



Precursor Chemical Diversion & Trafficking Trends

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www.deadiversion.usdoj.gov

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Disclaimer

I have no financial relationship to disclose.

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Drug Enforcement Administration's Diversion Control Division

Prevent, detect, and investigate the diversion of controlled pharmaceuticals and listed chemicals from legitimate sources.

Ensure an adequate and uninterrupted supply for legitimate medical, commercial, and scientific needs.





Diversion Control Division
Thomas Prevoznik
Assistant Administrator

**Office of Diversion Control
Operations (DO)**

**Chemical Investigations Section
(DOC)**

Drug and Chemical Evaluation Section
(DOE)

Targeting and Special Projects Section
(DOI)

Pharmaceutical Investigations Section
(DOP)

**Office of Diversion Control
Policy (DP)**

**Diversion Planning and Resources
Section
(DPA)**

Liaison Section
(DPL)

Regulatory Drafting and Policy
Support Section
(DPW)

Policy Section
(DPY)

**Office of Diversion Control
Regulatory (DR)**

**Regulatory Section
(DRG)**

Import/Export Section
(DRI)

UN Reporting and Quota Section
(DRQ)

Registration and Program Support
Section
(DRR)

DEA's Industry Liaison Project



- ▶ Provide educational outreach to e-commerce outlets and shipping industry to increase awareness of:
 - ▶ Equipment used to make counterfeit pills
 - ▶ Alternate uses of listed chemicals
 - ▶ Mismanifested cargo – hazards of transporting precursor chemicals
 - ▶ Regulations and record keeping requirements
 - ▶ “Know Your Customer” provision
- ▶ Conduct chemical industry outreach

DEA's Chemical Control

DEA works with domestic and international partners to:



**Deny precursor
chemicals to drug
trafficking organizations**



**Ensure an adequate
supply for legitimate
needs**

Communication Information Partnership



The Problem

***Record high drug overdose deaths
107,941***

- Highest number of overdose deaths ever recorded in a calendar year
- 71,238 overdose deaths from fentanyl alone

***An average of 1 overdose
death every 5 minutes***



THE THREAT

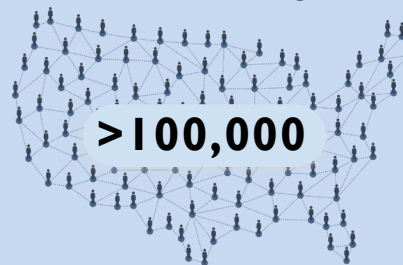
Fentanyl

Criminal drug networks are flooding the U.S. with fentanyl and fentanyl-laced fake pills, driving the nationwide overdose crisis.

**15,000 lbs
OF FENTANYL
SEIZED IN 2021**

Enough to supply a potentially lethal dose to **every member of the U.S. population**

A nationwide surge in fake prescription pills, made and marketed by criminal drug networks, is driving harm, violence, and overdoses across the U.S.



**DRUG OVERDOSE DEATHS
OVER THE LAST YEAR**



**2-3 milligrams of
FENTANYL
considered a *LETHAL* dose**



Fatal amounts of each drug



#ONEPILLCANKILL dea.gov/onepill

Counterfeit Prescription Pills

Fake pills, marketed as legitimate prescription pills to deceive the American public, are easy to purchase and widely available. Many counterfeit pills are made to look like prescription opioids such as oxycodone (Oxycontin®, Percocet®), hydrocodone (Vicodin®), and alprazolam (Xanax®); or stimulants like amphetamines (Adderall®).



Authentic Oxycodone



Counterfeit Oxycodone

**20.4 Million Fake Pills
Seized in 2021**



Today, **4 out of 10 DEA-tested fake pills with fentanyl** contain a potentially deadly dose.

Drug Trends



- ▶ Mexico has capitalized on the fentanyl market by importing precursor chemicals, commonly from China, and mass producing counterfeit pills containing fentanyl for exportation to the U.S.
- ▶ Mexico continues to import chemicals from the U.S. for illicit drug production via “front” companies

**In 2021, DEA seized over 15,000 pounds of fentanyl:
Enough to provide a lethal dose to every American**



Methamphetamine



- ▶ Remains an extremely serious problem in the United States
- ▶ Mexican Transnational Criminal Organizations are the primary producers/suppliers – low cost, high purity
- ▶ Precursors are often transported via maritime shipments from China and India
- ▶ Mexican TCOs use various methods:
 - ▶ Phenyl-2-propanone (P2P) instead of pseudoephedrine
 - P2P = Benzaldehyde and nitroethane to produce nitrostyrene (NTS)
 - P2P = Ethyl phenylacetate (EtPA) to make phenylacetic acid (PAA)
 - PAA = Benzyl chloride and sodium cyanide to make benzylnitrile oil



Methamphetamine



- ▶ Finished methamphetamine commonly trafficked across the Southwest border
- ▶ Can be dissolved in many liquids – acetone, methanol, vehicle fluids, fuels, water, and alcoholic beverages
 - ▶ Requires a conversion laboratory to extract the methamphetamine from the solution
 - ▶ Easily smuggled, more difficult to detect - can be less expensive than powder or crystal forms



\$80.7 million of liquid meth concealed in canola oil bottles shipped from Mexico



DEA List I Chemicals



- 1) 1-Boc-4-AP
- 2) 4-Anilinopiperidine
- 3) 4-Piperidone
- 4) N-Acetylanthranilic acid
- 5) Alpha-phenylacetoacetamide (APAA)
- 6) Alpha-Phenylacetoacetonitrile (APAAN)
- 7) Anthranilic acid
- 8) Benzaldehyde
- 9) Benzyl cyanide
- 10) Benzylfentanyl
- 11) Ephedrine
- 12) Ergocristine
- 13) Ergonovine
- 14) Ergotamine
- 15) Ethylamine
- 16) Gamma-Butyrolactone (GBL)
- 17) Hydriodic acid
- 18) Hypophosphorous acid
- 19) Iodine
- 20) Isosafrole
- 21) Methyl alpha-phenylacetoacetate (MAPA)
- 22) Methylamine
- 23) 3,4-Methylenedioxyphenyl-2-propanone
- 24) N-Methylephedrine
- 25) N-Methylpseudoephedrine
- 26) N-phenethyl-4-piperidone (NPP)
- 27) Nitroethane
- 28) Norpseudoephedrine
- 29) Phenylacetic acid
- 30) Phenylpropanolamine
- 31) Phosphorus (red)
- 32) Phosphorus (white or yellow)
- 33) Piperidine
- 34) Piperonal (heliotropin)
- 35) PMK glycidate
- 36) PMK glycidic acid
- 37) Propionic anhydride
- 38) Pseudoephedrine
- 39) Safrole



DEA List I Chemicals

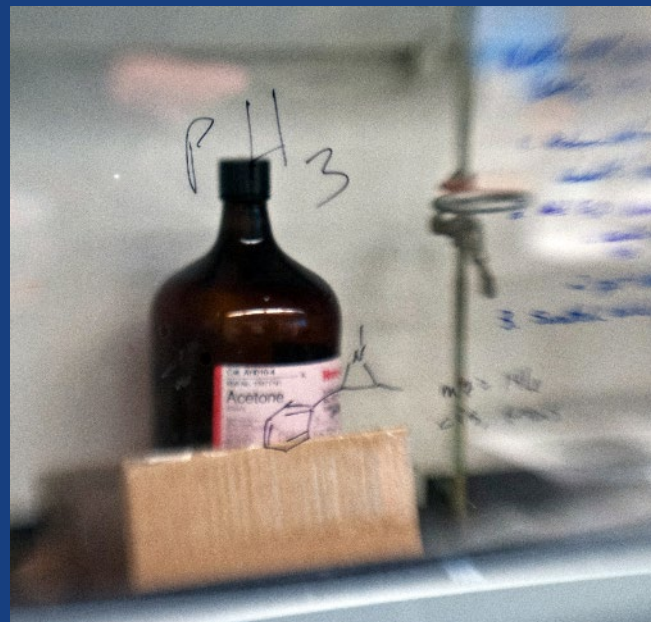


- ▶ Have legitimate uses
- ▶ Also used to manufacture controlled substances/drugs
- ▶ Often labeled as “precursors”
- ▶ Become part of the end product/drug
- ▶ **DEA registration required**
 - Requires record keeping and suspicious order reporting for ***importers, exporters, and manufacturers that distribute***
 - Persons required to register: 21 CFR 1309.21

DEA List II Chemicals



- 1) Acetic anhydride
- 2) Acetone
- 3) Benzyl chloride
- 4) Ethyl ether
- 5) Hydrochloric acid
- 5a) Hydrogen chloride gas
- 6) Methyl ethyl ketone (2-Butanone)
- 7) Methyl isobutyl ketone
- 8) Potassium permanganate
- 9) Sodium permanganate
- 10) Sulfuric acid
- 11) Toluene



DEA List II Chemicals



- ▶ Have legitimate uses
- ▶ Used in everyday products
- ▶ Usually classified as solvents and reagents
- ▶ **No DEA registration required**
 - Requires record keeping and suspicious order reporting
 - Persons required to register: 21 CFR 1309.21
 - Persons required to keep records and file reports: 21 CFR 1310-03
 - Maintenance of records: 21 CFR 1310.04
 - Reports: 21 CFR 1310.05

Listed Chemicals Regulated Under the Controlled Substances Act			CONTROLLED SUBSTANCE PRODUCED															THRESHOLDS				
See 21 C.F.R. §§ 1309, 1310, 1313 and 1314 for details			Reagent = ■ Precursor = ▲ Solvent = ●	DEA Chemical Code Number	Amphetamine	Cocaine	N,N-Dimethylamphetamine	Ethylamphetamine	Fentanyl & analogues	GHB	Heroin	LSD	MDA	MDP	MDMA	Methamphetamine	Methqualone	Methcathinone	4-Methylaminorex	Phencyclidine (PCP)	Phenyl-2-propanone	
Last Update: DEC 31, 2024																						
LIST I	1.	1-Boc-4-AP ¹		8336					▲													0
	2.	4-Anilinopiperidine ³		8335					▲													0
	3.	4-Piperidone ¹¹		8330					▲													0
	4.	N-Acetylthranilic acid ²		8522																		0
	5.	Alpha-Phenylacetacetamide ⁹ (APAA)		8515	▲																▲	0
	6.	Alpha-Phenylacetacetoneitrile ¹ (APAAN)		8512	▲																▲	0
	7.	Anthranilic acid ³		8530																		30
	8.	Benzaldehyde		8256	▲																▲	4
	9.	Benzyl cyanide		8735																	▲	1
	10.	Benzylfentanyl ¹		8334					▲													0
	11.	Ephedrine ^{3&7}		8113																		0
	12.	Ergocristine ¹		8612								▲										0
	13.	Ergonovine ¹		8675								▲										0.010
	14.	Ergotamine ¹		8676								▲										0.020
	15.	Ethylamine ¹		8678				▲														1
	16.	gamma-Butyrolactone (GBL)		2011					▲					▲								1
	17.	Hydriodic acid		6695																		1.7
	18.	Hypophosphorous acid ¹		6797	■																	0
	19.	Iodine		6699	■																	0
	20.	Isosafrole		8704								▲	▲	▲	▲							4
	21.	Methyl alpha-phenylacetacetate (MAPA) ³		8795	▲																▲	0
	22.	Methylamine ¹		8520																		1
	23.	3,4-Methylenedioxyphenyl-2-propanone		8502								▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	4
	24.	N-Methylephedrine ³		8115			▲															1
	25.	N-Methylpseudoephedrine ³		8119			▲															1
	26.	N-phenethyl-4-piperidone (NPP)		8332					▲													0
	27.	Nitroethane		6724	▲																	2.5
	28.																					

UN Controlled Drug Precursors



Table I

- Acetic anhydride
- *N*-Acetylanthranilic acid
- 4-Anilino-*N*-phenethylpiperidine (ANPP)
- *tert*-Butyl 4-oxopiperidine-1-carboxylate (1-boc-4-piperidone)
- *tert*-Butyl 4-(phenylamino)piperidine-1-carboxylate (1-boc-4-AP)
- Ephedrine
- Ergometrine
- Ergotamine
- Isosafrole
- Lysergic acid
- 3,4-MDP-2-P methyl glycidate ("PMK glycidate")
- 3,4-MDP-2-P methyl glycidic acid ("PMK glycidic acid")
- 3,4-Methylenedioxyphenyl-2-propanone (3,4-MDP-2-P)
- Methyl *alpha*-phenylacetoacetate (MAPA)
- Norephedrine
- Norfentanyl
- *N*-Phenethyl-4-piperidone (NPP)

Table I (continued)

- Phenylacetic acid
- *alpha*-Phenylacetoacetamide (APAA)
- *alpha*-Phenylacetoacetonitrile (APAAN)
- *N*-Phenyl-4-piperidinamine (4-AP)
- 1-Phenyl-2-propanone (P-2-P)
- P-2-P methyl glycidic acid ("BMK glycidic acid") and selected esters
- 4-Piperidone
- Piperonal
- Potassium permanganate
- Pseudoephedrine
- Safrole

Table II

- Acetone
- Anthranilic acid
- Ethyl ether
- Hydrochloric acid
- Methyl ethyl ketone
- Piperidine
- Sulphuric acid
- Toluene



Methamphetamine



Controlled

- Methylamine
- Benzaldehyde
- Nitroethane
- Phenylacetic Acid

Not Controlled

- Benzyl alcohol
- N-methyl formamide
- Tartaric acid
- Azobisisobutyronitrile (AIBN)
- Methyl thioglycolate

Cocaine



Controlled

- Potassium permanganate
- Methyl ethyl ketone
- Methyl isobutyl ketone
- Toluene

Not Controlled

- Ethyl acetate
- N-propyl acetate
- Calcium chloride
- Ammonium hydroxide

Fentanyl



Controlled

- 4-anilino-N-phenethyl-4-piperidine (ANPP)
- 4-anilinopiperidine (4-AP)
- N-phenethyl-4-piperidone (NPP)
- Propionic anhydride

Not Controlled

- 4-piperidone
- Propionyl chloride
- 2-phenethyl bromide

Heroin



Controlled

- Acetone
- Acetic anhydride
- Hydrochloric acid
- Methyl ethyl ketone

Not Controlled

- Ethyl acetate
- Sodium carbonate
- Ammonium chloride

EVER-CHANGING

Fentanyl Precursors



- 4-ANPP
- 4-anilinopiperidine (4-AP)
- NPP
- 4-Piperidone
- 1-Benzyl-4-piperidone (N-benzyl-4-piperidone)
- Benzyl fentanyl
- Norfentanyl
- 4-ANBP (4-anilino-1-benzylpiperidine)
- Aniline
- Propionyl chloride (Reagent)
- Phenethyl Bromide / Phenethyl Chloride
- Sodium triacetoxyborohydride (STAB)
- Propionyl Chloride

DEA's Chemical Regulation

Code of Federal Regulations (CFR)



Regulatory Authority

- ▶ Controls 48 listed chemicals (21 CFR 1310.02)
 - ▶ 37 List I chemicals
 - ▶ 11 List II chemicals
- ▶ Registration of List I chemical companies (21 CFR 1309)
 - ▶ Pre-registration investigations
 - ▶ Cyclical investigations

Reporting Requirements

- ▶ Suspicious orders, losses, thefts (21 CFR 1310.05)
- ▶ Imports, exports, broker, transshipment (21 CFR 1313)
- ▶ Mail order reporting for sales of pseudoephedrine and ephedrine (21 CFR 1314.110)
- ▶ Record keeping requirements (2 years) (21 CFR 1310.03 and 1310.04)

PART 1310 —RECORDS AND REPORTS OF LISTED CHEMICALS AND CERTAIN MACHINES; IMPORTATION AND EXPORTATION OF CERTAIN MACHINES



§1310.05 Reports.

(a)(1) Each regulated person **must report** to the Special Agent in Charge of the **DEA** Divisional Office for the area in which the regulated person making the report is located any regulated transaction involving ***an extraordinary quantity of a listed chemical, an uncommon method of payment or delivery, or any other circumstance that the regulated person believes may indicate that the listed chemical will be used in violation of this part.***

The regulated person will **orally report** to the Special Agent in Charge of the DEA Divisional Office at the earliest practicable opportunity after the regulated person **becomes aware** of the circumstances involved and as much in advance of the conclusion of the transaction as possible.

The regulated person must file a **written report** of the transaction(s) with the Special Agent in Charge of the DEA Divisional Office as set forth in §1310.06 **within 15 calendar days** after the regulated person becomes aware of the circumstances of the event.

DEA's Authority Related to Chemicals

The Controlled Substances Act (CSA)



Criminal Statutes

21 U.S.C. 841(c)

Offenses involving listed chemicals

21 U.S.C. 959

Possession, manufacture, or distribution of controlled substances (regarding unlawful importation)

21 U.S.C. 843(a)

Offenses including chemicals and regulated machines

21 U.S.C. 971

Notification, suspension of shipment, and penalties with respect to importation and exportation of listed chemicals

www.dea diversion.usdoj.gov



What Industry Can Do



The screenshot shows the official website of the U.S. Department of Justice Drug Enforcement Administration Diversion Control Division. The header includes the department's name and a search bar. The main navigation menu has links for HOME, REGISTRATION, REPORTING, RESOURCES, and ABOUT US. The REPORTING section is highlighted, showing links to Automation of Reports and Consolidated Orders System (ARCOS), Bulk Chemical Manufacturer Reports (BCM Online), Chemical Import/Export Declarations, CSOS (Controlled Substances Ordering System), Theft/Loss Reporting, International Trade Data System (ITDS), and Import/Export Permit Applications and Declarations. A sidebar on the right lists various reporting requirements and resources.

U.S. DEPARTMENT OF JUSTICE ★ DRUG ENFORCEMENT ADMINISTRATION
DIVERSION CONTROL DIVISION

HOME REGISTRATION REPORTING RESOURCES ABOUT US

REPORTING Get Email Updates:

Automation of Reports and Consolidated Orders System (ARCOS)
Background: What is ARCOS and What Does it Do?
Electronic Data Interchange (EDI) Program

Bulk Chemical Manufacturer Reports (BCM Online)

Chemical Import/Export Declarations
DEA Form 486 - Import/Export Declaration - Chemical
DEA Form 486a - Import Declaration for Ephedrine, Pseudoephedrine and Phenylpropanolamine

CSOS (Controlled Substances Ordering System)

Theft/Loss Reporting
DEA Form 106 - Report of Theft or Loss of Controlled Substances
DEA Form 107 - Report of Theft or Loss of Listed Chemicals
Theft/Loss Reports for 2014-2018

International Trade Data System (ITDS)

Import/Export Permit Applications and Declarations
Quick Reference Guide for Importers/Exporters of Controlled Substances
Conversion Factors for Controlled Substances
Controlled Substances Export Reform Act of 2005
Medical Missions

ARCOS
BCM Online
Chemical Import/Export Declarations
CSOS (Controlled Substances Ordering System)
Theft/Loss Reporting
Import/Export
Medical Missions
Quotas
Registrant Record of Controlled Substances Destroyed
Regulated Machines (Tableting and Encapsulating)
Reports Required by 21 CFR
SORS
Submit a Tip to DEA
Year-End Reports

- Have a link to Diversion's website
- Have customers acknowledge they understand and will comply with reporting requirements

www.deadiversion.usdoj.gov

What Industry Can Do

- ▶ See something, say something
- ▶ Report suspicious orders, or suspicious orders declined, to your local DEA office
- ▶ Review and/or revise order screening processes
- ▶ This will help us provide data to help you screen for suspicious orders
- ▶ Tell us how we can help you



Teaming with industry to combat precursor chemical diversion and trafficking on a global scale

NO CHEMICALS.

NO DRUGS.





Questions?

Thank you!