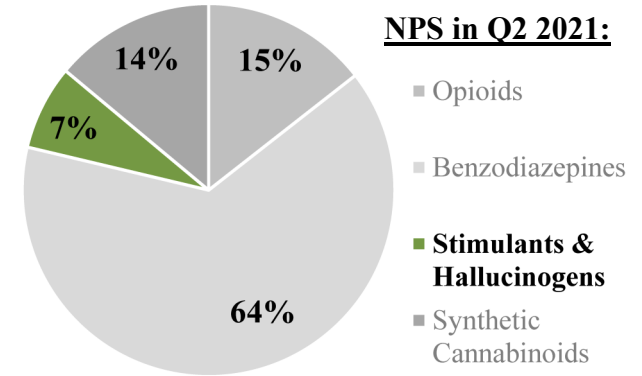


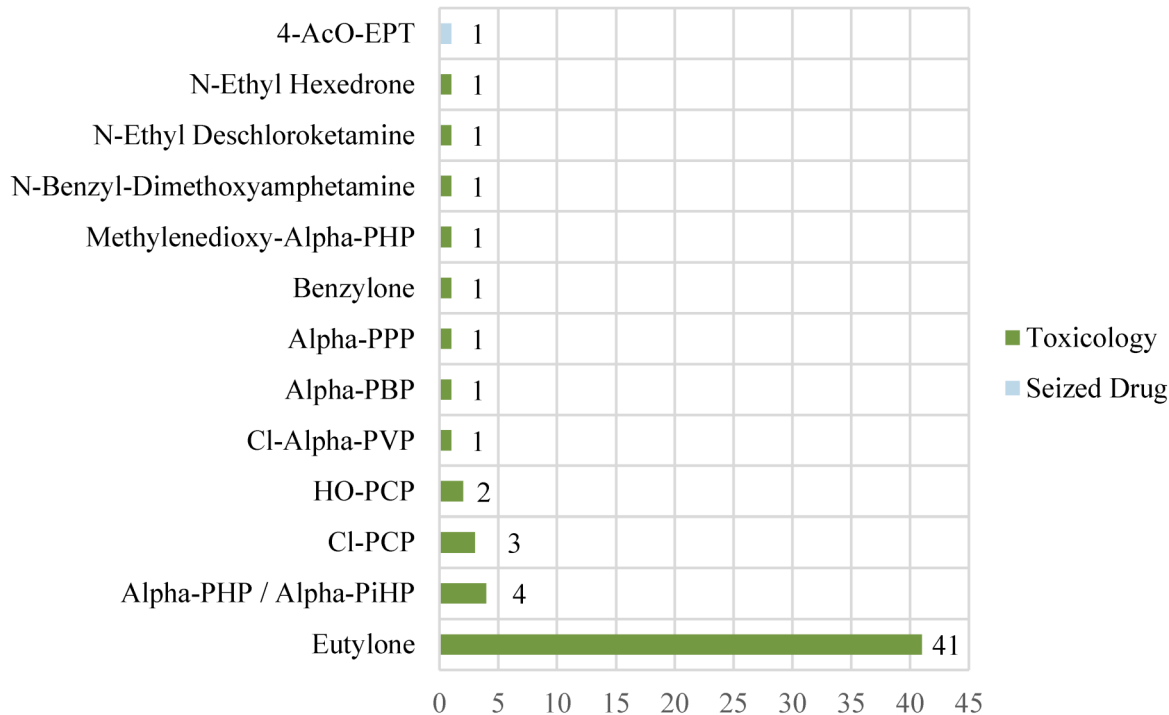
Purpose: This report provides up-to-date information regarding NPS stimulant & NPS hallucinogen prevalence and positivity within the United States.

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).

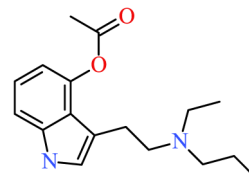
Objective: Our laboratory utilizes novel approaches for the analysis of drugs in biological samples and seized materials using comprehensive non-targeted data acquisition by gas chromatography mass spectrometry (GC-MS) and liquid chromatography quadrupole time-of-flight mass spectrometry (LC-QTOF-MS). The scope of analysis contains more than 900 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. 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 the CFSRE during this quarter, including those from sample-mining, data-mining, and/or esoteric testing.



NPS Stimulant & Hallucinogen Positivity



4-AcO-EPT: New Hallucinogen Identified in Q2 2021 →



NPS Stimulant Combinations

Combination	Frequency
Eutylone + Stimulant(s) (Cocaine and/or Methamphetamine)	29
Eutylone + Fentanyl	18
Eutylone + NPS Benzodiazepine(s) (e.g., Etizolam, Flubromazolam)	10
Cl-PCP + Fentanyl	3

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