

# NPS Stimulants & Hallucinogens in the United States

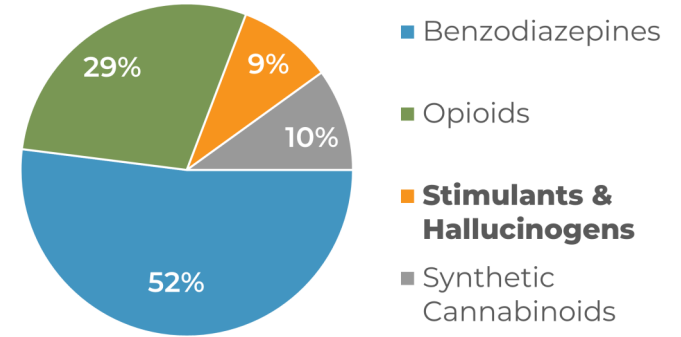
**TREND  
REPORT**

**Q4  
2024**

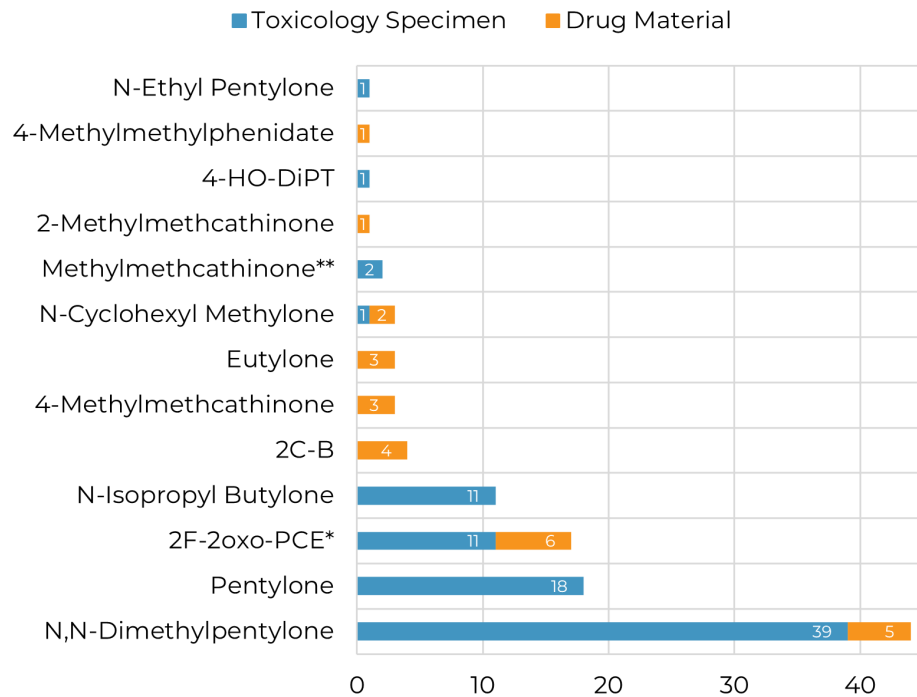
**PURPOSE:** This report provides up-to-date information regarding NPS stimulant & NPS hallucinogen prevalence and positivity in the United States.

**OVERVIEW:** Novel psychoactive substances (NPS), including NPS stimulants and NPS hallucinogens, continue to pose great challenges for forensic scientists, clinicians, and public health and safety personnel. Both NPS stimulants and NPS hallucinogens have been implicated in emergency room admissions, death investigations, and/or intoxication events associated with night clubs and music festivals. Maintaining a current scope of analysis can be challenging, requiring comprehensive analytical methodologies and reference materials for identification(s).

**OBJECTIVE:** Our laboratory utilizes novel approaches for the analysis of drugs in toxicology specimens and drug materials using comprehensive non-targeted data acquisition by gas chromatography mass spectrometry (GC-MS) and liquid chromatography quadrupole time-of-flight mass spectrometry (LC-QTOF-MS). The scope of analysis contains more than 1,200 drugs, including a vast majority of NPS and their metabolites. This approach allows for real-time identification of emerging stimulants and hallucinogens and further data analysis of important trends. Specimens and sample types associated with our results stem from recreational drug materials, drug equipment, medicolegal death investigations, clinical intoxications, and/or impaired driving investigations, among other circumstances. This report summarizes the total number of NPS identifications at the CFSRE during this quarter, encompassing findings from sample-mining, data-mining, routine testing, and esoteric testing.



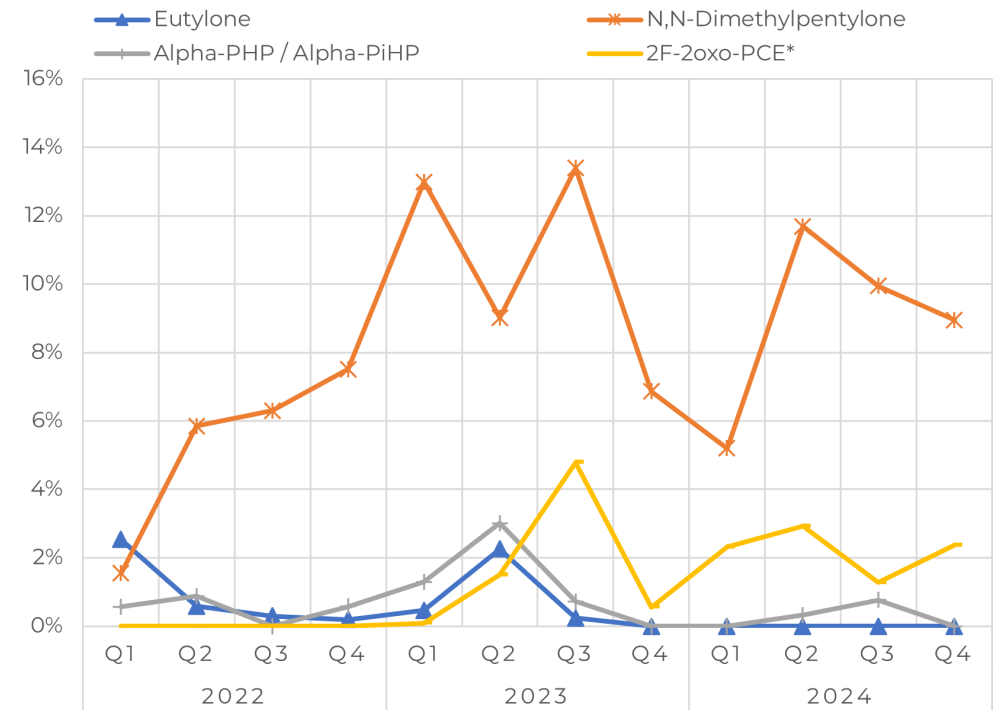
## NPS STIMULANTS & HALLUCINOGENS IDENTIFIED



\*Presumed primary isomer based on testing to date. \*\*Isomeric form not determined.

## SELECT POSITIVITY: Q1 2022 TO Q4 2024

Positivity plots are derived from a select toxicology data source that has been consistently monitored since 2018.



**ACKNOWLEDGEMENTS:** This report was prepared by Alex J. Krotulski, Sara E. Walton, Joshua S. DeBord, Amanda L.A. Mohr, and Barry K. Logan. CFSRE's NPS Discovery program acknowledges scientists at the CFSRE, NMS Labs, and many other collaborating agencies for their involvements and contributions. For more information about our programs and reports, please contact NPS Discovery at [npsdiscovery@cfsre.org](mailto:npsdiscovery@cfsre.org) or visit our website at [www.npsdiscovery.org](http://www.npsdiscovery.org).

**FUNDING:** CFSRE's NPS Discovery is supported by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice (Award Number 15PN1J-22-GG-04434-MUMU, "Implementation of NPS Discovery – An Early Warning System for Novel Drug Intelligence, Surveillance, Monitoring, Response, and Forecasting using Drug Materials and Toxicology Populations in the US"). 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.

