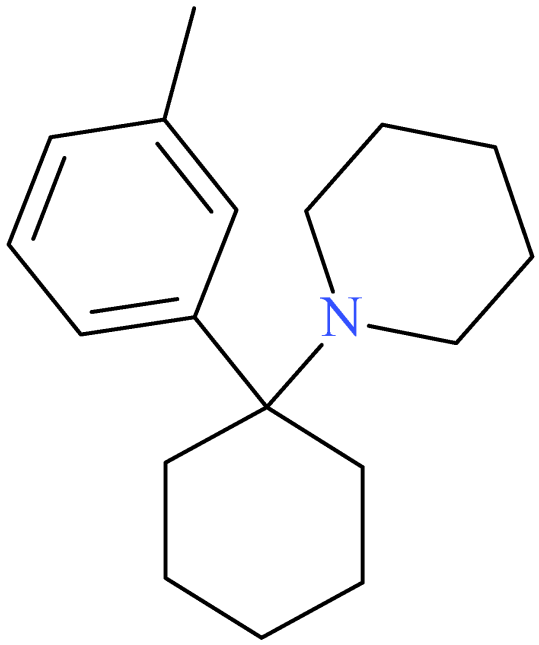
3-Methyl-PCP



NPS SUBCLASS
Hallucinogen
REPORT DATE
August 22, 2024
SAMPLE RECEIVED
February 29, 2024
SAMPLE TYPE
Drug Material

Preferred Name	3-Methyl-PCP
Synonyms	3-Methyl Phencyclidine, 3-Me-PCP
Formal Name	1-[1-(m-tolyl)cyclohexyl]piperidine
InChI Key	BMFKUCGCXMDGBK-UHFFFAOYSA-N
CAS Number	91164-59-9
Chemical Formula	$C_{18}H_{27}N$
Molecular Weight	257.4
Molecular Ion [M⁺]	257
Exact Mass [M+H]⁺	258.2216

Characterization & Intelligence

The following information was compiled in August 2024 and is subject to change as new research is conducted and as new information becomes available:

Description: 3-Methyl-PCP is a novel synthetic hallucinogen with structural similarity to other arylcyclohexylamines (e.g., ketamine, PCP). 3-Methyl PCP was synthesized in the 1960's along with other arylcyclohexylamines for the evaluation of their efficacy as central nervous system depressants.[1] 3-Methyl-PCP was first identified in the United States in February 2024 by our laboratory and confirmed in April 2024 after acquiring standard reference material.

Sample Source: Lehigh Valley Health Network (Allentown, PA)

Sample Appearance: White powder

Pharmacology: The activity and potency of 3-methyl-PCP is unknown; however, based on the structural similarity to 3-MeO-PCE and 3-HO-PCP, 3-methyl-PCP is assumed to have high affinity for the N-methyl-D-aspartate receptor and inhibit reuptake of norepinephrine and dopamine, causing dissociative effects.[2]

Toxicology: 3-Methyl-PCP has been identified in one toxicology case to date at the CFSRE.

Drug Materials: 3-Methyl-PCP has been detected in one drug material to date at the CFSRE.

Demographics / Geographics: Toxicology cases and drug materials originated from Pennsylvania. 3-Methyl-PCP was detected alongside other hallucinogens (e.g., 2F-2oxo-PCE and deoxymethoxetamine).

Legal Status: 3-Methyl-PCP is not currently scheduled in the United States.

References:

- Cayman Chemical: 3-Methyl-PCP
- [1]Maddox *et al.* (1964) The synthesis of phencyclidine and other 1-arylcyclohexylamines.
- [2]Bey et al. (2007) Phencyclidine intoxication and adverse effects: a clinical and pharmacological review.

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.

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Gas Chromatography Mass Spectrometry (GC-MS)

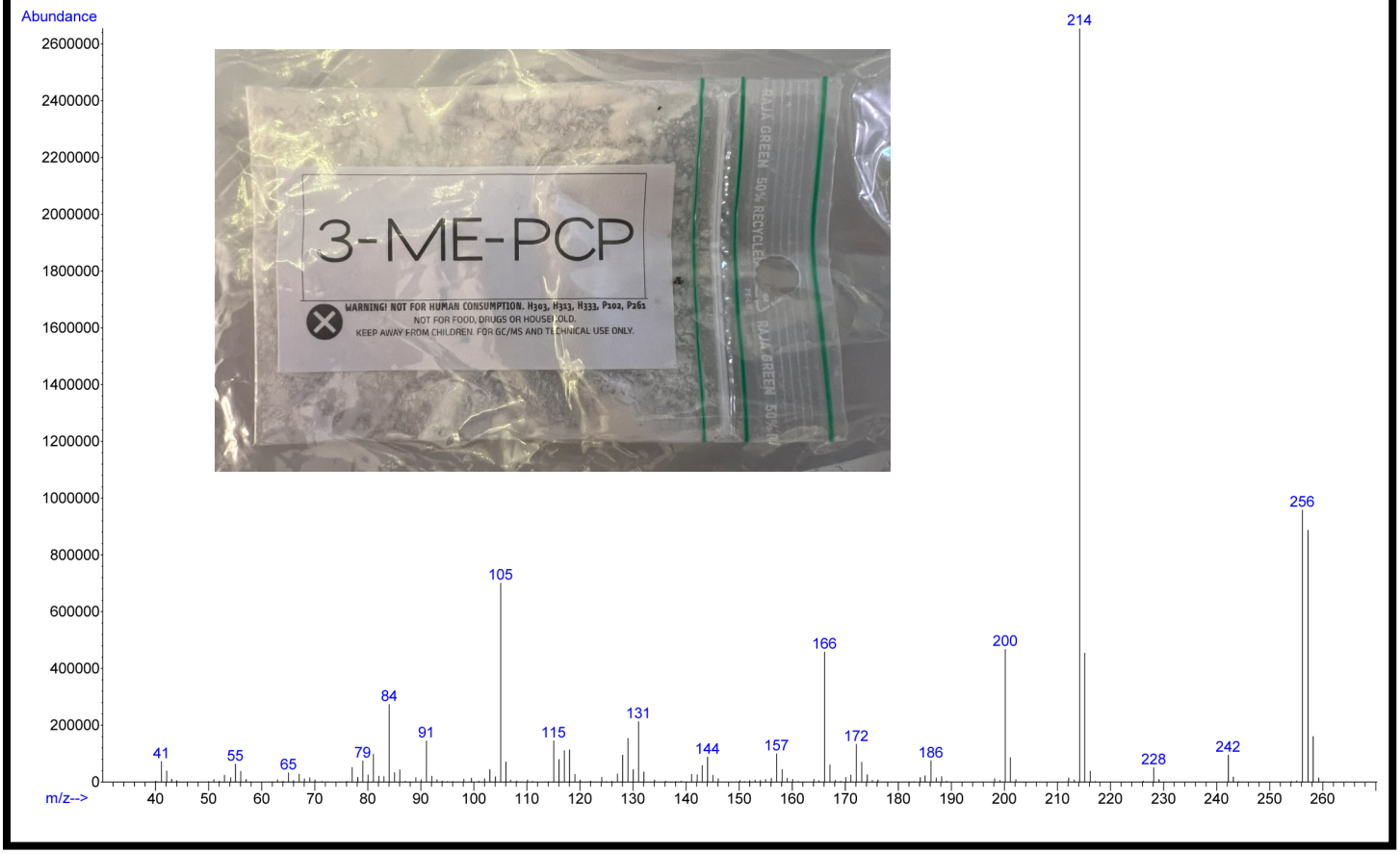
Laboratory: Center for Forensic Science Research and Education (CFSRE, Willow Grove, PA, USA)

Sample Preparation: Dilution in methanol

Instrument: Agilent 5975 Series GC/MSD

Methods: GC-MS Method Details & Monographs

GC-MS: Mass Spectrum (EI 70 eV)



Confirmation Using Drug Standard: *Reference material (Batch: 0625505-1) was purchased from Cayman Chemical (Ann Arbor, MI, USA). The analyte was confirmed to be 3-methyl-PCP based on retention time (sample: 5.56 min vs. standard: 5.61 min) and mass spectral data comparisons.*

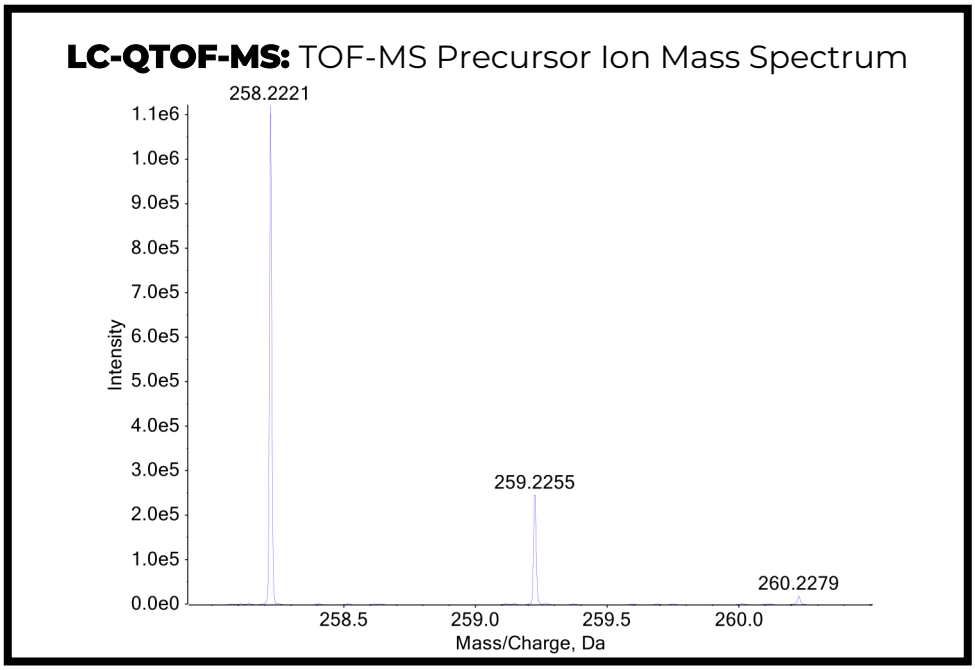
Liquid Chromatography Quadrupole Time-of-Flight Mass Spectrometry (LC-QTOF-MS)

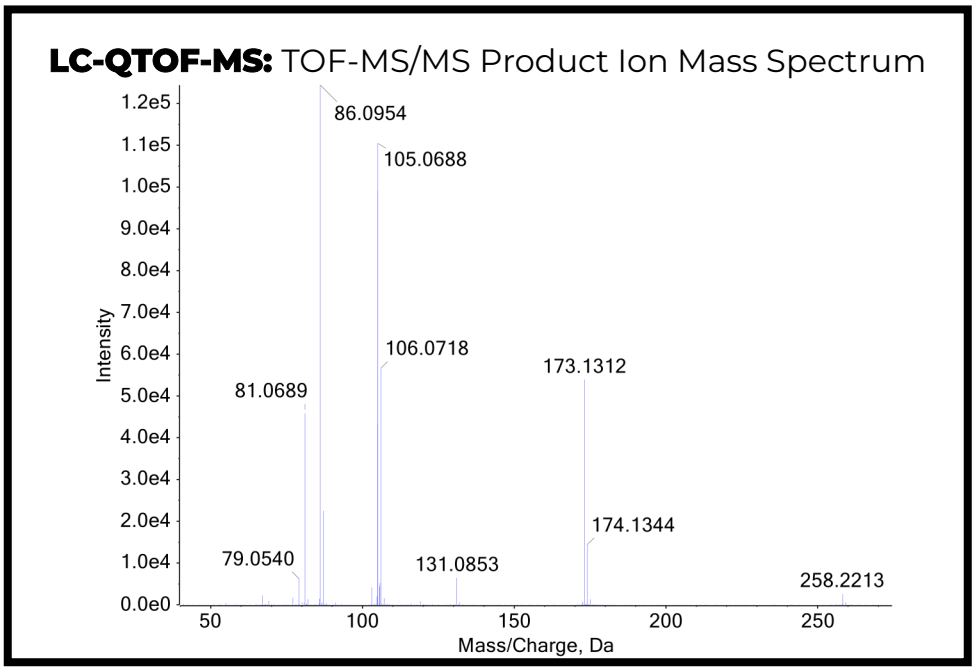
Laboratory: Center for Forensic Science Research and Education (CFSRE, Willow Grove, PA, USA)

Sample Preparation: Dilution in mobile phase

Instrument: Sciex 5600+ LC-QTOF-MS

Methods: LC-QTOF-MS Method Details & Monographs





Confirmation Using Drug Standard: *Reference material (Batch: 0625505-1) was purchased from Cayman Chemical (Ann Arbor, MI, USA). The analyte was confirmed to be 3-methyl-PCP based on retention time (sample: 6.49 min vs. standard: 6.59 min) and mass spectral data comparisons.*