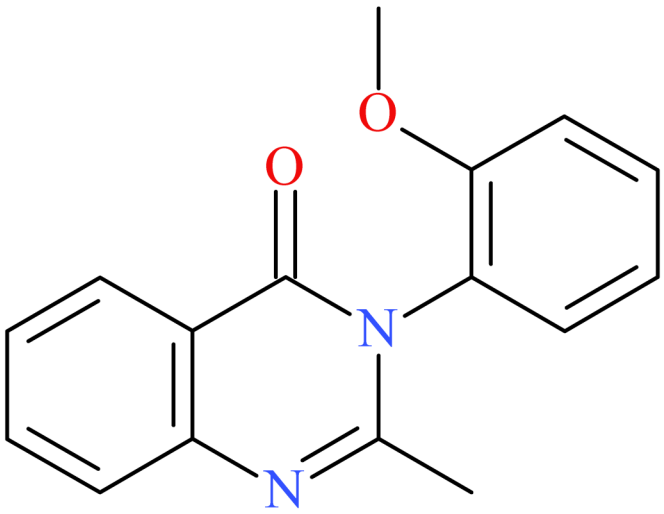
2-Methoxyqualone



NPS SUBCLASS
Miscellaneous
REPORT DATE
April 9, 2026
SAMPLE RECEIVED
February 27, 2026
SAMPLE TYPE
Drug Material

Preferred Name	2-Methoxyqualone				
Synonyms	NSC 632915, 2-MeO-Qualone				
Formal Name	3-(2-methoxyphenyl)-2-quinazolinone				
Chemical Formula	$C_{16}H_{14}N_2O_2$				
Molecular Weight	266.3	**Molecular Ion [M⁺]**	266	**Exact Mass [M+H]⁺**	267.1128

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, and should not be used for confirmatory purposes alone.

Funding: CFSRE's NPS Discovery is supported by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice (Award Number 15PNIJ-24-GK-00981-COAP, "Novel Psychoactive Substance Discovery, Education, and Reporting Institute"). The opinions, findings, conclusions and/or recommendations expressed in this publication are those of the author(s) and do not necessarily represent the official position or policies of the U.S. Department of Justice.

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 Max T. Denn, Sara E. Walton, Nicholas Khorozov, Alexis D. Quinter, Angel McDowell, Joshua S. DeBord, 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.

Suggested Citation: Denn MT, Walton SE, Khorozov N, Quinter AD, McDowell A, DeBord JS, Logan BK, Krotulski AJ. (2026) *2-Methoxyqualone — NPS Discovery New Drug Monograph*, Center for Forensic Science Research and Education, United States.

Characterization & Intelligence

The following information was compiled in April 2026 and is subject to change as new research is conducted and as new information becomes available:

Description: 2-Methoxyqualone is a quinazolinone derivative structurally similar to methaqualone (also referred to as "Quaalude", "Sopor", and "Mandrax"). 2-Methoxyqualone was first identified in a tablet from China in 2022.[1] No published data exist at this time regarding the pharmacological effects or potency of 2-methoxyqualone; however, it is hypothesized to produce sedative-hypnotic effects similar to methaqualone.[2] Methaqualone is a sedative and analgesic drug patented in 1962 and prescribed in the 1970's for the treatment of insomnia, anxiety, and muscle stiffening and quickly gained popularity as a recreational drug due to its central nervous system depressant effects, leading to a global manufacturing ban in 1982.[1,3] 2-Methoxyqualone has been detected in two drug materials and has not yet been identified in toxicology specimens to date at the CFSRE. Drug materials originated from Pennsylvania (tablet) and California (white powder). 2-Methoxyqualone was identified as the sole component in both specimens. 2-Methoxyqualone is not currently scheduled in the United States.

References:

- Cayman Chemical: 2-Methoxyqualone
- [1]Qiu et al. (2023) Quantification of a new recreational drug 2-methoxyqualone in human hair ...
- [2]Kuropka et al. (2023) Emerging trends in methaqualone and analogues abuse: insights from online forums
- [3]Yang et al. (2023) The next addiction-causing drug class 4-quinazolinone derivatives ...

Gas Chromatography Mass Spectrometry (GC-MS)

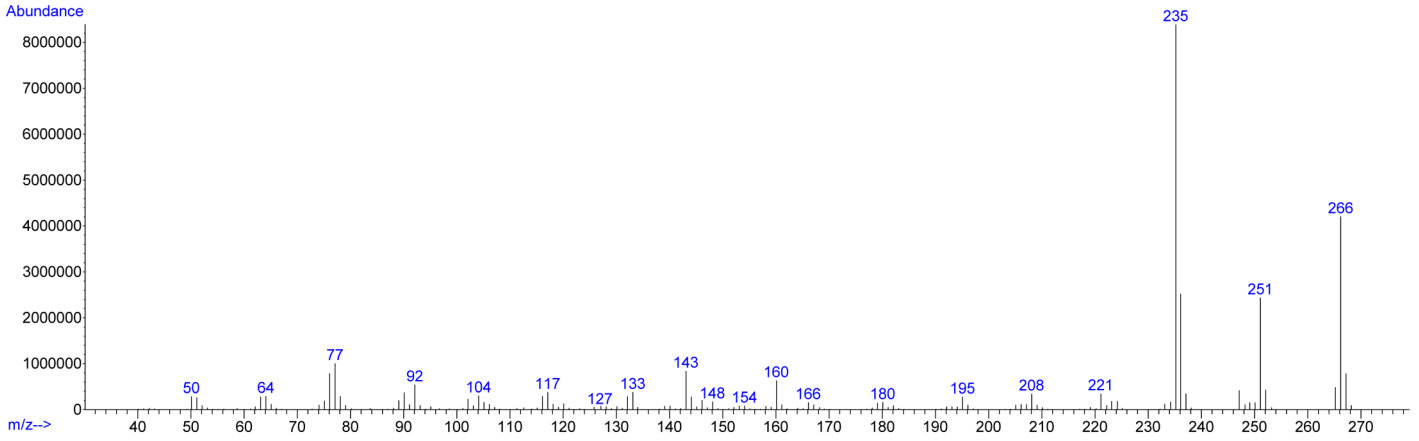
Laboratory: Center for Forensic Science Research and Education (CFSRE, Horsham PA, USA)

Sample Preparation: Acid-base extraction

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 for 2-methoxyqualone (Batch: 0816138-3) was purchased from Cayman Chemical (Ann Arbor, MI, USA). The analyte was confirmed to be 2-methoxyqualone based on retention time (sample: 6.55 min vs. standard: 6.50 min) and mass spectral data comparisons.*

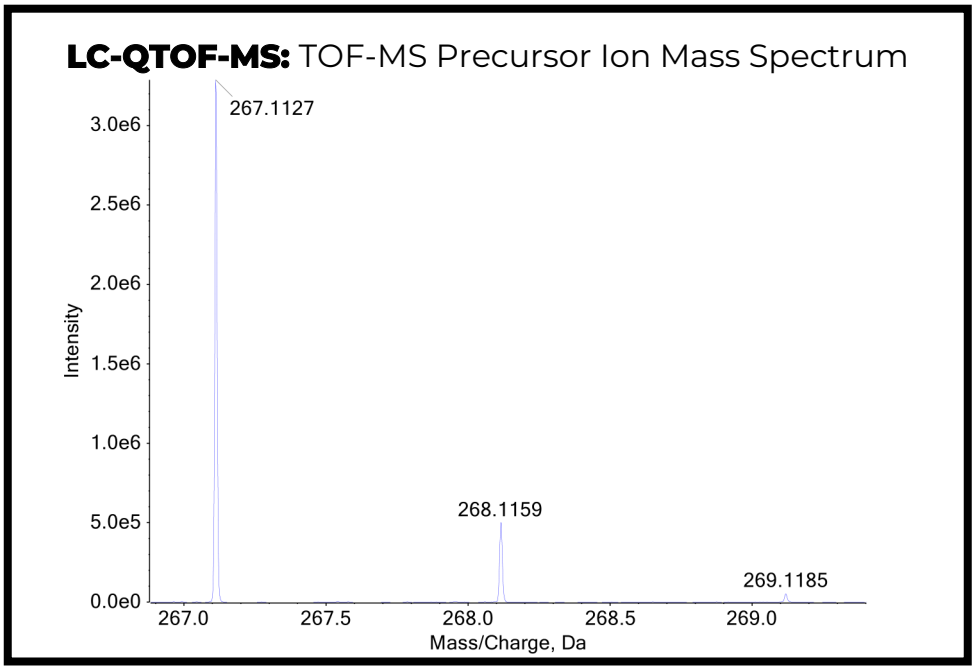
Liquid Chromatography Quadrupole Time-of-Flight Mass Spectrometry (LC-QTOF-MS)

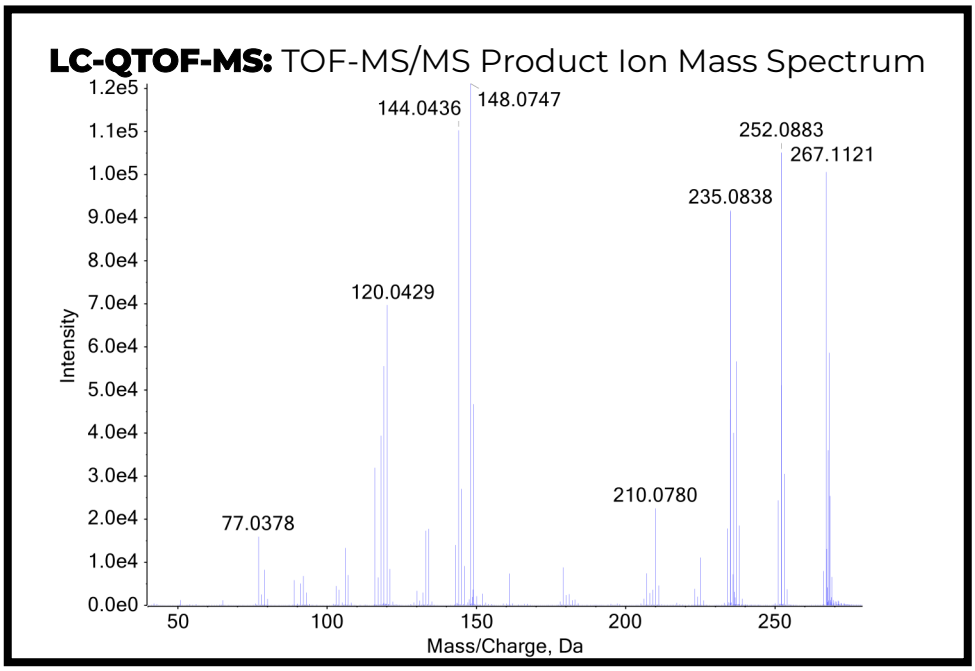
Laboratory: Center for Forensic Science Research and Education (CFSRE, Horsham, PA, USA)

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 for 2-methoxyqualone (Batch: 0816138-3) was purchased from Cayman Chemical (Ann Arbor, MI, USA). The analyte was confirmed to be 2-methoxyqualone based on retention time (sample: 6.83 min vs. standard: 6.85 min) and mass spectral data comparisons.*