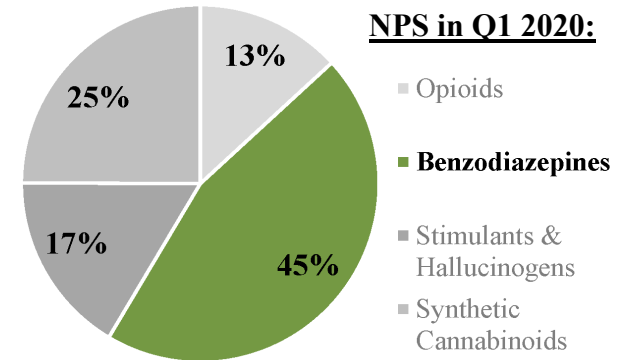


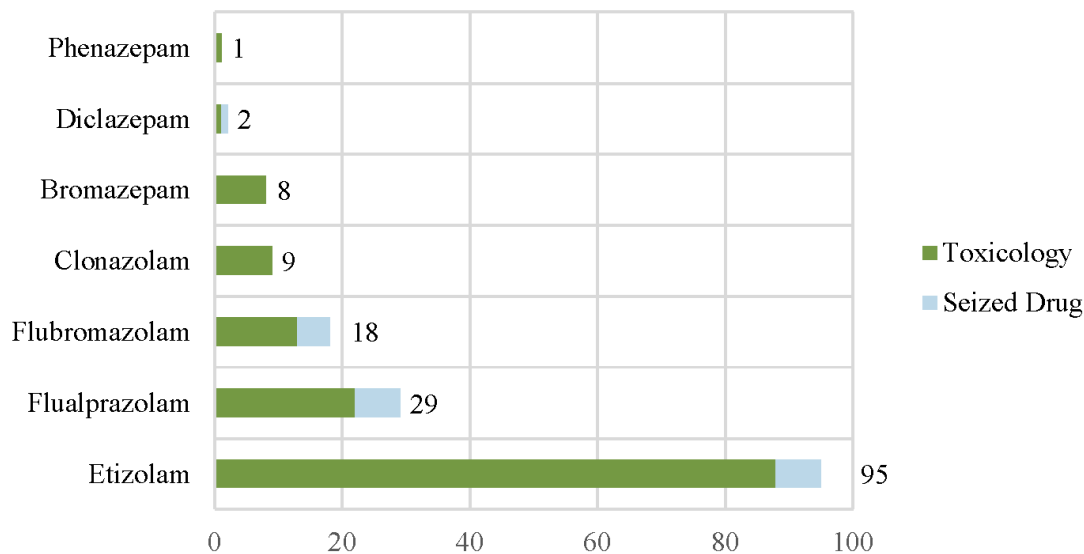
Purpose: This report provides up-to-date information regarding the status of NPS benzodiazepine prevalence and positivity within the United States.

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 event scenarios and death investigations, especially in combination with opioids. Maintaining a current scope of analysis can be challenging, often requiring comprehensive analytical methodologies and reference materials for identifications.

Objective: This project employs novel approaches for the analysis of biological samples and seized 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 800 drugs, including a vast majority of NPS and their metabolites. This model allows for real-time identification of new benzodiazepines and further data analysis of important trends. This project was conducted in collaboration with the toxicology and criminalistics laboratories of NMS Labs. Forensic case types linked to these results include illicit drug investigations, medicolegal death investigations, and/or driving under the influence of drugs (DUID) investigations. The results in this report represent the total number of NPS identifications at CFSRE during this quarter, including those from sample-mining, data-mining, and/or esoteric testing.



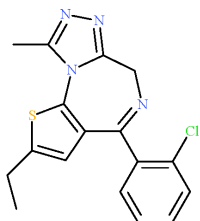
NPS Benzodiazepine Positivity



NPS Benzodiazepine Combinations

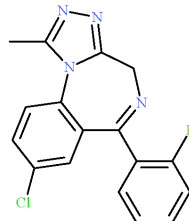
Common Combinations	Frequency
Etizolam + Fentanyl	55
Etizolam + Stimulant (Cocaine or Methamphetamine)	32
Etizolam + Traditional Benzodiazepine (Alprazolam or Diazepam)	22
Flualprazolam + Fentanyl	11
Etizolam + NPS Benzodiazepine (Clonazolam, Flualprazolam, and Flubromazolam)	9

Most Prevalent



Etizolam was the most prevalent NPS benzodiazepine identified; a common trend since 2016.

Trending



The prevalence of **Flualprazolam** continues to increase, impacting jurisdictions in most states.

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