

# Recommended Scope for NPS Testing in the United States

NPS  
SCOPE

Q2  
2023

**PURPOSE:** The objective of this report is to provide updated guidance in developing an appropriate analytical scope of testing for novel psychoactive substances (NPS) in the United States (and around the world) based on current trends and intelligence. *This report is based on information available in Q1 2023 and early Q2 2023 and is subject to change along with the drug market.*

**SUMMARY:** The NPS landscape is changing rapidly, requiring laboratories to constantly remain abreast of new and emerging drugs locally, nationally, and internationally. To meet individualized needs, laboratories amend existing methods or develop new ones for detection and confirmation of NPS. This can be challenging for scientists as information about NPS detections can be regionalized and/or out-of-date, making it difficult to determine which drugs should be prioritized at a given time. **CFSRE's NPS Discovery** and the **SOFT NPS Committee** have established the below recommendations for NPS scope based on information from extensive collaborations, partnerships, and initiatives which yield national and international perspectives. Suggested cut-off concentrations or reporting limits (in ng/mL) are listed for each NPS. These values are categorized (i.e., <1, 1-10, and >10 ng/mL) and determined based on currently available quantitative data and/or comparison to structurally similar NPS within the given sub-class.

BENZODIAZEPINES		OPIOIDS		STIMULANTS & HALLUCINOGENS		SYNTHETIC CANNABINOIDS	
<b>TIER ONE (STRONGLY RECOMMEND)</b>							
Bromazolam	1-10	*Protonitazene	<1	N,N-Dimethylpentylone	>10	MDMB-4en-PINACA	<1
Etizolam†	1-10	Metonitazene	<1	Pentylone	>10	ADB-BINACA (-BUTINACA)	<1
Flualprazolam	1-10	*N-Pyrrolidino Protonitazene	<1	Eutylone	>10	ADB-5'Br-BINACA	<1
Flubromazepam	1-10	N-Desethyl Isotonitazene	<1	N-Propyl Butylone	>10	CH-PIATA	<1
Clonazolam‡	<1	o/m/p-Fluorofentanyl	1-10	alpha-PHP / alpha-PiHP	>10	ADB-FUBIATA	<1
<b>TIER TWO (RECOMMEND)</b>							
8-Aminoclonazolam‡	1-10	*Isotonitazene	<1	Fluoroexetamine	1-10	5F-MDMB-PICA	<1
Flubromazolam	1-10	N-Pyrrolidino Metonitazene	<1	N-Cyclohexyl Butylone	>10	4F-MDMB-BINACA	<1
Desalkylgidazepam†	1-10	N-Pyrrolidino Etonitazene	<1	N-Cyclohexyl Methylone	>10	ADB-5'Br-PINACA	<1
4'Cl-Deschloroalprazolam	1-10	*Carfentanil	<1	2F-Deschloroketamine	<1	*4F-ABINACA (-ABUTINACA)	<1
<b>TIER THREE (CONSIDER)</b>							
Desalkylflurazepam†	1-10	Brorphine	<1	2,3,4-Methylmethcathinone	1-10	*CH-FUBIATA	<1
Deschloroetizolam	1-10	Etodesnitazene	1-10	3-HO-PCP / 4-HO-PCP	<1	5F-BZO-POXIZID	<1
Pyrazolam	1-10	*Ethyleneoxynitazene	1-10	3-MeO-PCP / 4-MeO-PCP	<1	ADB-4en-PINACA	<1
*Bromazepam†	1-10	*N-Piperidiny Etonitazene	<1	MDPHP	>10	*MDMB-BINACA (-BUTINACA)	<1

Note: This may not be an all-inclusive list. Laboratories should consider additional NPS for inclusion (or exclusion) based on local, national, and/or international trends.



**Acknowledgements:** These scope recommendations were developed by the Society of Forensic Toxicologists (SOFT) NPS Committee in collaboration with the Center for Forensic Science Research and Education (CFSRE) at the Fredric Beiders Family Foundation. This report was prepared by Alex Krotulski, Donna Pappas, Dani Mata, Kayla Ellefen, Elisa Shoff, Szabolcs Söfalvi, Svante Vikingsson, Michael Truver, Cella Modeli, and Barry Logan. The authors would like to acknowledge scientists and staff at our laboratories for their related involvements and contributions.

**Disclaimer:** The recommendations in this report are subject to change with time as new information becomes available. Toxicologists should consider that NPS may appear due to varying pharmaceutical origins.

**Funding:** CFSRE's NPS Discovery is funded in part by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice (Award Number 15PND22-CG-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.

**Suggested Citation:** Krotulski et al. (2023). Recommended Scope for NPS Testing in the United States Q2 2023. Center for Forensic Science Research and Education, United States.