

# Opioid Analytical Standards

Cayman Chemical is dedicated to working with the forensic community to quickly make authentic reference standards available from our ISO/IEC 17025 and ISO 17034 laboratories. In response to the opioid epidemic, our catalog has expanded to now contain more than 730 opioid standards to help identify, confirm, and quantify these drugs of abuse. This includes a wide collection of fentanyls and other emerging synthetic opioids as well as plant-derived opiates and their metabolites and internal standards. A library of GC-MS spectral data containing many of Cayman's emerging opioid standards is freely available for download at [www.caymanchem.com/CSL](http://www.caymanchem.com/CSL).



ACCREDITED  
ISO/IEC 17025 #AT-1773  
ISO 17034 #AR-1774

## More than 730 Opioid Standards for:

- Synthetic Opioids
  - Fentanyls
  - Nitazenes
  - Cinnamylpiperazines
  - Utopioids
  - Emerging NPS
- Metabolites
- Additives & Precursors
- Opiates & Related Opioid Compounds
  - Semi-Synthetic Opiates
  - Opioid Antagonists
  - Kratom Alkaloids

## NEW FAS Kit Expands Coverage to Emerging Fentanyl Co-Drugs

The FAS Kit – Emergent Drug Panel (EDP) allows testing laboratories to detect and identify additional emerging drugs that are commonly found as co-drugs in fentanyl-containing samples.

### **FAS Kits are Free to Qualified Labs**

- Includes 200 µg of each compound
- Full set includes reference standards for 250 synthetic opioids and 60 co-drugs
- Improves immunoassay and mass spectrometry screening methods



Request kits for your lab at [www.caymanchem.com/faskit](http://www.caymanchem.com/faskit)

Custom Opioid Mixtures, Screening Panels, and Plates Available  
Email [sales@caymanchem.com](mailto:sales@caymanchem.com) to discuss your specific project needs

# Fentanyl

The basic fentanyl scaffold can be modified in four different regions leading to a myriad of new fentanyl varieties. Cayman now offers more than 420 standards for the identification, confirmation, and quantification of fentanyls and their metabolites. Read more about Cayman's standardized naming of substituted fentanyls at [www.caymanchem.com/fentanylnaming](http://www.caymanchem.com/fentanylnaming).

## Parent Compounds

Item No.	Product Name
ISO60197	Fentanyl (hydrochloride) (CRM) *
9002860	$\beta$ -methyl Fentanyl (hydrochloride)
23017	<i>para</i> -Fluoroacetyl fentanyl (hydrochloride)
ISO60128	Acetyl fentanyl (hydrochloride) (CRM) *
25936	Benzyl fentanyl (hydrochloride) (CRM) *
27536	<i>para</i> -Bromofentanyl
19734	Butyryl fentanyl (hydrochloride) (CRM) *
19884	Carfentanil (CRM)
19795	FIBF (hydrochloride) (CRM) *
22990	Isovaleryl fentanyl (hydrochloride)
19424	<i>meta</i> -Fluorofentanyl (hydrochloride)
19425	<i>ortho</i> -Fluorofentanyl (hydrochloride)
19735	<i>para</i> -Fluorofentanyl (hydrochloride) (CRM) *
23540	Methoxyacetyl fentanyl (hydrochloride) (CRM) *
22429	Remifentanil (hydrochloride) (CRM) *

\* Compound also available as a neat solid

## Metabolites

Item No.	Product Name
19561	Butyryl norfentanyl (hydrochloride) (CRM) *
22182	Norcarfentanil (hydrochloride) (CRM) *
35259	<i>para</i> -fluoro Norfentanyl
33492	N-propionyl Norfentanyl
19559	Furanyl norfentanyl (hydrochloride) (CRM) *
21926	Remifentanil Acid (trifluoroacetate salt)

\* Compound also available as a neat solid

Download PDF or request a copy of our Fentanyl Lab Guide at [www.caymanchem.com/fentanylposter](http://www.caymanchem.com/fentanylposter)

## Fentanyl Analog Detection

### Fluorofentanyl Isomer Mixture

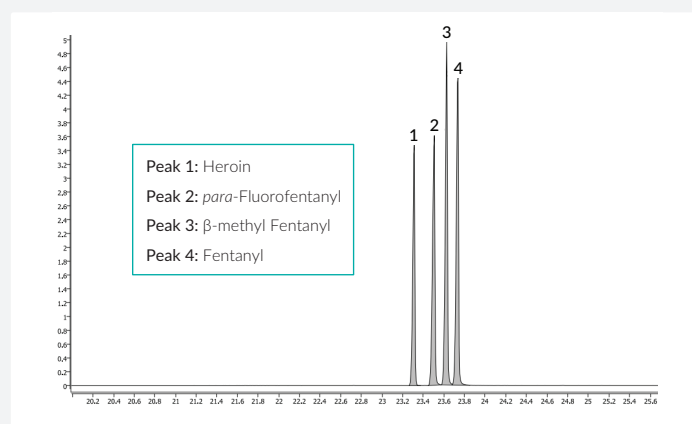
Item No. 37028

Contains a mixture of the 3 positional isomers *ortho*-, *meta*-, and *para*-fluorofentanyl for direct snap and inject analysis by HPLC, GC-MS, or LC-MS

### GC-MS Heroin Adulterant Mixture

Item No. 37356

Contains a mixture of heroin and controlled fentanyl compounds for routine analytical checks using GC-MS



View all opioid mixtures & panels at [www.caymanchem.com](http://www.caymanchem.com)

## Precursors & Byproducts

Item No.	Product Name
20085	4-Anilinopiperidine (hydrochloride)
22700	4-ANPP (CRM) *
28386	Phenethyl 4-ANPP
26428	Despropionyl <i>para</i> -Fluorofentanyl (CRM) *

\* Compound also available as a neat solid

## Isotope-Labeled Standards

Item No.	Product Name
ISO60129	Acetyl fentanyl-d <sub>5</sub> (hydrochloride) (CRM) *
26314	Cyclopropyl fentanyl- <sup>13</sup> C <sub>6</sub> (hydrochloride) (CRM) *
26638	<i>para</i> -Fluorofentanyl- <sup>13</sup> C <sub>6</sub> (hydrochloride) (CRM) *
19224	Furanyl fentanyl-d <sub>5</sub> (hydrochloride) (CRM)
18729	Norfentanyl-d <sub>5</sub> (CRM) *

\* Compound also available as a neat solid

# Non-Fentanyl Synthetic Opioids

## Nitazenes

Item No.	Product Name
30218	4'-hydroxy Nitazene
29318	5-Aminoisotonitazene
30278	Butonitazene
29642	Clonitazene
34947	Ethyleneoxynitazene (citrate)
29916	Etodesnitazene (citrate)
21824	Etonitazene
33168	N-Piperidiny Etonitazene (citrate)
33169	N-Pyrrolidino Etonitazene
30880	Isotonitazene (CRM)
30216	N-desethyl Isotonitazene (hydrochloride)
26398	Metonitazene
34909	N-Pyrrolidino Isotonitazene (citrate)
37685	N-Pyrrolidino Metonitazene (citrate)
29381	Protonitazene (hydrochloride)
37456	N-Pyrrolidino Protonitazene

View all nitazenes at [www.caymanchem.com](http://www.caymanchem.com)

## Other Synthetic Opioids & Metabolites

Item No.	Product Name
26485	2-methyl AP-237 (hydrochloride)
30744	<i>para</i> -methyl AP-237 (hydrochloride)
34184	Brorphine (hydrochloride) (CRM) *
33720	Dipyanone (hydrochloride)
ISO60145	(±)-Methadone (hydrochloride) (CRM) *
20899	Normeperidine (hydrochloride) (CRM) *
18660	Tapentadol (hydrochloride) (CRM) *
ISO60149	<i>cis</i> -Tramadol (hydrochloride) (CRM) *
18751	O-Desmethyl- <i>cis</i> -tramadol (hydrochloride) (CRM) *
24264	U-51754 (hydrochloride)
19397	U-47700 (CRM) *
25522	U-48800 (hydrochloride) (CRM) *
23999	U-49900 (CRM) *

\* Compound also available as a neat solid

## CAYMAN SPECTRAL LIBRARY

Free, searchable GC-MS spectral database that contains 70eV EI mass spectral data of 2,000+ of Cayman's forensic drug standards.

Download the latest database at [www.caymanchem.com/CSL](http://www.caymanchem.com/CSL)

## Common Opioid Co-Drugs

### FEATURED PRODUCTS

#### Xylazine a.k.a. "tranq"

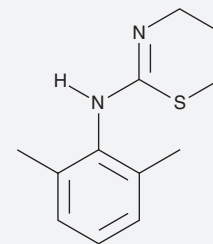
A non-opioid sedative most commonly found in mixtures with fentanyl

CRM - Item No. 37854

Reference Standard - Item No. 22641

4-hydroxy Metabolite - Item No. 22920

*d*<sub>6</sub>-Labeled Standard - Item No. 38353



### Additional Co-Drugs

Item No.	Product Name
38201	Bromazolam (CRM) *
25614	Clonazolam (CRM) *
ISO60176	Cocaine (CRM) *
22489	Diphenhydramine (hydrochloride)
20991	Etizolam (CRM) *
25577	Flualprazolam (CRM) *
15157	Flubromazepam
26352	Flubromazolam (CRM) *
38582	Medetomidine (hydrochloride)
ISO60168	(±)-Methamphetamine (hydrochloride) (CRM) *

\* Compound also available as a neat or crystalline solid

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# Opiates & Related Opioid Compounds

## Parent Compounds, Precursors, & Impurities

Item No.	Product Name
17048	6-Acetylcodeine
ISO60178	Buprenorphine (hydrochloride) (CRM) *
ISO60140	Codeine (CRM) *
29917	Codeinone
18052	Codeine-d <sub>3</sub> (CRM)
15714	Desomorphine (exempt preparation)
ISO60142	Dihydrocodeine (CRM) *
ISO60187	Heroin (CRM) *
22882	Heroin-d <sub>3</sub> (exempt preparation)
ISO60144	Hydrocodone (CRM) *
ISO60147	Morphine (CRM) *
24514	Morphine-d <sub>3</sub> (CRM)
ISO60148	Oxycodone (CRM) *
ISO60203	Oxycodone-d <sub>3</sub> (CRM) *
22024	Thebaine (CRM) *

\* Compound also available as a neat or crystalline solid

## Metabolites

Item No.	Product Name
19418	6-Acetylmorphine (CRM) *
25518	6-Acetylmorphine-d <sub>6</sub> (CRM)
21536	Dihydromorphine (hydrate)
ISO60146	Hydromorphone (CRM) *
20127	Norbuprenorphine (CRM) *
22661	Norhydrocodone (hydrochloride) (CRM) *
22662	Norhydrocodone-d <sub>3</sub> (hydrochloride) (CRM) *
35521	Noroxycodone (hydrochloride) (CRM) *
36792	Noroxycodone-d <sub>3</sub> (hydrochloride) (CRM)
15903	Noroxymorphone
37237	Northebaine
21538	6α-Oxycodol
21544	nor-6α-Oxycodol
21540	6β-Oxycodol
21545	nor-6β-Oxycodol (hydrate)
25940	6α-Oxymorhol (CRM) *
ISO60171	Oxymorphone (CRM) *

\* Compound also available as a neat or crystalline solid

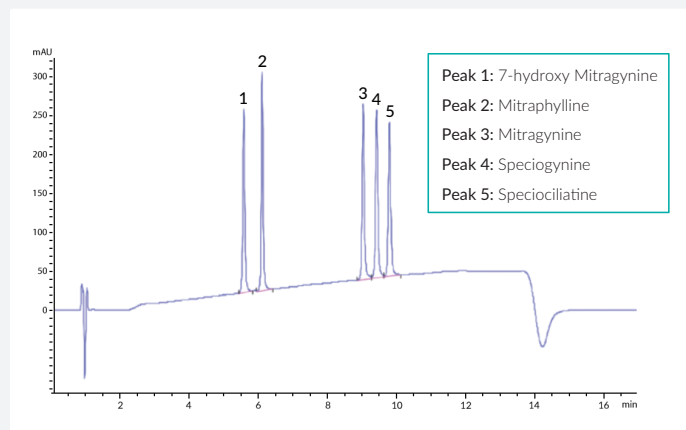
View all opiate metabolites at [www.caymanchem.com](http://www.caymanchem.com)

## Kratom Alkaloid Detection

### Kratom Alkaloids Mixture

Item No. 37649

A 5-component mixture containing alkaloids found in *M. speciosa* (Kratom) in a solution intended for HPLC or LC-MS applications



## Individual Kratom Standards

Item No.	Product Name
18567	Mitragynine (CRM) *
35468	7-hydroxy Mitragynine (CRM) *
25528	Mitraphylline
38999	Paynantheine (CRM) *
38994	Speciocilatine (CRM) *
38997	Speciogynine (CRM) *

\* Compound also available as a neat or crystalline solid

## Opioid Antagonists & Metabolites

Item No.	Product Name
28625	Butorphanol (tartrate) (CRM) *
22717	6β-Naloxol (CRM) *
ISO60191	Naloxone (hydrochloride) (CRM) *
18274	Naloxone-d <sub>5</sub> (CRM) *
18790	6β-Naltrexol (CRM) *
20396	6β-Naltrexol-d <sub>3</sub> (CRM) *
19323	Naltrexone-d <sub>3</sub> (CRM) *
9000705	Naltrindole (hydrochloride)

\* Compound also available as a neat or crystalline solid

View all opioid antagonists at [www.caymanchem.com](http://www.caymanchem.com)