Recommended Scope for NPS Testing in the United States

NPS SCOPE

Q3 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 Q2 2023 and early Q3 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 This can be challenging for scientists as information about NPS detections can be regionalized and/or out-of-date, making it difficult to determine which drugs should be prioritized at a given time.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	
TIER ONE (STRONGLY RECOMMEND)							
Bromazolam	1-10	Metonitazene	<]	N,N-Dimethylpentylone	>10	MDMB-4en-PINACA	<]
*Desalkylgidazepam†	1-10	N-Pyrrolidino Protonitazene	<]	Pentylone	>10	ADB-BINACA (-BUTINACA)	<]
Flubromazepam	1-10	Protonitazene	<]	alpha-PiHP / alpha-PHP	>10	*MDMB-BINACA (-BUTINACA)	<]
Etizolam [†]	1-10	*N-Pyrrolidino Metonitazene	<1	Eutylone	>10	ADB-5'Br-BINACA	<]
Flualprazolam	1-10	o/m/p-Fluorofentanyl	1-10	*Fluoroexetamine / 2F-2-oxo-PCE	1-10	CH-PIATA	<]
TIER TWO (RECOMMEND)							
*Clonazolam‡	<]	Isotonitazene	<7	*N-Propyl Butylone	>10	*CHO-4'Me-5'Br-FUBOXPYRA	<1
8-Aminoclonazolam‡	1-10	*N-Desethyl Isotonitazene	<]	N-Cyclohexyl Butylone	>10	*ADB-4en-PINACA	<]
*Desalkylflurazepam†	1-10	N-Pyrrolidino Etonitazene	<]	N-Cyclohexyl Methylone	>10	ADB-FUBIATA	<]
*Deschloroetizolam	1-10	Carfentanil	<]	2F-Deschloroketamine	<]	ADB-5'Br-PINACA	<]
TIER THREE (CONSIDER)							
*Flubromazolam	1-10	Brorphine	<]	2,3,4-Methylmethcathinone	1-10	*5F-MDMB-PICA	<]
'4'Cl-Deschloroalprazolam	1-10	Etodesnitazene	1-10	3-HO-PCP / 4-HO-PCP	<1	*4F-MDMB-BINACA	<1
Pyrazolam	1-10	Ethyleneoxynitazene	1-10	3-MeO-PCP / 4-MeO-PCP	<]	*4F-ABINACA (-ABUTINACA)	<]
Bromazepam†	1-10	N-Piperidinyl Etonitazene	<1	MDPHP	>10	*NMDMSB	<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.



by the Society of Forensic Toxicologists (SOFI) MFS Committee in collaboration with the Center for Forensic Science Research and Education (CFSRE) at the Fredric Rieders Family Foundation. This report was prepared by Aker Krotiuski, Onnea Papsun, Dani Mats, Kayla Ellefern, Ellias Shoff, Szabolcs Sofaki, Svante Vikingson, Michael Truver, Celai Modell, and Barry Logan. The authors would like to acknowledge scientists and staff at our laboratories for their related involvements and contributions.

Disclaimen The recommendations in this report are subject to chan with time as new information becomes available. Toxicologists should be consider that NDS may appear due to varying pharmaceutical priging.

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