cfsre The Center for Forensic Science Research & Education

NPS DISCOVERY

Q2 2026 TREND REPORTS

Benzodiazepines, Opioids, Stimulants & Hallucinogens, Cannabinoids, and Miscellaneous in the United States

About: With funding from the National Institute of Justice (NIJ), the Center for Forensic Science Research and Education (CFSRE) at the Fredric Rieders Family Foundation is developing quarterly trend reports in relation to novel psychoactive substance (NPS) use in the United States, with a focus on five main classifications: benzodiazepines, opioids, stimulants and hallucinogens, cannabinoids, and miscellaneous substances. The goal of this specific initiative is to provide near real-time information regarding NPS prevalence and positivity based on the analysis of authentic forensic samples.

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 or visit our website at www.npsdiscovery.org.

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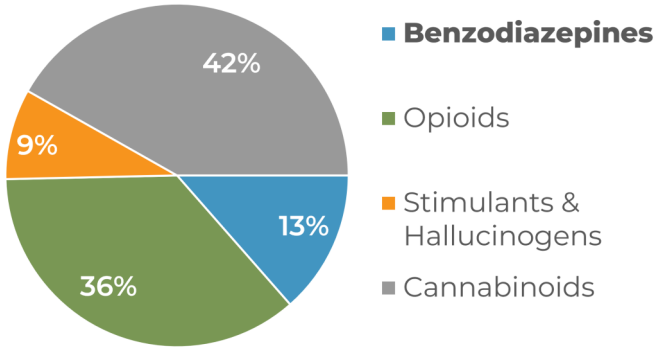
NPS BENZODIAZEPINES IN THE UNITED STATES

TREND REPORT | **Q2 2026**

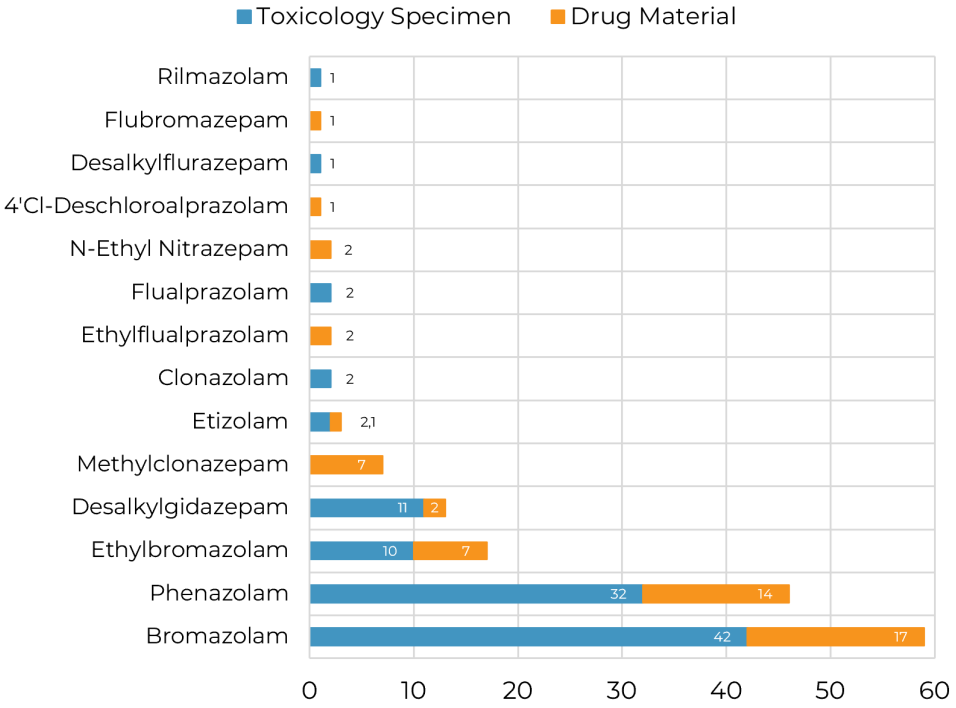
PURPOSE: This report provides up-to-date information regarding the status of NPS benzodiazepine prevalence and positivity in the United States.

OVERVIEW: Novel psychoactive substances (NPS), including NPS benzodiazepines, continue to pose great challenges for forensic scientists, clinicians, and public health and safety personnel. NPS benzodiazepines have been implicated in an increasing number of adverse health events, marked by emergency room admissions and death investigations, especially when ingested in combination with opioids. Maintaining a current scope of analysis can be challenging, requiring comprehensive analytical methodologies and reference materials for identification(s).

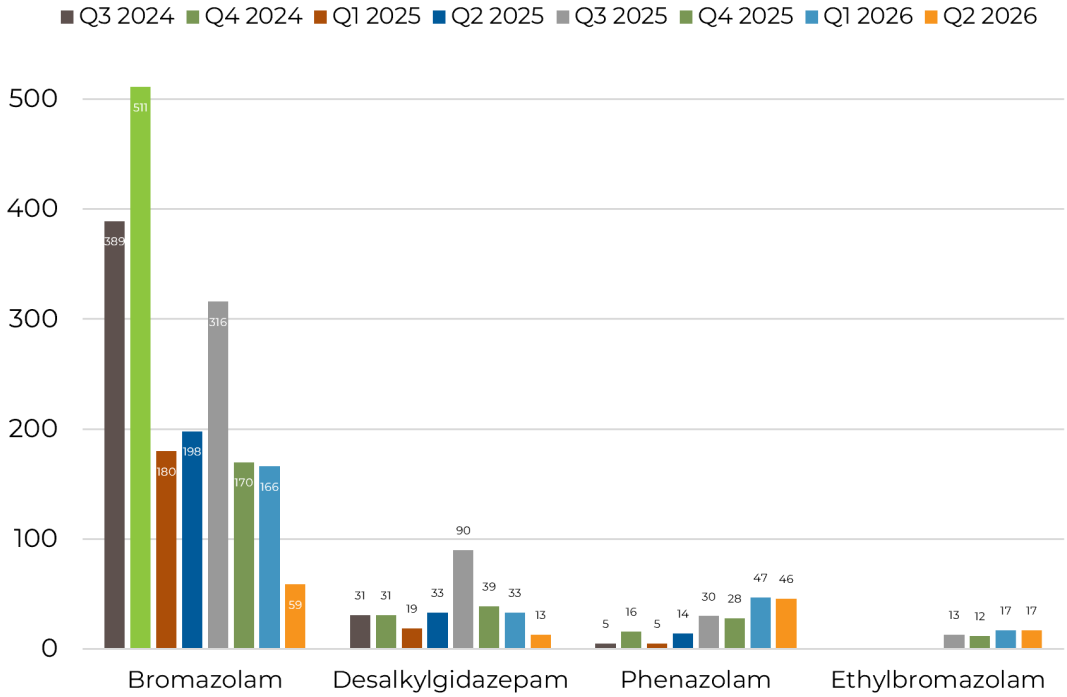
OBJECTIVE: Our laboratory utilizes novel approaches for the analysis of drugs in toxicology specimens and drug materials using comprehensive non-targeted data acquisition by gas chromatography mass spectrometry (GC-MS) and liquid chromatography quadrupole time-of-flight mass spectrometry (LC-QTOF-MS). 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 new benzodiazepines 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.



IDENTIFICATIONS: Q2 2026



TRENDS: Q3 2024 TO Q2 2026



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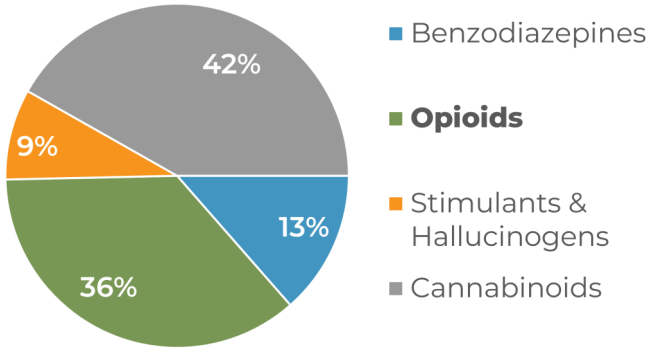
NPS OPIOIDS IN THE UNITED STATES

TREND REPORT | **Q2 2026**

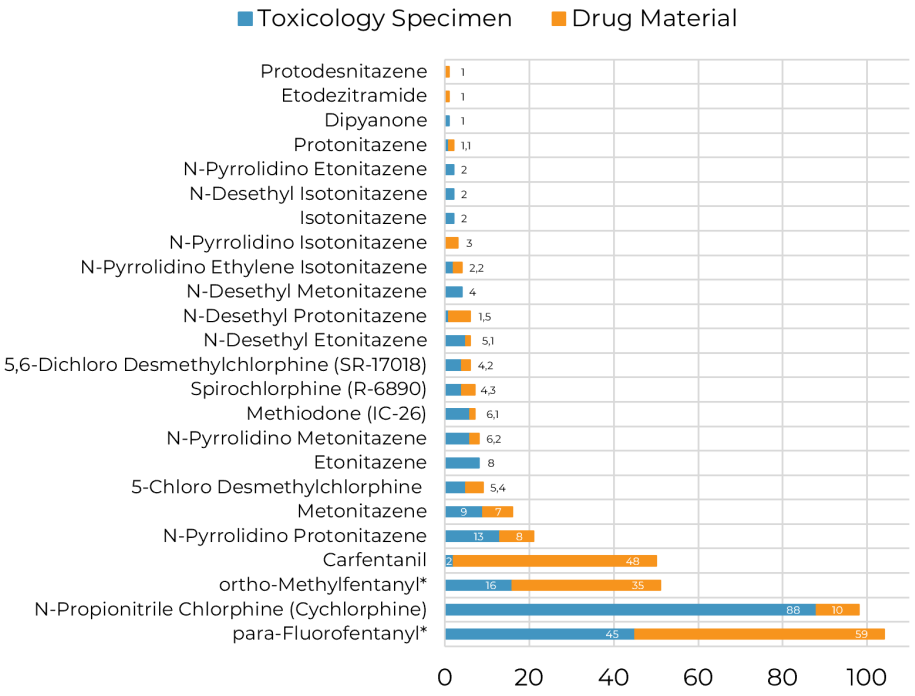
PURPOSE: This report provides up-to-date information regarding the status of NPS opioid prevalence and positivity in the United States.

OVERVIEW: Novel psychoactive substances (NPS), including NPS opioids, continue to pose great challenges for forensic scientists, clinicians, and public health and safety personnel. NPS opioids have been implicated in an increasing number of emergency room admissions, death investigations, and mass intoxication events, and often appear in combination with other illicit opioids (e.g. fentanyl, heroin). 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 novel opioids 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.

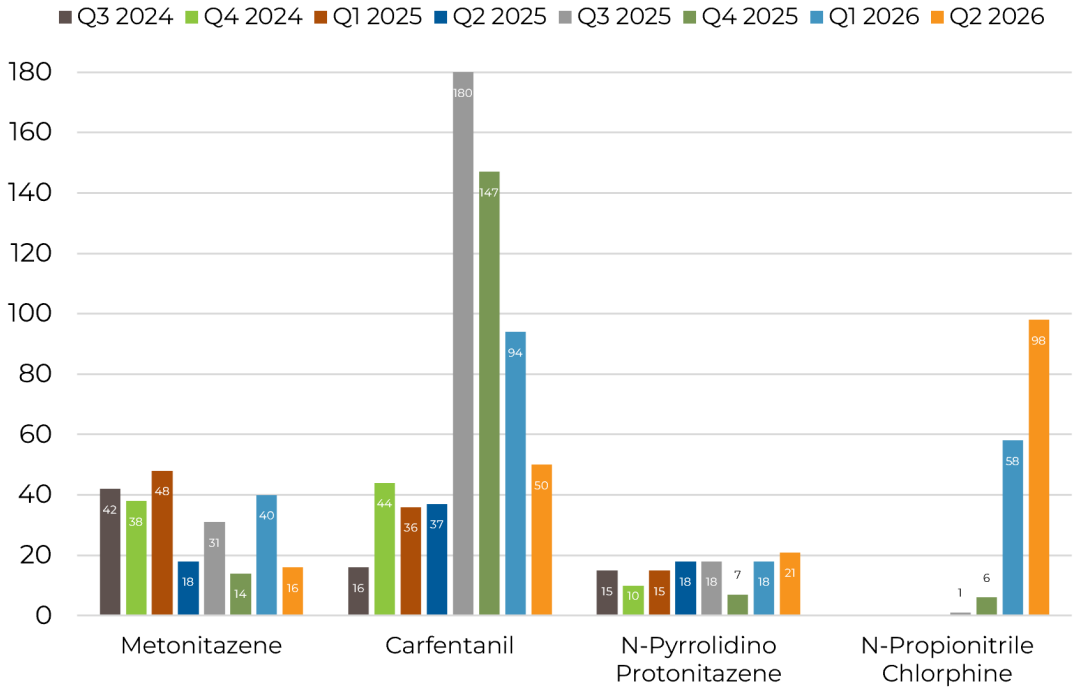


IDENTIFICATIONS: Q2 2026



**Presumed primary isomer based on testing to date. — For Reference: Fentanyl (n>1000)*

TRENDS: Q3 2024 TO Q2 2026



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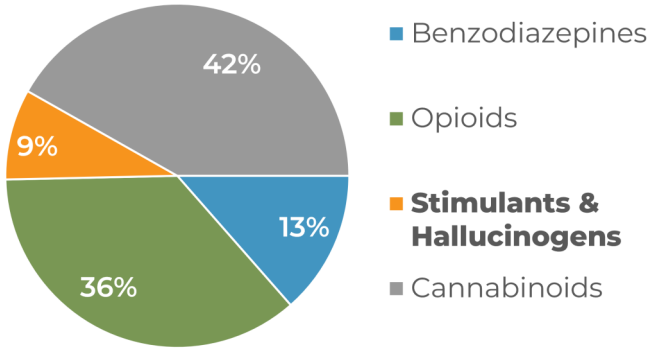
NPS STIMULANTS & HALLUCINOGENS IN THE UNITED STATES

TREND REPORT | **Q2 2026**

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.



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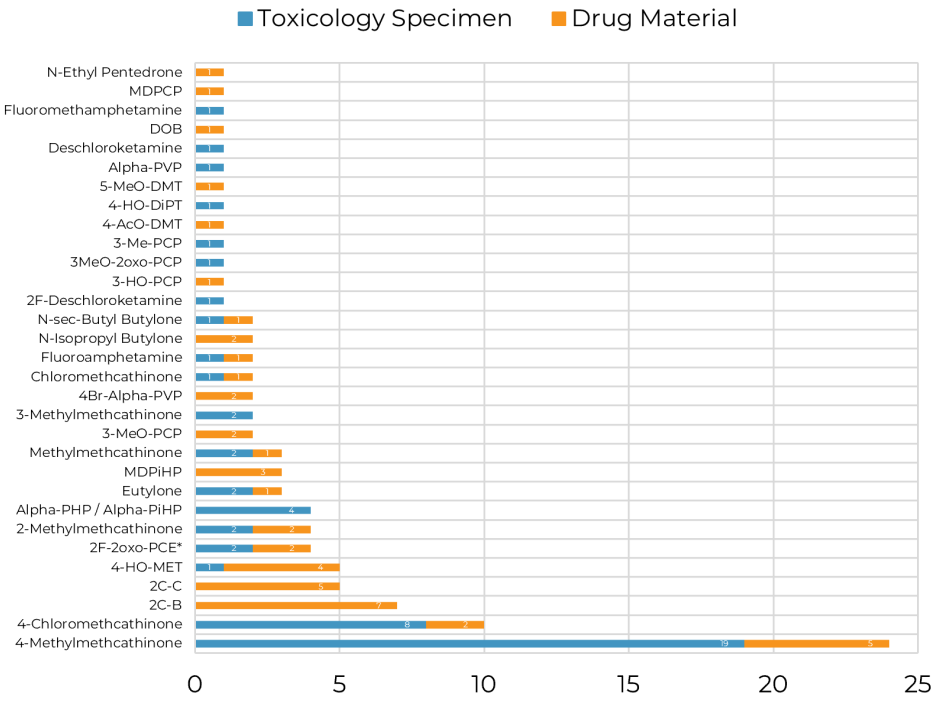
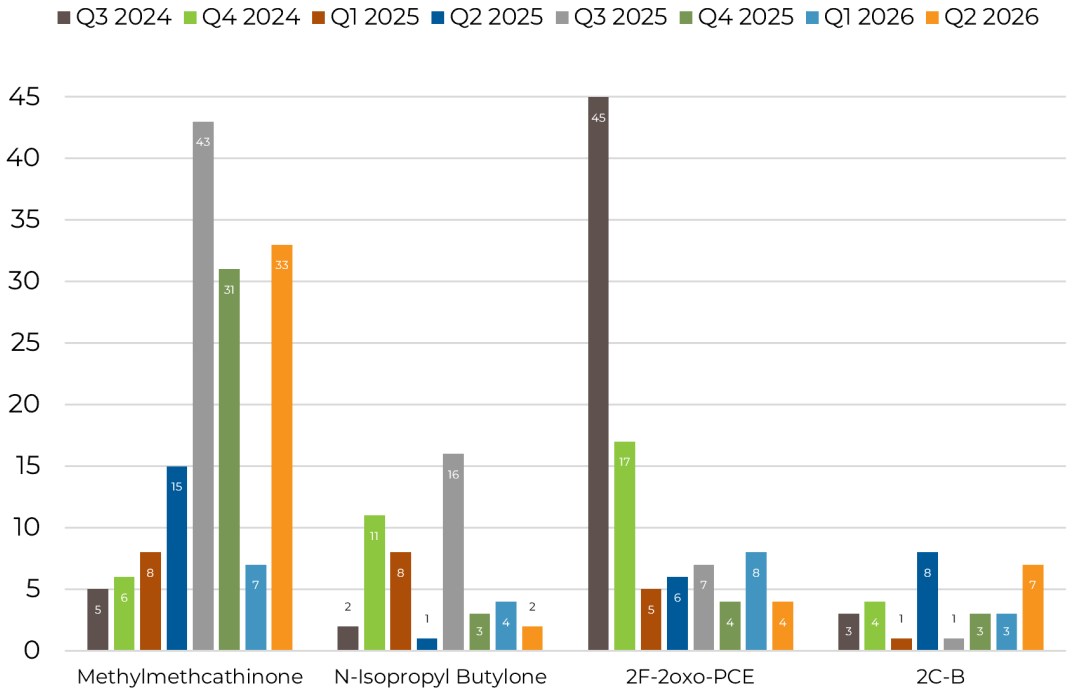


*Presumed primary isomer based on testing to date.

TRENDS: Q3 2024 TO Q2 2026



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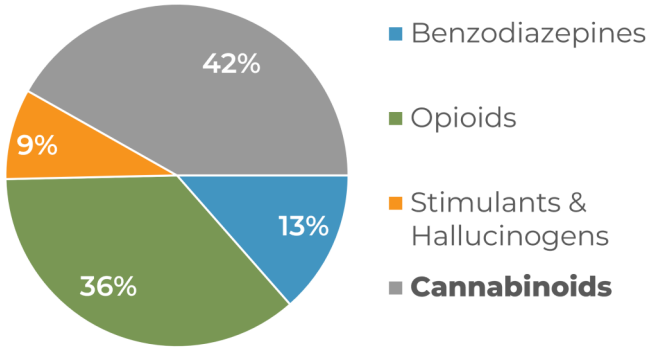
NPS CANNABINOIDS IN THE UNITED STATES

TREND REPORT | **Q2 2026**

PURPOSE: This report provides up-to-date information regarding the status of NPS cannabinoid prevalence and positivity in the United States.

OVERVIEW: Novel psychoactive substances (NPS) continue to pose great challenges for forensic scientists, clinicians, and public health and safety personnel. Synthetic cannabinoids (e.g., MDMB-4en-PINACA) have been implicated in increasing hospital admissions, intoxication events, and deaths, especially in jails and prisons. Semi-synthetic cannabinoids (e.g., delta-8 THC) continue to be sold in recreational smoke and vape shops. 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 novel synthetic cannabinoids 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.



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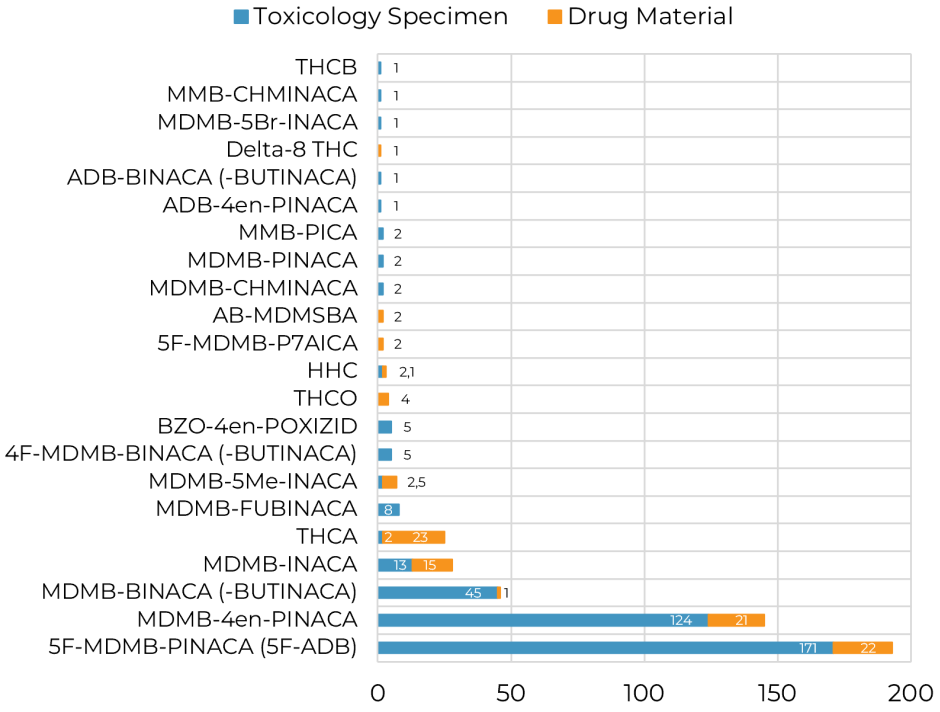

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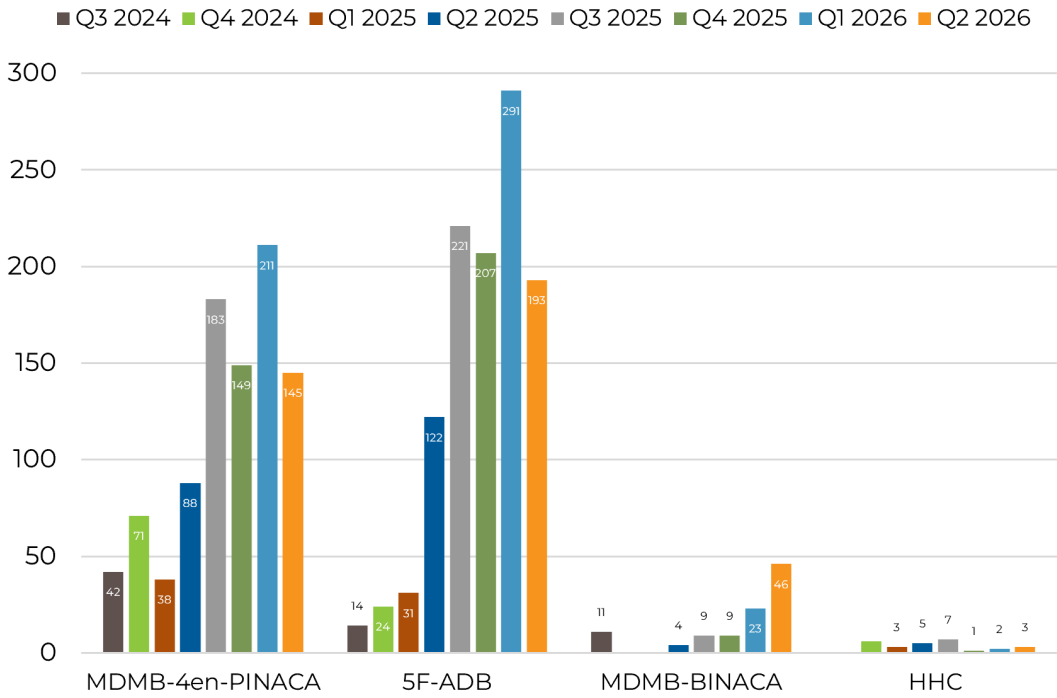

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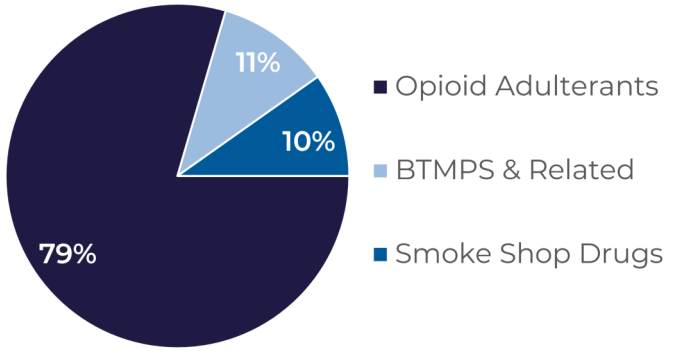
MISCELLANEOUS NPS IN THE UNITED STATES

TREND REPORT | **Q2 2026**

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

OVERVIEW: Novel psychoactive substances (NPS), including emergent adulterants, smoke shop drugs, and relevant intoxicants, continue to pose great challenges for forensic scientists, clinicians, and public health and safety personnel. The miscellaneous sub-category of NPS includes opioid adulterants, kratom alkaloids, kava alkaloids, nootropics, and psychedelics, among other substances of interest. 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.



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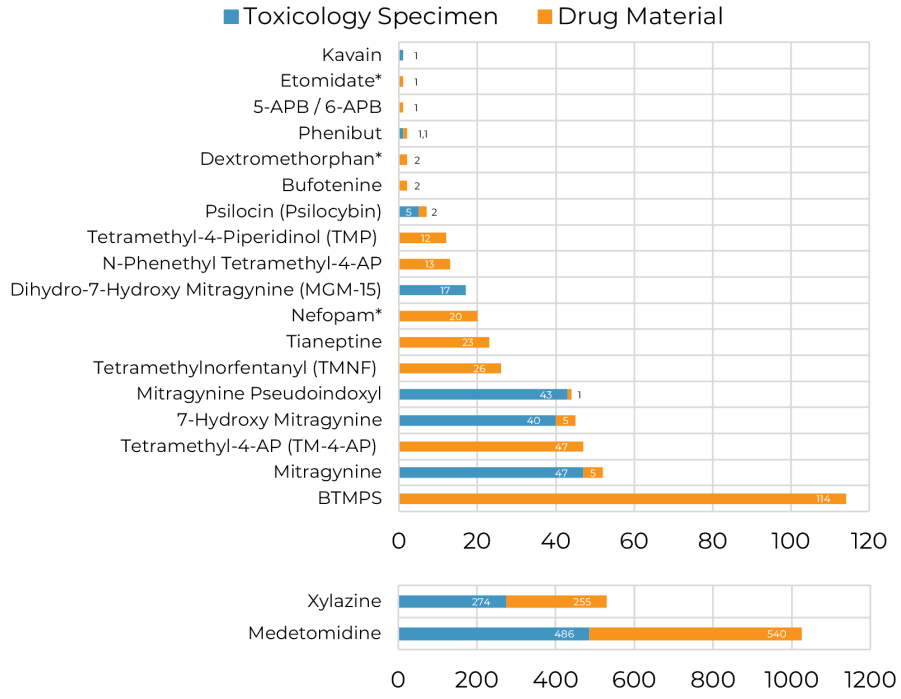
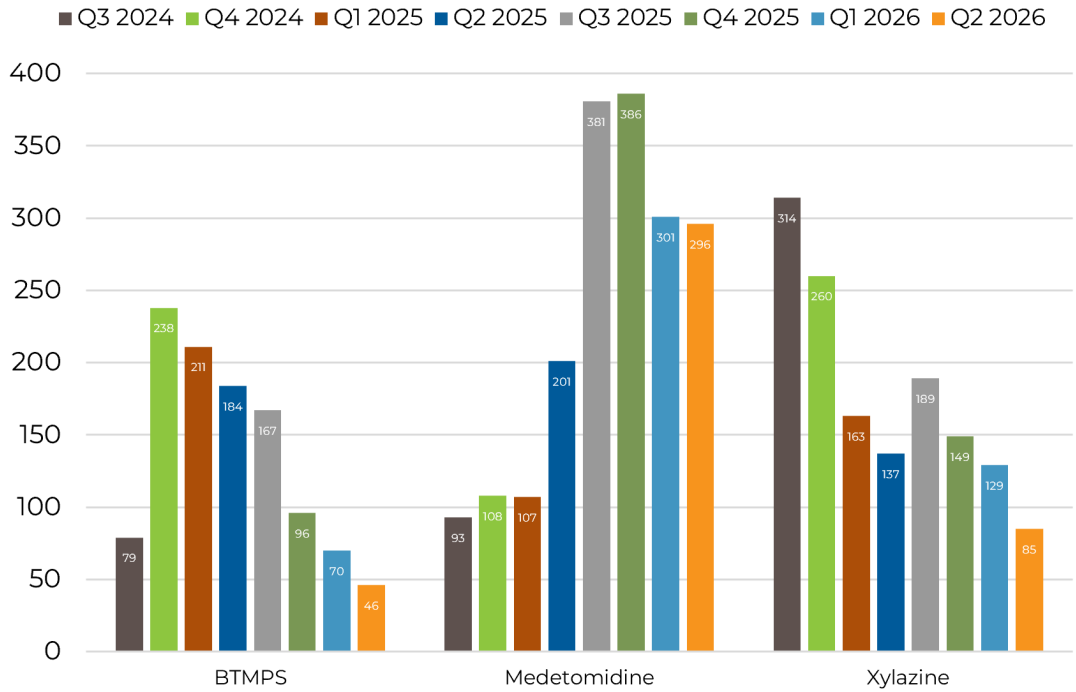


*Identifications in toxicology specimens were excluded.

TRENDS: Q3 2024 TO Q2 2026‡



‡These trends represent a select sample population. Data included in the above graphic originate from only drug materials submitted through our drug checking program.

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