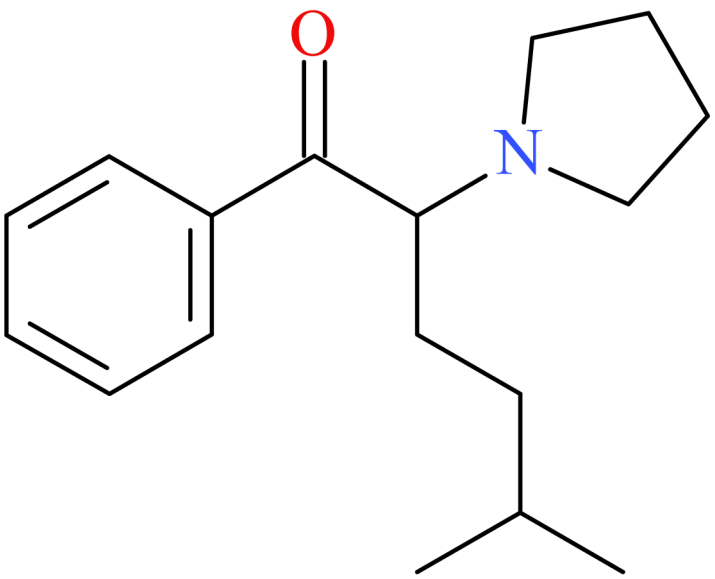
Alpha-PiHpP



NPS SUBCLASS
Stimulant
REPORT DATE
June 23, 2025
SAMPLE RECEIVED
January 6, 2025
SAMPLE TYPE
Toxicology

Preferred Name	Alpha-PiHpP
Synonyms	*iso*-PV8, alpha-PiHPP, alpha-Pyrrolidinoisoheptanophenone
Formal Name	5-methyl-1-phenyl-2-pyrrolidin-1-yl-hexan-1-one
InChI Key	HJZRHYAAONOQLE-UHFFFAOYSA-N
CAS Number	N/A
Chemical Formula	$C_{17}H_{25}NO$
Molecular Weight	259.4
Molecular Ion [M⁺]	259
Exact Mass [M+H]⁺	260.2009

Characterization & Intelligence

The following information was compiled in June 2025 and is subject to change as new research is conducted and as new information becomes available:

Description: Alpha-PiHpP (also known as *iso*-PV8) is a synthetic stimulant with structural similarity to other known synthetic cathinones (e.g., alpha-PiHP, alpha-PHP). Alpha-PiHpP was first identified in China in late 2024 and reported to the United Nations Office on Drugs and Crime (UNODC).[1] Alpha-PiHpP was first identified by our laboratory in January 2025 and confirmed after acquiring standard reference material.

Sample Source: Florida 4th District Chief Medical Examiner's Office (Jacksonville, FL)

Sample Appearance: Blood specimen

Pharmacology: The activity and potency of alpha-PiHpP have not been explicitly studied; however, due to structural similarity to other synthetic cathinones such as alpha-PiHP, it is assumed that alpha-PiHpP selectively binds to monoamine transporters to inhibit dopamine (DA) and norepinephrine (NE) reuptake.[2]

Toxicology: Alpha-PiHpP has been detected in one toxicology case to date at the CFSRE.

Drug Materials: Alpha-PiHpP has not been detected in drug materials to date at the CFSRE.

Demographics / Geographics: The toxicology specimen originated from Jacksonville, FL, and alpha-PiHpP was found alongside other synthetic cathinones (e.g., 4F-alpha-PHP, alpha-PiHP, MD-PiHP, and *N*-isopropyl butylone), traditional stimulants (e.g., cocaine and methamphetamine), and fentanyl.

Legal Status: Alpha-PiHpP is not currently a scheduled substance in the United States.

References:

- Cayman Chemical: Alpha-PiHpP
- [1]UNODC: Synthetic drugs in east and southeast Asia, latest developments and challenges 2025
- [2]Baarset *et al.* Pharmacological effects andpharmacokinetics of the novel synthetic cathinone...

About: In collaboration with medical examiner and coroner offices, crime laboratories, clinical partners, and other stakeholders, the Center for Forensic Science Research and Education (CFSRE) is documenting first confirmations of NPS through analysis of drug materials and/or toxicology samples. These reports are generated using comprehensive analytical techniques (e.g., GC-MS, LC-QTOF-MS, NMR) and include available information about the new substances identified at the time of reporting, as well as the analytical data generated during testing. Our new drug monographs are intended to assist with the rapid identification of NPS in forensic casework and related disciplines, and should not be used for confirmatory purposes alone.

Analytical Notes: All identifications were made based on evaluation of analytical data (GC-MS and LC-QTOF-MS) in comparison to analysis of acquired reference material.

Acknowledgements: This report was prepared by Sara E. Walton, Brianna N. Stang, Alyssa G. Reyes, Savannah M. Baker, Barry K. Logan, and Alex J. Krotulski at the Center for Forensic Science Research and Education (CFSRE) at the Fredric Rieders Family Foundation. The authors acknowledge scientists at the CFSRE for their involvements and contributions. For more information, contact npsdiscovery@cfsre.org or visit www.npsdiscovery.org.

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Gas Chromatography Mass Spectrometry (GC-MS)

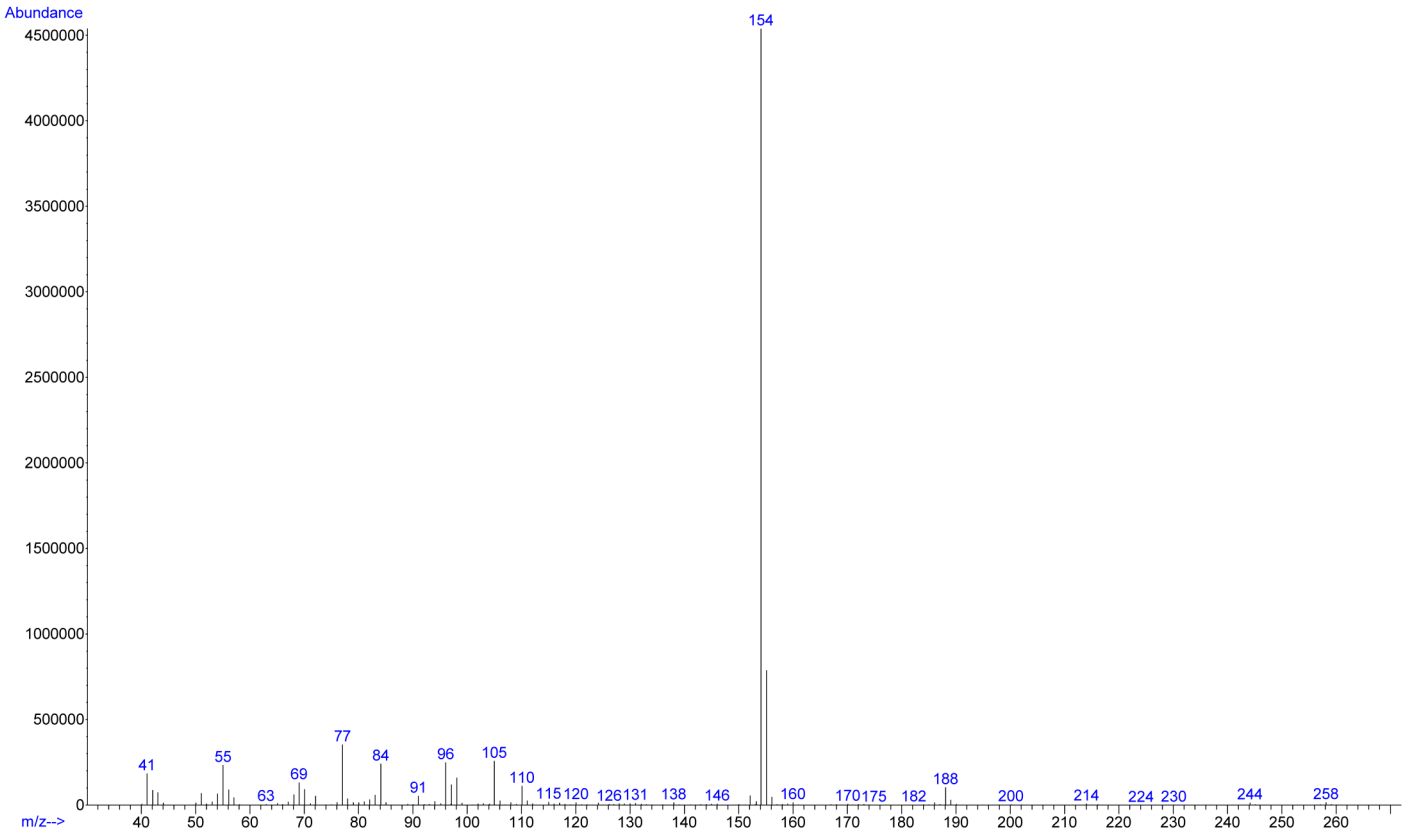
Laboratory: Center for Forensic Science Research and Education (CFSRE, Horsham PA, USA)

Sample Preparation: Standard diluted in methanol

Instrument: Agilent 5975 Series GC/MSD

Methods: GC-MS Method Details & Monographs

GC-MS: Mass Spectrum (EI 70 eV)



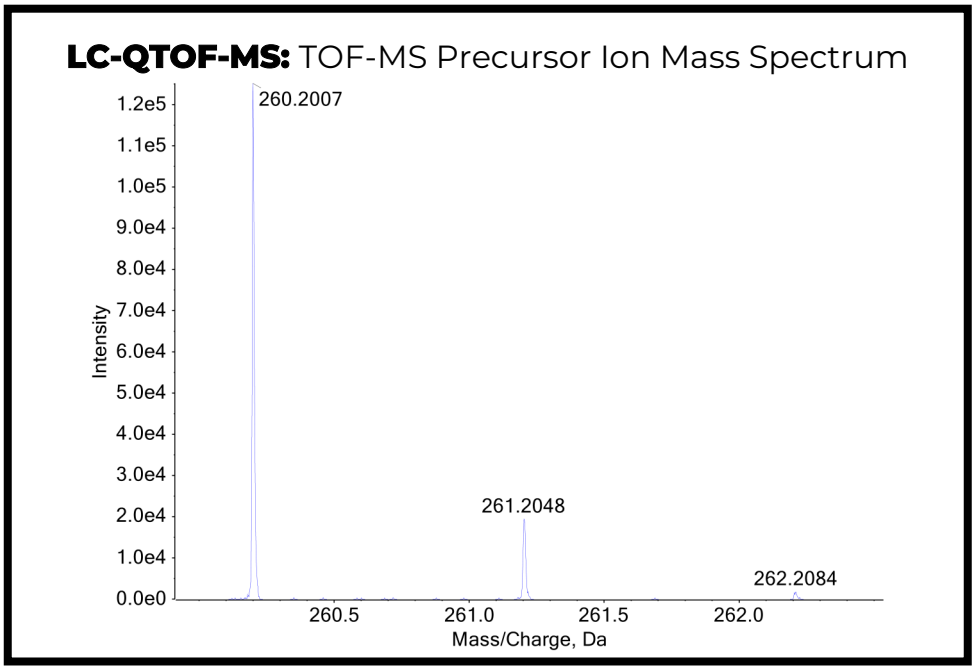
Liquid Chromatography Quadrupole Time-of-Flight Mass Spectrometry (LC-QTOF-MS)

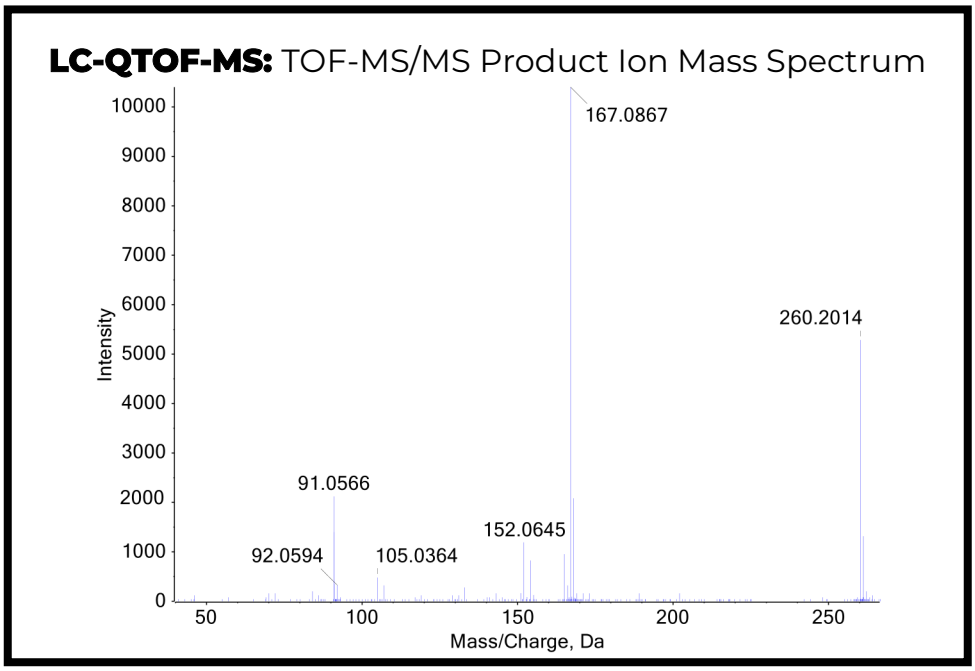
Laboratory: Center for Forensic Science Research and Education (CFSRE, Horsham, PA, USA)

Sample Preparation: Liquid-liquid extraction

Instrument: Sciex X500R LC-QTOF-MS

Methods: LC-QTOF-MS Method Details & Monographs





Confirmation Using Drug Standard: *Reference materials for alpha-PiHpP (Batch: 0727713-5) and alpha-PHpP (Batch: 0707665-1) were purchased from Cayman Chemical (Ann Arbor, MI, USA). The analyte was confirmed to be alpha-PiHpP based on retention time (sample: 6.26 min vs. standards alpha-PiHpP: 6.27 and alpha-PHpP: 6.43 min) and mass spectral data comparisons.*