IV	Benzodiazepines, Ephedrine, Tramadol
Schedule V	Pseudoephedrine

## SCHEDULING IN WI

4



5



6



7

- ▶ "The 8 Questions"
  - ▶ Potential for abuse
  - ▶ Scientific evidence of pharmacological effect
  - ▶ Current scientific knowledge on the substance
  - ▶ History and current pattern of abuse
  - ▶ Scope, duration and significance of abuse
  - ▶ Risk to public health
  - ▶ Potential to produce psychological or physical dependence
  - ▶ Whether the substance is an immediate precursor of an already scheduled substance

**STANDARD SCHEDULING**

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- ▶ 3 Factors
  - ▶ History and current pattern of abuse for the drug
  - ▶ Scope, duration, and significance of abuse
  - ▶ Risk to public health
- ▶ Requested by a district attorney prosecuting a case
- ▶ Emergency Rules Process – drug scheduled for 1 year
- ▶ Permanent Rules Process - must be in place before emergency rule expires

## EMERGENCY SCHEDULING

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- ▶ Affirmative Action Process
  - ▶ DEA schedules a drug and it's published in the Federal Register
  - ▶ Board must wait 30 days from DEA publication before scheduling
  - ▶ Board approves and publishes an Affirmative Action Order
  - ▶ Affirmative Action Order schedules drug into the same schedule under WI
  - ▶ Affirmative Action Order is effective upon publication until permanent rule goes into effect
  - ▶ Board then follows Permanent Rules Process

## SCHEDULING BASED ON FEDERAL ACTION

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Controlled Substances Board 11/12/2021 - Item "B. Annual Hearing with Law Enforcement Leaders, Agencies, and Prosecutors; 3) Receive Testimony Discussion Regarding Drug Trends; b. Presentation from the Wisconsin State Crime Lab Bureau"

# Drug Trends in Wisconsin

**Division of Forensic Sciences**  
Wisconsin State Crime Laboratories  
Controlled Substances Unit  
Sandy Koresch

Mission: to promote excellence in analysis, training and service to the community and our organization with integrity and uncompromising quality.

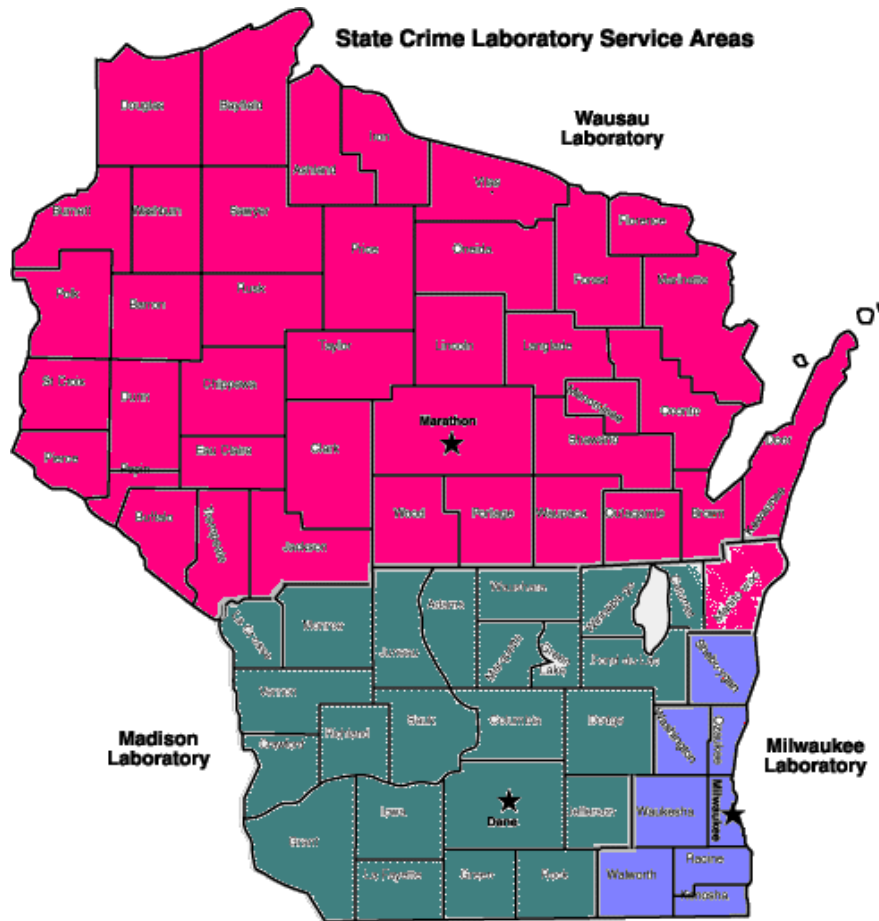


Vision: to search for the truth through science and to lead and shape the advancement of forensic science.

**WSCL** | Wisconsin State Crime Laboratories



# Wisconsin State Crime Laboratories



Milwaukee serves 8 Southeastern County Area  
Madison serves 24 Southern County Area  
Wausau serves 40 Northern County Area



# Controlled Substances Unit

The examination of evidence (seized drugs) for the presence of controlled substances under Wisconsin Statute 961





# Types of Evidence

Plant Materials

Powders/Chunky Substances

Liquids

Tablets/Capsules

Residues/Paraphernalia

Clandestine Laboratories

Adulterated Food Items

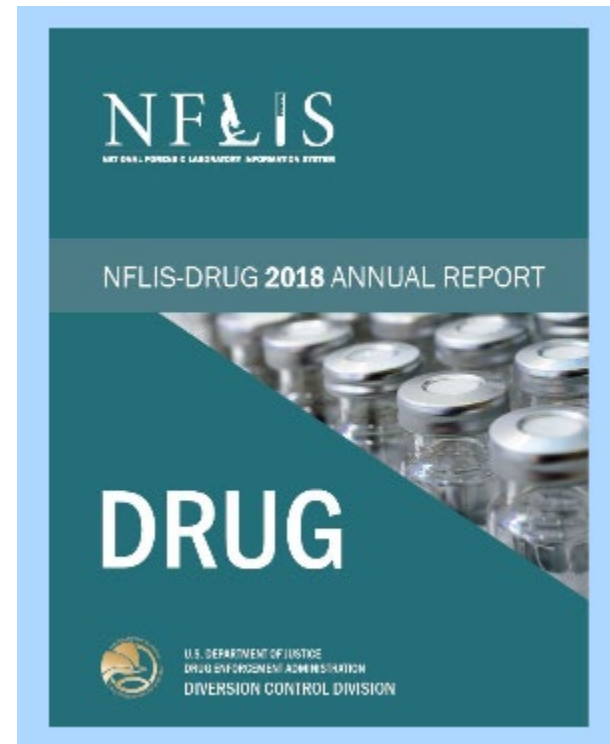
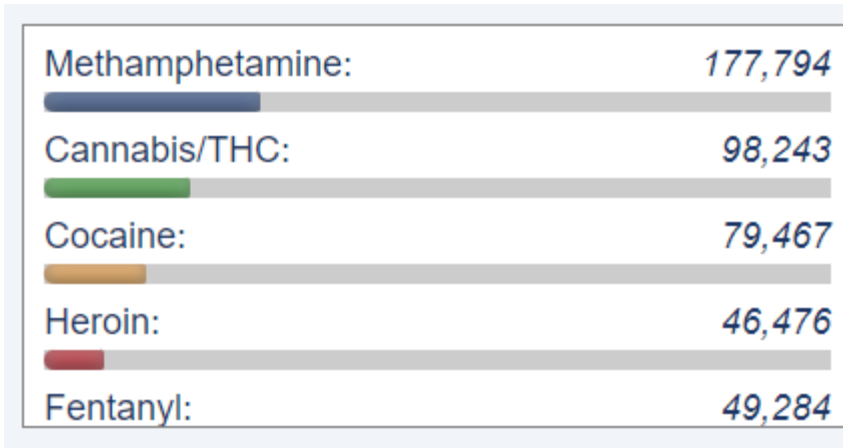


# NFLIS DATA

National Forensic Laboratory Information

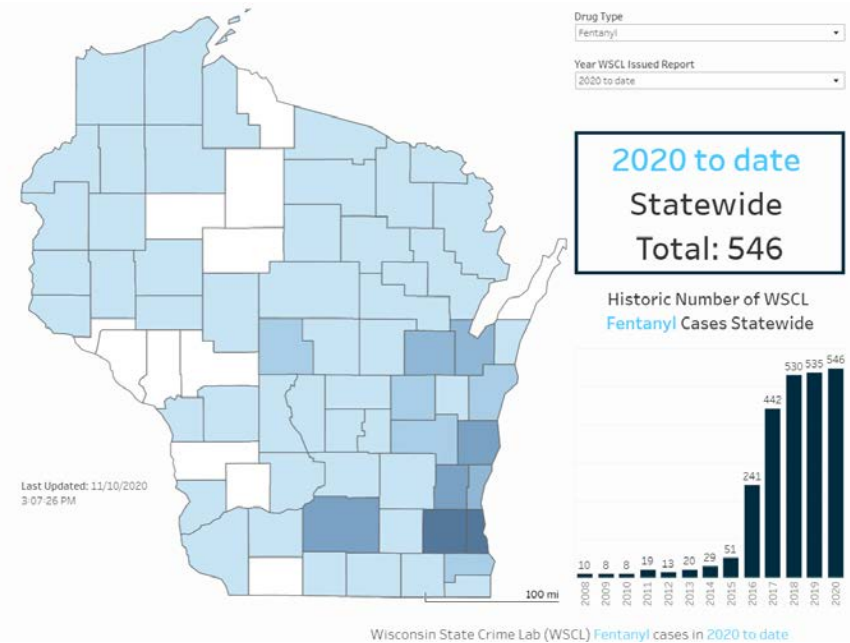
<http://www.nflis.deadiversion.usdoj.gov>

## NFLIS 2020 Midyear Report



# WSCL Data

- See DFS website for WSCL Data  
<https://www.doj.state.wi.us/dfs/division-forensic-sciences>
- Last updated in November 2020
- New Drug Dashboard coming soon!



# WSCL Trends

- Most Prevalent Drugs 2021
  - Methamphetamine
  - Cannabis
  - Fentanyl
  - Cocaine
  - Heroin
- Novel Psychoactive Substances (NPS)
- Counterfeits
- Kratom
- THC isomers
- Complex Mixtures



# Fentanyl Substances

## Fentanyl

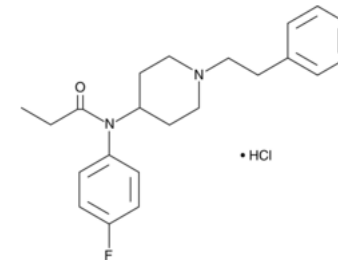
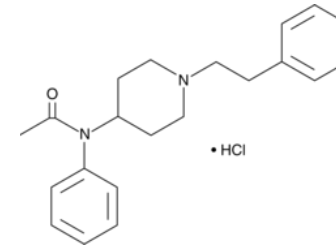
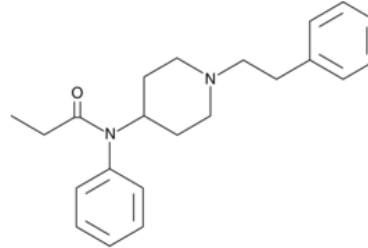
## Acetyl Fentanyl

## Fluorofentanyl

- Ortho, Meta, and Para isomers
- Generally, isomer not determined
- Ortho and Para – specifically listed
- Meta – not listed; structurally controlled

## Increased Precursors/Byproducts

- 4-ANPP
- Phenethyl 4-ANPP

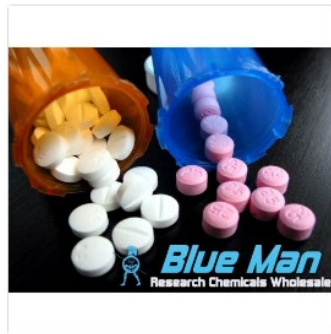


Structures from [www.caymanchemical.com](http://www.caymanchemical.com)



# Novel Psychoactive Substances (NPS)

- Substances developed to mimic the affects of a variety of drugs
- Referred to as “legal highs” or “research chemicals”
- Often small modifications to currently controlled substances which make them legal
- Readily available on the internet



## FLUALPRAZOLAM 1MG

BRAND: **BLUE MAN CHEMICALS**

PRODUCT CODE: **FLUALPRAZOLAM**

AVAILABILITY: **IN STOCK**

### AVAILABLE OPTIONS

\* Select Number of Pellets:

- 10 Pellets (+10.00€)
- 25 Pellets (+20.00€)
- 50 Pellets (+35.00€)

## PIPERIDYLTHIAMBUTENE .HCL

Piperidylthiambutene (Piperidinotnon) is an opioid analgesic drug from the thiambutene family, which has around the same potency as morphine. If sold / was obtained for the purpose of human consumption it could be considered a controlled substance in some

Item Code: LF-0061

★★★★★ (1) [Write a review](#)

USD **\$105.00** ~~\$300.00~~ You Save: 65%

Formal Name : **1-(4,4-Di(2-thienyl)-3-buten-2-yl)piperidine**

Chemical Formula: **C17H21NS2**

Molecular Weight: **303.485 g/mol**

CAS NO. **54160-31-5**

WEIGHT	1g	5g	10g	25g	50g
PRICE	\$105.00 (per gram)	\$40.00 (per gram)	\$28.00 (per gram)	\$19.20 (per gram)	\$15.00 (per gram)



# Designer Benzodiazepines

- Often mixed with opiates or components of counterfeit tablets
- Increase potential for overdose with opiates

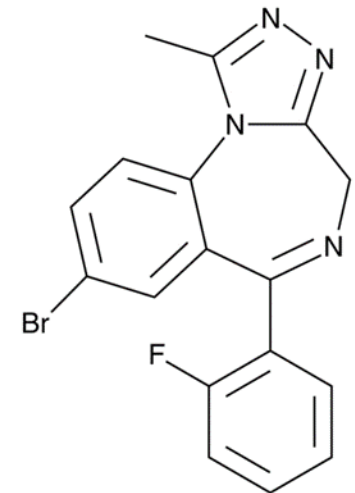
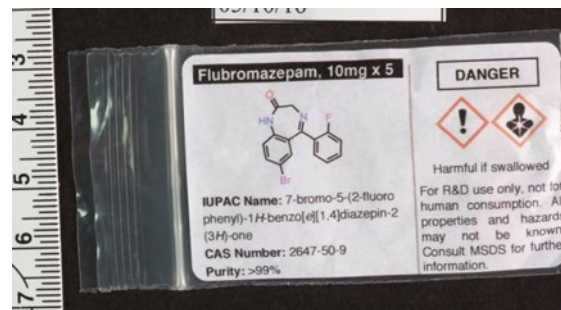
**Flualprazolam\***

**Etizolam**

**Flubromazolam**

**Bromazolam**

**Clonazolam**



\*Emergency scheduled 10/27/20



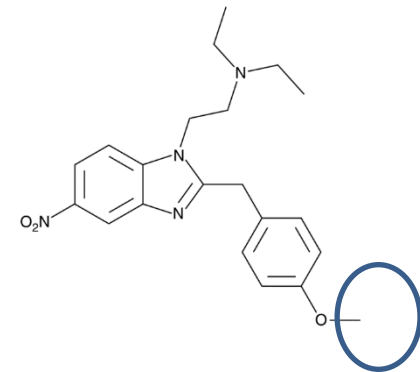
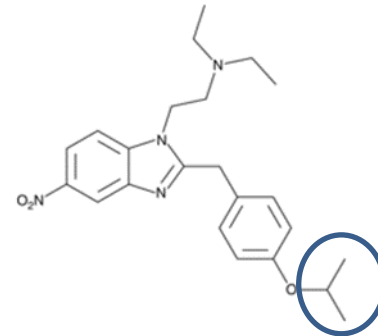
# The Nitazenes

- Often mixed with other opiates or designer benzodiazepines
- Similar potency to fentanyl

**Isotonitazene\***

**Metonitazene**

**Flunitazene**



\*Emergency scheduled 6/5/20



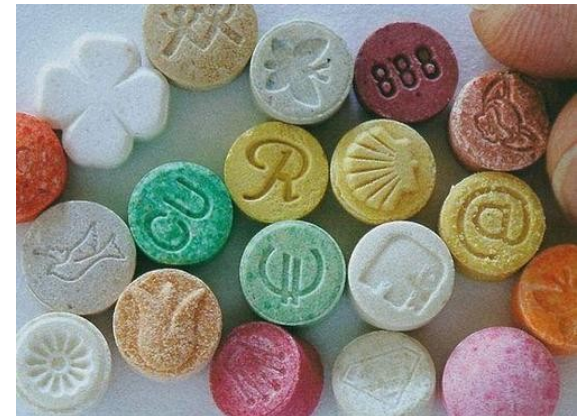
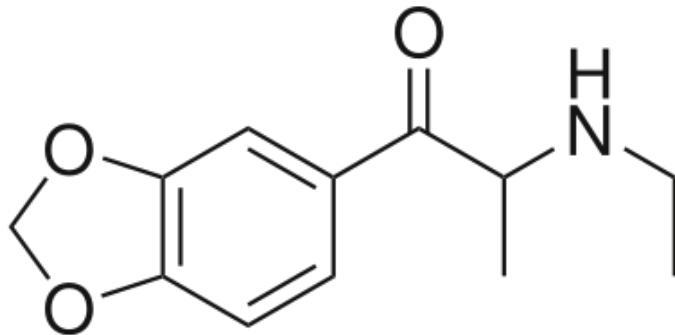


# Synthetic Cathinones

**N-Butyl pentylone\***

**Ethyl heptedrone\***

**Benzylone\*** — 3,4-methylenedioxy-N-benzyl cathinone

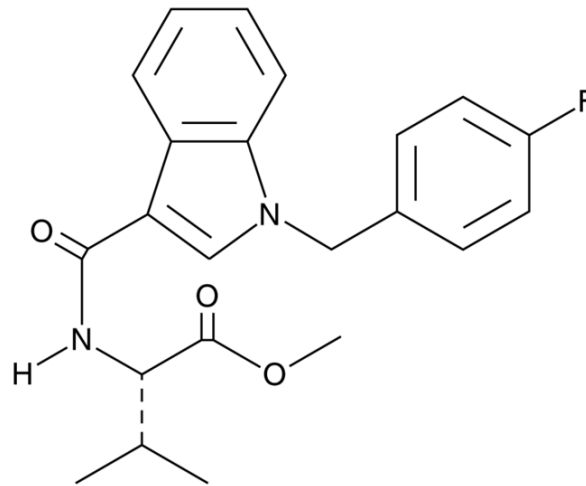


Not specifically listed but controlled by structural language



# Synthetic Cannabinoids

- Decrease in cases
- MDMB-4en-PINACA
- 4F-MDMB-BINACA\*
- MMB-FUBICA\*

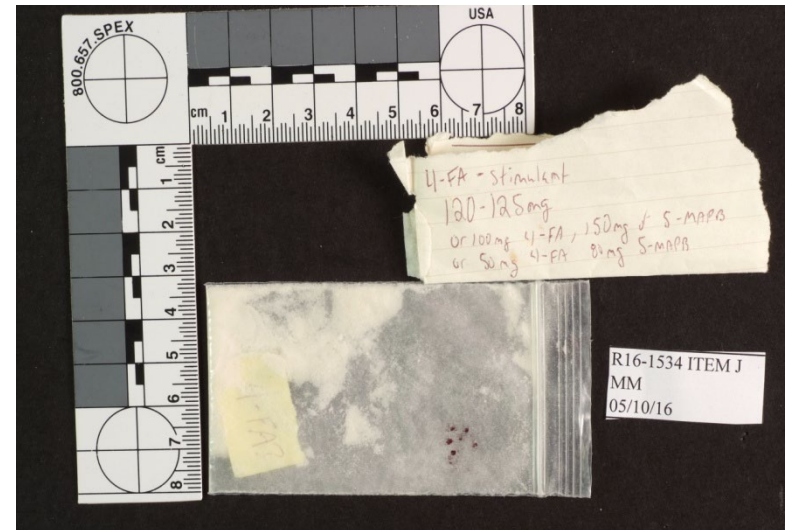


\*Emergency scheduled 6/26/20



# Stimulants

- Fluoromethamphetamine
- Fluorophenmetrazine
- Fluoromethylphenidate



# Hallucinogens

## 1P-LSD\*

Acetylated tryptamines

Acetyl-Psilocin\*\*

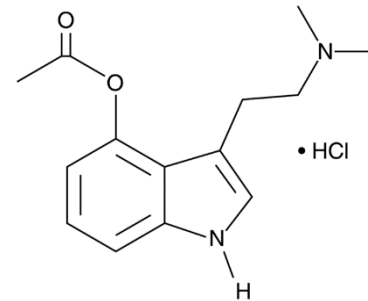
Acetyl-Diethyltryptamine

## 5-MEO-MIPT

(5-methoxy-N-methyl-N-isopropyltryptamine)

5-Bromo-DMT

(5-bromo-Dimethyltryptamine)



\*Emergency scheduled 6/5/20    \*\* Not listed but controlled by 961 ester language



# Other Substances

## Xylazine

- Veterinary anesthesia/tranquilizer
- Component in heroin/fentanyl samples

## Dipyrone (metamizole)

- Non-opioid analgesic with antipyretic activity
- Component in heroin/fentanyl samples



# Novel Psychoactive Substances (NPS)

- **Synthetic Opioids**

Isotonitazene (Emergency Scheduled 6/5/20)

Brorphine (Affirmative Action 4/26/21)

- **Designer Benzodiazepines**

Flualprazolam (Emergency Scheduled 10/27/20)

- **Hallucinogens**

1P-LSD (Emergency Scheduled 6/5/20)

- **Synthetic Cannabinoids/Cathinones**

MMB-FUBICA and 4F-MDMB-BINACA (Emergency Scheduled 6/26/20)



# NPS Discovery

Center for Forensic Research and Education (CFRE)

Includes seized drug samples and biological samples

<https://www.npsdiscovery.org/>

NPS Discovery Dashboard →

Monographs →

Trend Reports →

Public Alerts →

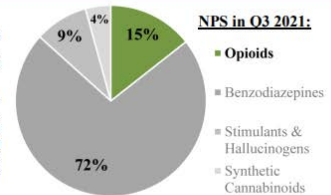
## Trend Report: Q3 2021

## NPS Opioids in the United States

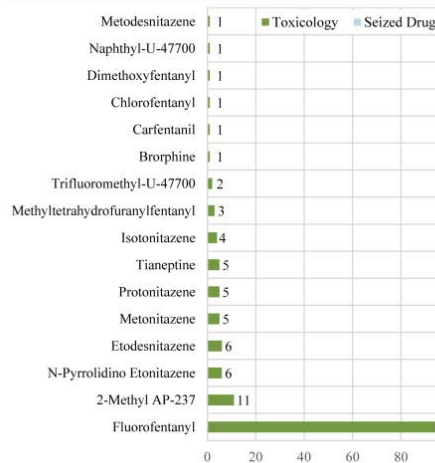
**Purpose:** This report provides up-to-date information regarding the status of NPS opioid prevalence and positivity within the United States.

**Overview:** Novel psychoactive substances (NPS), including NPS opioids, continue to pose great challenges for forensic scientists, clinicians, and public health and safety personnel. NPS opioids have been implicated in an increasing number of emergency room admissions, death investigations, and mass intoxication events, and often appear in combination with other illicit opioids (e.g. fentanyl, heroin). Maintaining a current scope of analysis can be challenging, requiring comprehensive analytical methodologies and reference materials for identification(s).

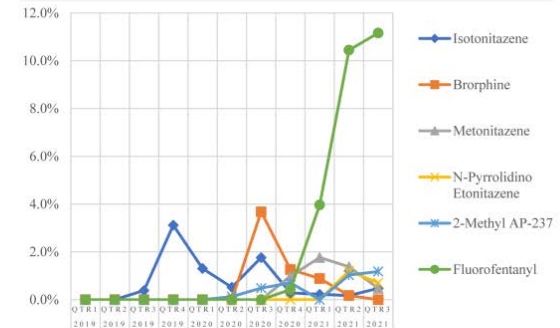
**Objective:** Our laboratory utilizes novel approaches for the analysis of drugs in biological samples and seized materials using comprehensive non-targeted data acquisition by gas chromatography mass spectrometry (GC-MS) and liquid chromatography quadrupole time-of-flight mass spectrometry (LC-QTOF-MS). The scope of analysis contains more than 900 drugs, including a vast majority of NPS and their metabolites. This approach allows for real-time identification of novel opioids and further data analysis of important trends. This project was conducted in collaboration with the toxicology and criminalistics laboratories of NMS Labs. Forensic case types linked to these results include illicit drug investigations, medicolegal death investigations, and/or driving under the influence of drugs (DUII) investigations. The results in this report represent the total number of NPS identifications at CFSRE during this quarter, including those from sample-mining, data-mining, and/or esoteric testing.



### NPS OPIOIDS IDENTIFIED



### SELECT POSITIVITY SINCE Q1 2019



For Reference:  
Fentanyl = 481  
(Tox. Samples)

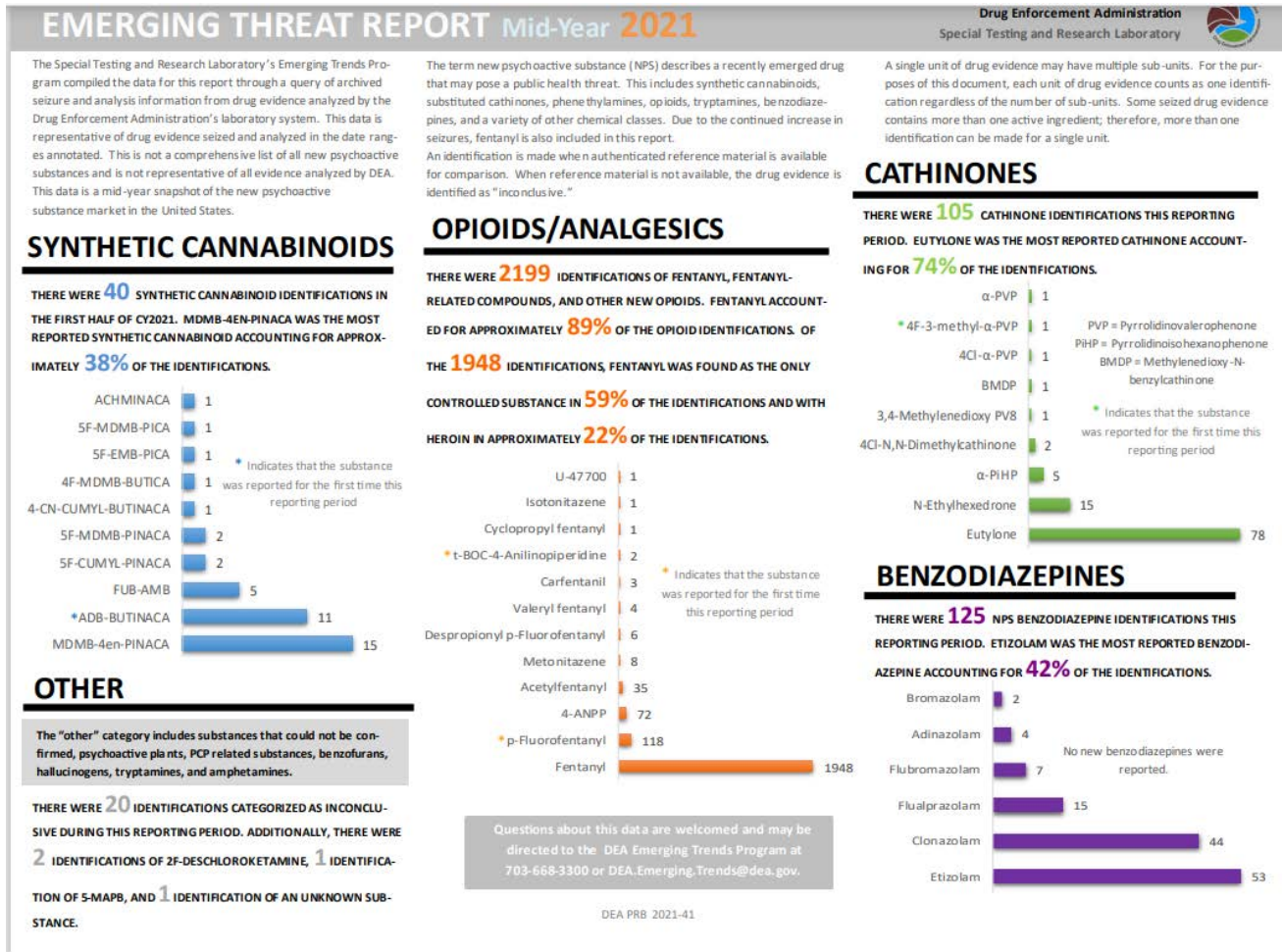
**Acknowledgments:** This report was prepared by Alex J. Kozelski, PhD, Sam E. Walton, MS, Amanda L.A. Mide, MS, D-ABT P.F., and Barry K. Logan, PhD, F-ADT in the Center for Forensic Science, Research and Education (CFRE) of the Francis Research Family Foundation. NPS Discovery would like to acknowledge scientists at CFRE and NMS Labs for their contributions and contributions. For more information about our program and reports, please contact NPS Discovery at [alex@npsdiscovery.org](mailto:alex@npsdiscovery.org) or 708-698-9676 or visit us at [www.npsdiscovery.org](http://www.npsdiscovery.org).

**Funding:** NPS Discovery at the CFRE is supported in part by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice (Award Number 2020-024-0001, "Real-Time Sample Mining and Data-Mining Approaches for the Discovery of Novel Psychoactive Substances (NPS)"); the system, hardware, consultation and/or maintenance expenses in this publication are those of the author(s) and do not necessarily reflect those of the Department of Justice.



# Emerging Threat Report - DEA

DEA Emerging Threat Reports | CESAR | Center for Substance Abuse Research | University of Maryland (umd.edu)





# Counterfeits



- More counterfeits being seen
- DEA Public Safety Alert in September; 430% increase since 2019
- Some counterfeits very difficult to visually distinguish
- Most common counterfeits are oxycodone preparations (blue M30)
- Often contain fentanyl
- Alprazolam 2<sup>nd</sup> most common counterfeit; designer benzodiazepines
- Also amphetamines; Adderall©



# Kratom

- Stimulant effects at low doses
- Opioid effects at higher doses
- Major psychoactive compounds mitragynine and 7-hydroxymitragynine (currently schedule I)
- 2021 Assembly Bill 599 to repeal scheduling and regulate kratom
- 13 cases so far in 2021: 26 cases in 2020



# THC isomers

- WSCL cases of delta-8-THC
- Occurs naturally in Cannabis in trace levels
- Most likely produced by conversion from CBD (hemp)
- Less psychoactive than delta-9-THC
- Other isomers and products being marketed
  - delta-10-THC
  - THC acetate
- Legality?
  - “Delta-8 Tetrahydrocannabinol (THC)” *Wisconsin Legislative Council Issue Brief, July 2021*



# Complex Mixtures

- Complex mixtures more prevalent in last two years often containing 3 or more different drug substances
- Case
  - ~2.8 grams of material and 2 separate small corner cuts of material - all consistent
  - Identified **Heroin** and **Fentanyl**
  - Other substances detected at lower levels Fluorofentanyl\* Etizolam\*, Bromazolam\*, Buspirone\*, Clonazepam\*, Gabapentin, Caffeine, Quinine,  
\*Also reported



# References

**Public Health Alert** – “Dipyrone (Metamizole): A Toxic Adulterant Found in Illicit Street Drugs” – May 2021

“WHO Expert Committee on Drug Dependence Critical Review -Isomers of THC”, *World Health Organization*, 2018

“Delta-8 Tetrahydrocannabinol (THC)” *Wisconsin Legislative Council Issue Brief*, July 2021

“The next generation of synthetic cannabinoids: Detection activity, and potential toxicity of pent-4en and but-3en analogues including MDMB-4en-PINACA”, *Drug Test. Anal.* 2021; 13:427-438.

September 27, 2021



**PUBLIC SAFETY ALERT**

**Sandy Koresch**

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414-382-7500

Sharp Increase in Fake Prescription Pills Containing Fentanyl and Methamphetamine

