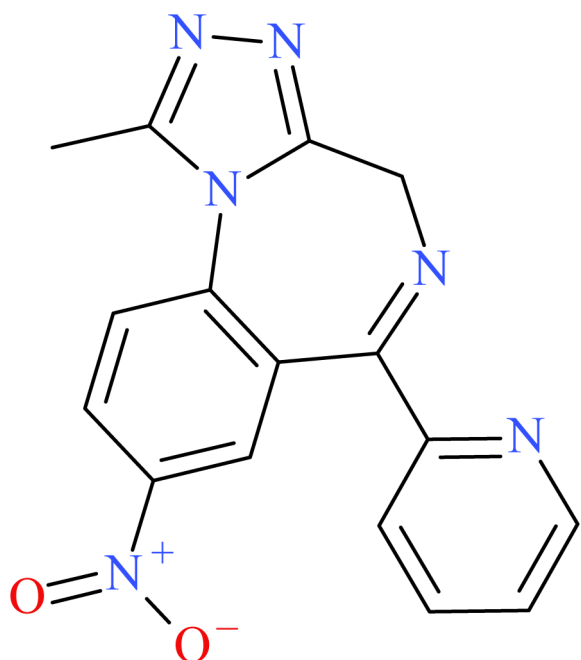




Pynazolam



NPS SUBCLASS	Benzodiazepine
REPORT DATE	February 3, 2026
SAMPLE RECEIVED	November 18, 2025
SAMPLE TYPE	Drug Material

Preferred Name	Pynazolam				
Synonyms	N/A				
Formal Name	1-methyl-8-nitro-6-(2-pyridinyl)-4H-[1,2,4]triazolo[4,3-a][1,4]benzodiazepine				
Chemical Formula	C ₁₆ H ₁₂ N ₆ O ₂				
Molecular Weight	320.3	Molecular Ion [M⁺]	320	Exact Mass [M+H]⁺	321.1095

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.

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

Characterization & Intelligence

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

Description: Pynazolam is a novel benzodiazepine classified as a triazolobenzodiazepine and bears structural similarity to other traditional and novel benzodiazepines (e.g., alprazolam, bromazolam, clonazolam). Pynazolam was synthesized in the 1970s for use as an anticonvulsant, muscle relaxant, and sedative; however, was never marketed to the public.¹ Currently, no published studies describe the *in vivo* or *in vitro* pharmacology of pynazolam. Pynazolam has been studied using *in silico* predictive modeling, which predicts pynazolam is a potent GABA agonist with strong addiction potential.^{2,3} Pynazolam was identified in a liquid ordered from an online vendor through the [CFSRE's NPS Discovery Test Purchase Program](#). The sample was ordered as pynazolam and subsequently confirmed as the sole component after acquiring standard reference material. Pynazolam is not currently scheduled in the United States.

References:

- ▶ Cayman Chemical: [Pynazolam](#)
- ▶ ¹Sternbach et al. (1976) [Preparation of Triazolo Benzodiazepines](#)
- ▶ ²Balkhi and Abbara (2023) [Designer Benzodiazepines: Effects, Toxicity, and Interactions](#)
- ▶ ³Catalani et al. (2022) [In silico studies on recreational drugs: 3D quantitative structure activity relationship...](#)

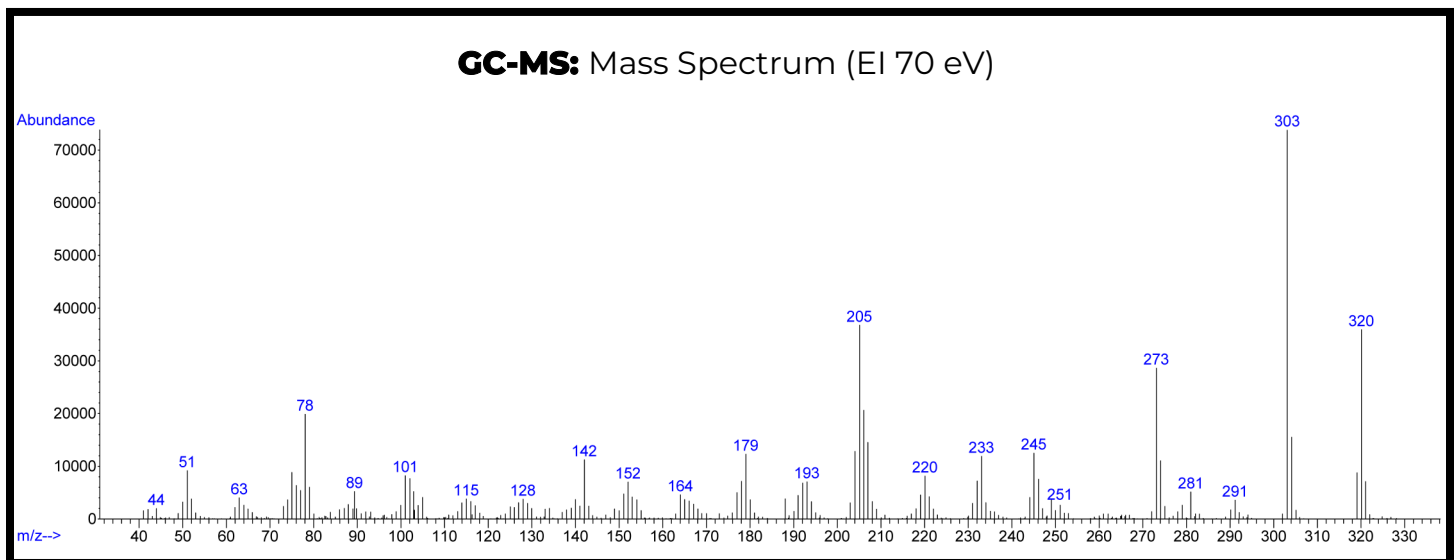
Gas Chromatography Mass Spectrometry (GC-MS)

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

Instrument: Agilent 5975 Series GC/MSD

Methods: [GC-MS Method Details](#) & [Monographs](#)

Sample Preparation: Acid-base extraction



Confirmation Using Drug Standard: Reference material for pynazolam (Batch: 0815397-1) was purchased from Cayman Chemical (Ann Arbor, MI, USA). The analyte was confirmed to be pynazolam based on retention time (sample: 8.58 min vs. standard: 8.62 min) and mass spectral data comparisons.

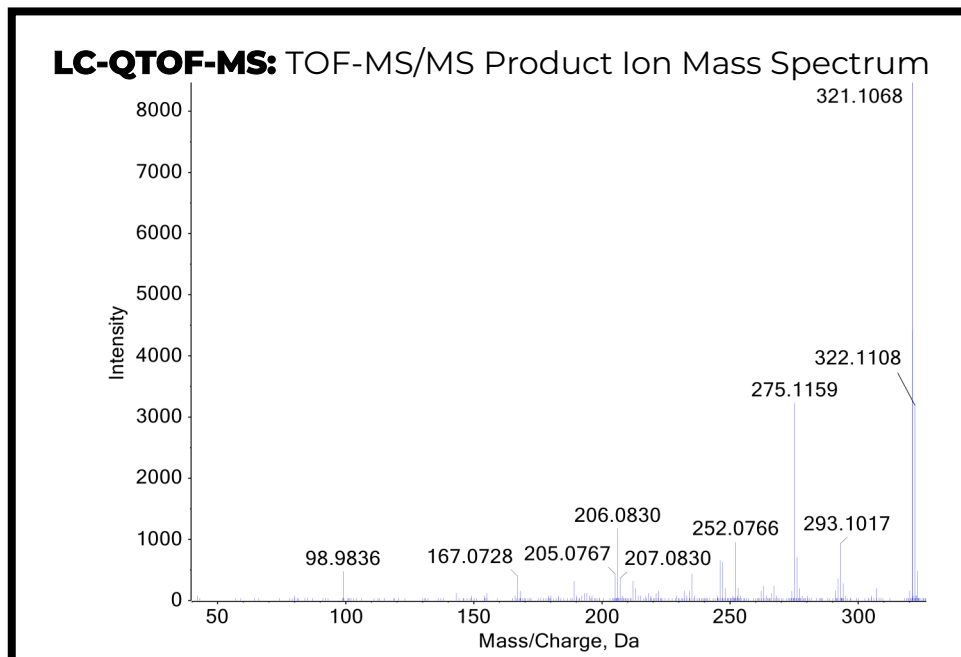
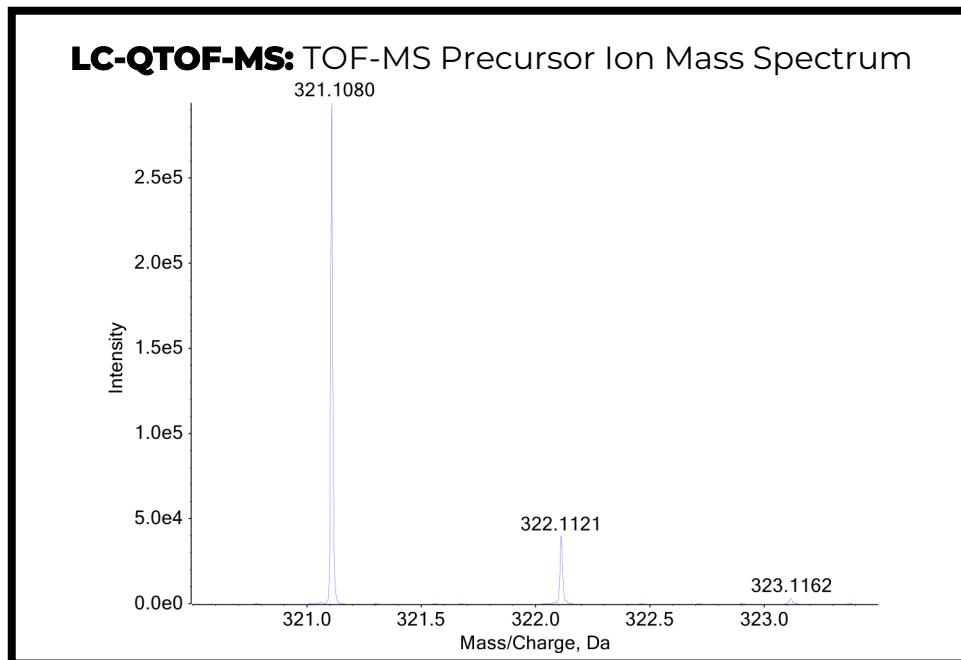
Liquid Chromatography Quadrupole Time-of-Flight Mass Spectrometry (LC-QTOF-MS)

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

Instrument: Sciex 5600+ LC-QTOF-MS

Methods: [LC-QTOF-MS Method Details](#) & [Monographs](#)

Sample Preparation: Dilution in mobile phase



Confirmation Using Drug Standard: Reference material for pynazolam (Batch: 0815397-1) was purchased from Cayman Chemical (Ann Arbor, MI, USA). The analyte was confirmed to be pynazolam based on retention time (sample: 5.43 min vs. standard: 5.42 min) and mass spectral data comparisons.