

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 725 opioid standards to help identify, confirm, and quantify these drugs of abuse. This includes a wide collection of fentanyl 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.



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

More than 75 Opioid Standards for:

- Synthetic Opioids
 - Fentanyl
 - Nitazenes
 - Cinnamylpiperazines
 - Utopioids
 - Emerging NPS
- Opiates & Natural Products
 - Prescription Drugs
 - Semi-Synthetic Opiates
 - Opioid Antagonists

New FAS Kit

Emergent Drug Panel for Detection of Fentanyl Co-Drugs

The new CDC-sponsored FAS Kit panel contains 60 emerging drugs of abuse typically detected alongside fentanyl and its analogs to further expand laboratory screening and surveillance capabilities.

FAS Kits are Free to Qualified Labs

- Includes 200 µg of each compound
- 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

Custom Opioid Mixtures, Screening Panels, and Plates Available
Email 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.

Parent Compounds

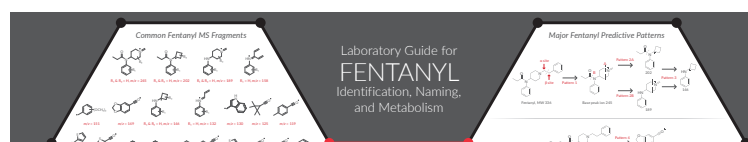
Item No.	Product Name
ISO60197	Fentanyl (hydrochloride) (CRM) *
9002860	β -methyl Fentanyl (hydrochloride)
23017	<i>para</i> -Fluoroacetyl fentanyl (hydrochloride)
ISO60128	Acetyl fentanyl (hydrochloride) (CRM) *
25936	Benzyl fentanyl (hydrochloride) (CRM) *
27536	<i>para</i> -Bromofentanyl
19734	Butyryl 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 Laboratory Guide poster at www.caymanchem.com/fentanylposter

Fentanyl Analog Detection

Fluorofentanyl Isomer Mixture

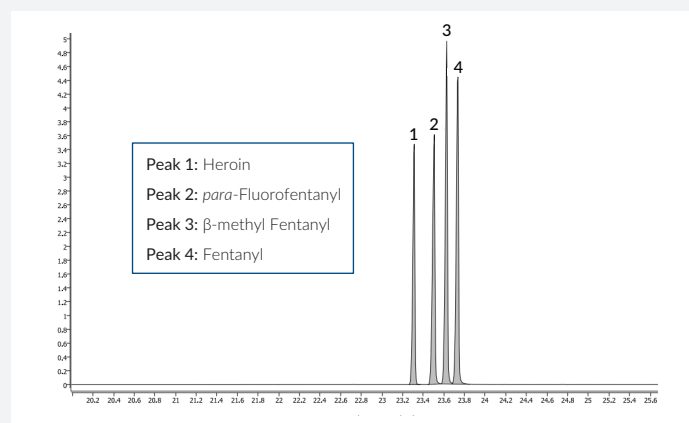
Item No. 37028

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

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

Precursors & Byproducts

Item No.	Product Name
19561	Butyryl norfentanyl (hydrochloride) (CRM) *
22182	Norcarfentanil (hydrochloride) (CRM) *
35259	<i>para</i> -fluoro Norfentanyl
33492	N-propionyl Norfentanyl

*Compound also available as a neat solid

Isotope-Labeled Standards

Item No.	Product Name
ISO60129	Acetyl fentanyl-d5 (hydrochloride) (CRM) *
25563	Cyclopropyl fentanyl-13C6 (hydrochloride)
26638	<i>para</i> -Fluorofentanyl-13C6 (hydrochloride) (CRM) *
19946	<i>para</i> -Fluorofentanyl-d5 (hydrochloride) (CRM) *
19224	Furanyl fentanyl-d5 (hydrochloride) (CRM)
18729	Norfentanyl-d5 (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
34856	sec-Butonitazene (citrate)
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

*Compound also available as a neat solid

View all nitazenes at www.caymanchem.com

Other Synthetic Opioids & Metabolites

Item No.	Product Name
26485	2-methyl AP-237 (hydrochloride)
30744	para-methyl AP-237 (hydrochloride)
34184	Borophine (hydrochloride) (CRM) *
33720	Dipyanone (hydrochloride)
ISO60145	(±)-Methadone (hydrochloride) (CRM) *
20899	Normeperidine (hydrochloride) (CRM) *
18660	Tapentadol (hydrochloride) (CRM) *
ISO60149	cis-Tramadol (hydrochloride) (CRM) *
18751	O-Desmethyl-cis-tramadol (hydrochloride) (CRM) *
20593	O-Desmethyl-cis-tramadol-d6 (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 Webinar

New Adversaries in the Opioid Crisis: The Nitazenes

Learn more about the synthesis, chemical characterization, and μ -opioid receptor activity of "nitazene" 2-benzylbenzimidazole synthetic opioids.

Watch the webinar at

www.caymanchem.com/nitazene-webinar

Read the Collaborative Study Between Ghent University and Cayman

Synthesis, Chemical Characterization, and μ -Opioid Receptor Activity Assessment of the Emerging Group of "Nitazene" 2-Benzylbenzimidazole Synthetic Opioids

ACS Chem. Neurosci. **12(7)**, 1241–1251 (2021).

Common Opioid Co-Drugs

Featured Product

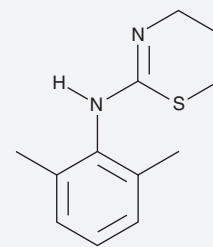
Xylazine "tranq"

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

CRM Version - Item No. 37854

Metabolite - Item No. 22920

Labeled Standard - Item No. 38353



Common Opioid 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

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 ₃ (CRM)
15714	Desomorphine (exempt preparation)
ISO60142	Dihydrocodeine (CRM) *
ISO60187	Heroin (CRM) *
22882	Heroin-d ₃ (exempt preparation)
ISO60144	Hydrocodone (CRM) *
ISO60147	Morphine (CRM) *
24514	Morphine-d ₃ (CRM)
ISO60148	Oxycodone (CRM) *
ISO60203	Oxycodone-d ₃ (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 ₆ (CRM)
21536	Dihydromorphine (hydrate)
21537	6β-Hydromorphol
ISO60146	Hydromorphone (CRM) *
20127	Norbuprenorphine (CRM) *
22661	Norhydrocodone (hydrochloride) (CRM) *
22662	Norhydrocodone-d ₃ (hydrochloride) (CRM) *
35521	Noroxycodone (hydrochloride) (CRM) *
36792	Noroxycodone-d ₃ (hydrochloride) (CRM)
15903	Noroxymorphone
37237	Northebaine
21538	6α-Oxycodol
21544	nor-6α-Oxycodol
21540	6β-Oxycodol
21545	nor-6β-Oxycodol (hydrate)
25940	6α-Oxymorphol (CRM) *
ISO60171	Oxymorphone (CRM) *

*Compound also available as a neat or crystalline solid

View all opiate metabolites at www.caymanchem.com

Opioid Antagonists & Metabolites

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

*Compound also available as a neat or crystalline solid

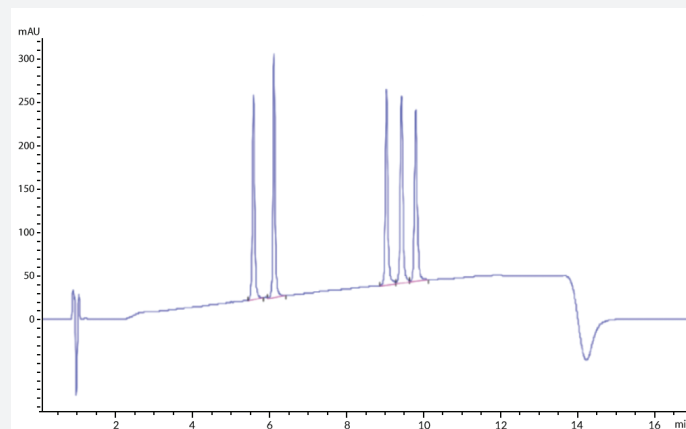
View all opioid antagonists at www.caymanchem.com

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



Representative chromatogram of the compounds included in the Kratom Alkaloids Mixture. Peak order from left to right: 7-hydroxy mitragynine, mitraphylline, mitragynine, speciogynine, speciociliatine

Individual Kratom Standards

Item No.	Product Name
37859	Corynantheidine
21841	Paynantheine
27246	Speciociliatine
25794	Speciogynine
11151	Mitragynine
13114	7-hydroxy Mitragynine
25528	Mitraphylline