

FORENSIC CHEMISTRY

Cayman Chemical

No. **ISO60128**

NAME **ACETYL FENTANYL
(HYDROCHLORIDE) CRM**

No. **ISO00117**

NAME NOM **25I-NBOMe
(HYDROCHLORIDE) RM**

No. **ISO00133**

NAME NOM **AB-PINACA RM**



With more than 30 years of experience in the synthesis, purification, and characterization of biochemicals, Cayman Chemical has become a leader in the field of designer drugs by providing high purity Schedule I-V Controlled Substances to federally-licensed laboratories and qualified academic research institutions for forensic analysis. Our highly trained staff of Ph.D. chemists provides institutions with solutions to quickly identify and understand the physiological and toxicological properties of new designer drugs. Cayman synthesizes a range of designer drugs including synthetic cannabinoids, cathinones, phenethylamines, amphetamines, indanes, and tryptamines among many others.

For institutions that rely on highly traceable reference standards for use in quantitative or qualitative testing, Cayman Chemical offers synthesized Reference Materials and Certified Reference Materials accredited to meet ISO/IEC 17025:2005 and ISO Guide 34:2009 guidelines.

Quality First

Cayman is committed to ensuring and maintaining quality in all aspects of its material production with a goal of meeting or exceeding our customers' expectations.

This goal is realized through the implementation of a robust quality management system implemented and maintained by trained staff to meet the requirements set forth in ISO/IEC 17025 and ISO Guide 34.



ISO/IEC 17025:2005

Accreditation recognizes Cayman Chemical staff and laboratories as competent in carrying out administrative duties, quality control protocols, and technical operations within the scope of its quality management system to ensure valid and reliable test results for the consumer.



ISO Guide 34:2009

Accreditation recognizes Cayman Chemical staff and laboratories as competent in the manufacturing of Reference Materials and Certified Reference Materials. Each standard produced under ISO Guide 34 is characterized and validated with one or more certified property values, and is accompanied by a Certificate of Analysis.

Reference Materials

Reference Materials

Reference Materials (RMs) are a low-cost, scalable, and highly-flexible option for analytical labs where accurate qualitative results are desired. RMs are fully characterized and their property values are tested to ISO/IEC 17025:2005 guidelines, making them fit for direct use by labs requiring traceable qualitative standards. Our RMs are sold as solids in custom sizes.

Certified Reference Materials

Certified Reference Materials (CRMs) serve as a Primary Standard as defined by ISO, and are suitable for labs requiring traceable quantitative standards. A CRM, as defined by ISO Guide 34: 2009, must include a certified property value (e.g., concentration), fully traceable to SI units, plus its uncertainty. Our CRMs are suitable for accurately measuring concentrations of analytes in test samples and are sold as quantitative solutions in sealed ampoules.

Certificate of Analysis

All RMs and CRMs come with a Certificate of Analysis (CofA) that includes:

- Description
- Storage and handling conditions
- Analytical data
- Traceable property values

In addition to the values reported on CofAs for the RMs and CRMs also include:

- Certified concentration and uncertainty
- Homogeneity and stability information



ISO/IEC 17025
#AT-1773
ISO Guide 34
#AR-1774

Recommended for
General Research
Qualitative Solids

Multiple and/or Custom Sizes

Recommended for
ISO/IEC 17025 Testing Labs

Enhanced Certificate of Analysis

Produced in Cayman's ISO Guide 34
and ISO/IEC 17025 Accredited Lab

Sealed Ampoule Packaging

Quantitative Solutions

Which one is right for you?

Reference Materials	Certified Reference Materials
<input type="radio"/>	
<input type="radio"/>	
<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>
	<input type="radio"/>



Reference Materials

ISO00133	AB-PINACA RM
ISO00134	AB-FUBINACA RM
ISO00122	PB-22 RM
ISO00123	5-fluoro PB-22 RM
ISO00125	BB-22 RM
ISO00060	AKB48 RM
ISO00019	AM2201 RM
ISO00127	EAM2201 RM
ISO00120	MAM2201 RM
ISO00058	STS-135 RM
ISO00055	UR-144 RM
ISO00059	XLR11 RM
ISO00119	JWH 018 adamantyl carboxamide RM
ISO00128	Acetyl fentanyl (hydrochloride) RM
ISO00130	Acetyl norfentanyl (hydrochloride) RM
ISO00117	25I-NBOMe (hydrochloride) RM
ISO00041	Methylone (hydrochloride) RM
ISO00043	Pentedrone (hydrochloride) RM
ISO00121	JWH 015 RM
ISO00129	Acetyl fentanyl-d ₅ (hydrochloride) RM
ISO00131	Acetyl norfentanyl-d ₅ (hydrochloride) RM

See the full line-up at www.caymanchem.com/forensic

Certified Reference Materials

ISO60060	AKB48 CRM
ISO60055	UR-144 CRM
ISO60122	PB-22 CRM
ISO60123	5-fluoro-PB-22 CRM
ISO60128	Acetyl fentanyl (hydrochloride) CRM
ISO60129	Acetyl fentanyl-d ₅ (hydrochloride) CRM
ISO60130	Acetyl norfentanyl (hydrochloride) CRM
ISO60131	Acetyl norfentanyl-d ₅ (hydrochloride) CRM
ISO60121	JWH 015 CRM

See the full line-up at www.caymanchem.com/forensic

ToxBox

ToxBox by PinPoint Testing

PinPoint Testing, LLC is a partnership composed of leading scientists that can provide forensic, public health, and medical labs with the advice and reagents to detect new and emerging drugs of abuse in critical blood and urine samples. The expertise of PinPoint Testing, LLC spans organic and medicinal chemistry, pharmacology, toxicology, pharmacokinetics, forensic science, and legal testimony. For the past five years, the partners and associates of PinPoint Testing, LLC have stayed on the forefront of devising methods to identify designer drugs in order to help clinical and forensic laboratories meet their missions.

PINPOINT
TESTING, LLC
INNOVATIVE TOXICOLOGICAL SOLUTIONS & CONSULTING

Cayman Chemical has partnered with PinPoint Testing, LLC in Little Rock, Arkansas to offer complete laboratory solutions for rapid analytical method validation and implementation. Once methods have been validated and

transferred to your lab, you can purchase validated run packs directly from Cayman.



ToxBox Kit - Product Packages

A user-friendly test kit for the detection of emerging drugs in blood or urine samples. Available in four packages ranging from platinum to bronze.

	Platinum	Gold	Silver	Bronze
Analytical Run Packs (5)	⊙	⊙	⊙	⊙
Liquid Chromatography Column (1)	⊙	⊙	⊙	
Solid Phase Extraction Cartridges (10 boxes of 50)	⊙	⊙		
Standard Operating Procedure	⊙	⊙		
Validation Plan	⊙	⊙		
On-site Consulting (80 hrs.)	⊙			

Now Available: Acetyl Fentanyl ToxBox Kit
Coming Soon: Opioid ToxBox Kit

Services

For over 5 years, Cayman scientists have been collaborating with forensic and academic labs to provide data and analytical reference standards to help quickly identify emerging drugs of abuse. With a staff of more than 50 chemists, at our 120,000 ft² campus in Ann Arbor, Michigan, Cayman has the resources and expertise to offer affordable custom services with reasonable and reliable lead-times.

Our expert chemistry staff is available to support you with:

- Quantitative HPLC-MS/GC/Fluorescence
- Compound identification (GC-MS, MS/MS, NMR)
- Reference standard characterization — residual solvents, HPLC purity, Karl Fischer, optical purity, *etc.*
- Adulteration testing
- Raw materials, finished goods, product stability testing

Contact us at sales@caymanchem.com for more information on the custom synthesis and analysis of emerging drugs of abuse and their corresponding metabolites, isomers, analogs, and labeled reference standards.

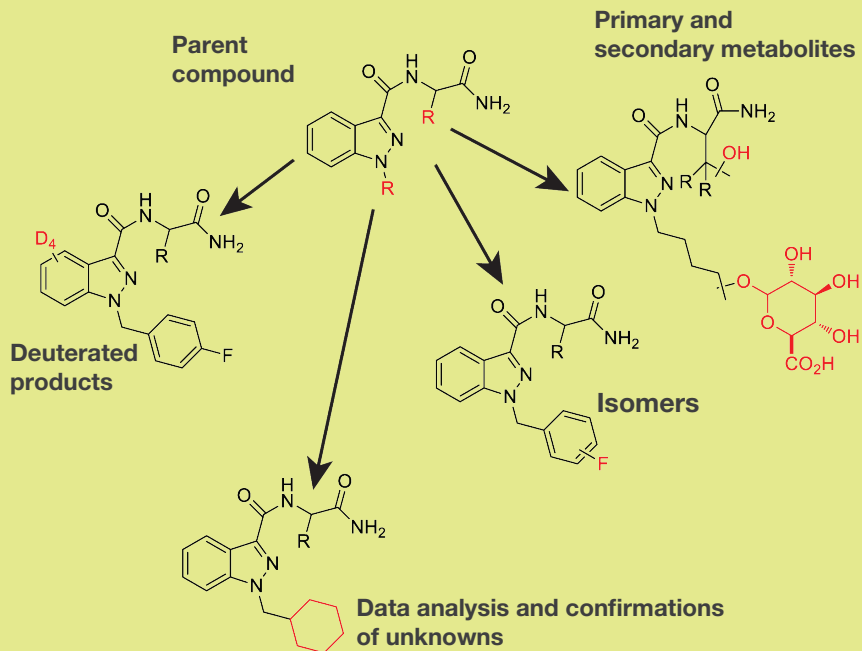


Custom Synthesis

Analytical standards for designer drug, isomer, and metabolite confirmations

Custom Analysis

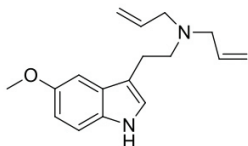
Qualitative analysis of unknowns and quantitative analysis in biological samples



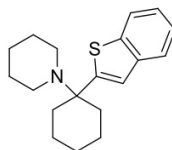
Designer Drugs

Cayman is the leading supplier of analytical standards of newly identified illicit substances, often referred to as designer drugs. These emerging drugs of abuse are continually evolving, and Cayman is at the forefront of this research. We provide the reference standards that help enforce and help to limit or prevent the consequences of this dangerous trend. Cayman cooperates with several collaborators and research partners to quickly identify, confirm, and publish verified examples. Through this work, Cayman is able to provide affordable reference standards and distribute the analytical data free of charge to the forensic science community.

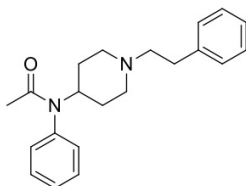




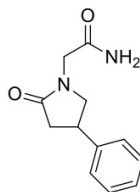
5-methoxy DALT
Hallucinogenic tryptamine



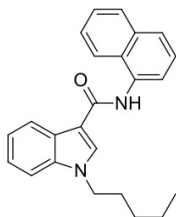
Benocyclidine
Phencyclidine



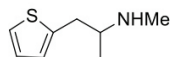
Acetyl fentanyl
Designer opiate



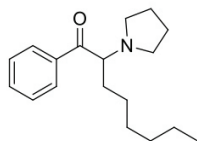
Phenylpiracetam
Nootropic compound



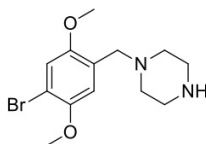
MN-24 (NNEI)
Synthetic cannabinoid



Methiopropamine
Amphetamine analog



PV9
Cathinone analog



2C-B-BZP
Phenethylamine/Piperazine

To view the full line-up of more than 800 designer drug analytical reference standards, visit www.caymanchem.com/forensic

Support

Cayman Spectral Library

A searchable GC-MS spectral database that contains 70eV EI mass spectral data of hundreds of our emerging forensic drug standards.

Download the library at www.caymanchem.com/CSL

The screenshot shows the homepage of the Forensic Drug Review website. The header features the title 'Forensic Drug Review' and a search bar. A navigation menu includes links for Home, Compounds, Submission Process, About, Contact, and Forendex. The main content area is titled 'Welcome to Forensic Drug Review website' and contains introductory text, 'Our Goals', 'Submissions', and a 'Recently Verified Compounds' section with a table of data. A right-hand sidebar lists various committees and their members, including Terry Dal Cason, Terry Mills, Daniel V. Reinhardt Jr., Dr. Peter Roessler, Jason Nawyn, Stanton Wheasler, Jennifer McNair, and Nicole Astor.

Forensic Drug Review

Home | Compounds | Submission Process | About | Contact | Forendex

Welcome to Forensic Drug Review website

This site is a collaborative effort between the Southern Association of Forensic Scientists and Cayman Chemical Company for the benefit of the Forensic Drug Chemistry Community. We are focused on providing rapid peer review of Emerging Drug Identification data.

Our Goals

A major bottleneck in the forensic analysis of emerging drugs has been the non-availability of peer-reviewed monographs for newly identified drugs of abuse. Forensic drug chemists typically identify drugs of abuse by analysis and comparison of the results to data produced from a verified reference standard, or, in some cases, to data available in peer-reviewed monographs. In either case, it is necessary for peer-reviewed data to be available to the forensic drug chemist. With this dramatic rise in the number of emerging drugs of abuse and the speed at which these compounds are evolving, there is a great deal of pressure on the forensic community to rapidly identify them. This site helps streamline and hasten the peer review process for new chemical substances of relevance to the forensic community.

Submissions

New chemical monographs may be submitted to the site where they are routed for review by a committee of research scientists skilled in the fields of forensic science and chemical compound identification. Once approved by this committee, these monographs will be published to this site and available for viewing and download.

Recently Verified Compounds

[View entire Compound Library](#)

Showing 5 items

Compound	Status	Date Submitted	Date Verified	Organization	Details
JWH 018 Benzimidazole Analog	Verified	2013-12-16	2013-12-20	Cayman Chemical	More info
ADB-PINACA	Verified	2013-09-01	2013-10-28	Cayman Chemical	More info
PB-22 & 5-Fluoro-PB-22	Verified	2013-05-21	2013-08-14	Cayman Chemical	More info
N-Ethylbuphedrone	Verified	2013-04-30	2013-08-14	Cayman Chemical	More info
XLR11 & Fluoroalkyl Analog	Verified	2013-04-30	2013-05-20	Cayman Chemical	More info

Showing 5 items

Committees

Review Committee

Terry Dal Cason
Retired forensic chemist

Terry Mills
Former Deputy Director of the Georgia Bureau of Investigation Department of Forensic Services

Daniel V. Reinhardt Jr., PhD
Chief, Drug Chemistry Branch, US Army Criminal Investigation Laboratory

Dr. Peter Roessler
Head of the toxicology department at the state agency of criminal investigation (Landeskriminalamt)

Editorial Committee

Jason Nawyn
Forensic Drug Chemistry United States Army Criminal Investigation Laboratory

Stanton Wheasler
Forensic Scientist, Ohio Bureau of Criminal Identification and Investigation

Jennifer McNair
Forensic Science Manager, Utah Bureau of Forensic Services

Nicole Astor
Chemistry Technical Leader at the Georgia Bureau of Investigation, Division of Forensic Sciences

Forensic Drug Review

Peer reviewed designer drug identification data for the benefit of the Forensic Drug Chemistry Community.

www.forensicdrugreview.com



Technical Support

Email: **techserv@caymanchem.com**

Phone: **888.526.5351** (USA and Canada only)
734.975.3888 (direct)

Web: **www.caymanchem.com/techserv**



Join us! · AAFS 66th Annual Scientific Meeting · Seattle, Washington · February 17-22, 2014 · Booth # 1000

Forensic Science

Introduction Products Quality Standards Services Publications
Cayman's Forensic product line is continually evolving. We are dedicated to working with the forensic and academic communities to identify emerging new drugs and to quickly make authentic reference standards available from our ISO/IEC 17025:2005 and ISO Guide 34:2009 labs.

Please contact our [sales department](#) for your custom requests or to share your new product ideas.

[Synthetic Cannabinoids](#) [Emerging](#) [New Products](#) [Reference Chart](#)

RM and CRM are available to customers outside North America through [LGC Standards](#). Customers located in Japan, Australia, and New Zealand, please contact [Cayman Chemical](#).

Use the drop down menus below to help find your product of interest. Match the series name with the type of molecule, i.e. Series: JWH & Type: Metabolite or Series: RCS & Type: Deuterated

Series: Type: Grade:

See all 8 [products](#)

- Filter
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- ISO001
- ISO001
- for
- BB
- PE
- INACA
- TUJ

keyword

of 2 entries

Grade1	Product1
Reference Material	JWH 015 RM
Reference Material	JWH 018 adamantly carboxamide RM

synthesis is available. Contact sales@caymanchem.com for pricing.

Cayman Europe
Cayman Pharma

Illustrations and Charts
Key Research Area Posters

Look closer at our reference standards by visiting:
www.caymanchem.com/forensic


Notes





See the full line-up at
www.caymanchem.com/forensic
Contact us at
sales@caymanchem.com or
(800) 364-9897

 /CaymanChemical

 /@Cayman_Forensic