

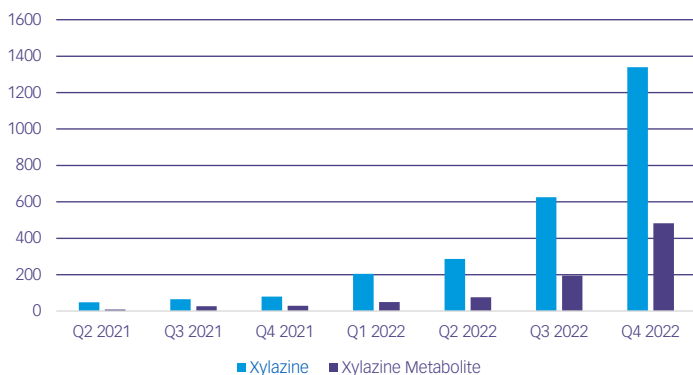
# Xylazine:

## New Psychoactive Substances Report

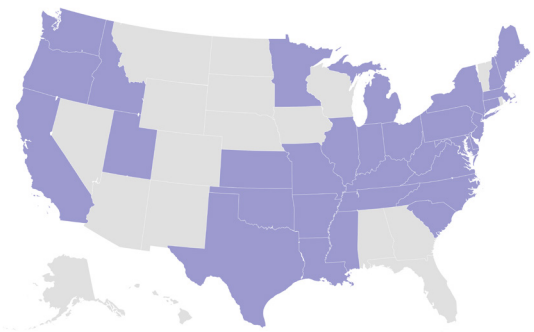
Aegis is pleased to offer industry-leading testing options to allow providers the opportunity to more completely understand an individual's drug use pattern, and facilitate more informed care and harm reduction measures. New Psychoactive Substances (NPS) are compounds designed to mimic common illicit or prescription drugs while evading regulation and routine testing methods. They are also known as "novel psychoactive substances," "designer drugs," or "research chemicals."

- Xylazine is a tranquilizer frequently found as an adulterant in the illicit drug supply, which has CNS-depressant activity and is increasingly identified in overdose death cases.
- For further information about NPS, including recorded presentations and national trends, please visit our website: <https://www.aegislabs.com/our-services/nps-testing>

### Aegis' Xylazine Detections by Quarter



### States with Xylazine Positives\*



\* Based on states where xylazine testing has been ordered. Lack of detection in states is due, in part, to test ordering patterns and do not reflect a lack of presence in a state's illicit drug supply.

## Xylazine

- Xylazine is a tranquilizer used in veterinary medicine as a sedative and muscle relaxant, but is not approved for human use. Along with its central nervous system depressant activity, it can cause hypotension. It is often identified as an adulterant in illicit fentanyl preparations. Because it is not an opioid, naloxone is not expected to reverse its effects. In fact, one study found naloxone present in 33.3% of overdose deaths where xylazine was detected.<sup>1</sup>
- A study of 2019 CDC SUDORS data revealed that xylazine was listed as a cause of death in 64.3% of cases in which it was detected. One or more other drugs was also listed as a cause of death.<sup>2</sup>
- Aside from overdose concerns, observational studies have described skin lesions which appear as diffuse abscesses or ulcerations in individuals who chronically use substances containing xylazine. While xylazine has not been definitively linked as the cause of these lesions, it does frequently occur and is a visible signal which can inform harm reduction measures.<sup>3</sup>
- Xylazine represents an increasing threat to those who use illicit drugs. Steps to address the threat include expanded xylazine testing and education of clinicians and patients, to include risks and promotion of harm reduction strategies.<sup>3</sup>

1. Chhabra N, Mir M, Hua MJ, et al. Notes From the Field: Xylazine-Related Deaths - Cook County, Illinois, 2017-2021 [published correction appears in MMWR Morb Mortal Wkly Rep. 2022 May 06;71(18):641]. MMWR Morb Mortal Wkly Rep. 2022;71(13):503-504. Published 2022 Apr 1. doi:10.15585/mmwr.mm7113a3

2. Kariisa M, Patel P, Smith H, Bitting J. Notes from the Field: Xylazine Detection and Involvement in Drug Overdose Deaths - United States, 2019. MMWR Morb Mortal Wkly Rep. 2021;70(37):1300-1302. Published 2021 Sep 17. doi:10.15585/mmwr.mm7037a4

3. Alexander RS, Conner BR, Sue KL, Morford KL. Xylazine and Overdoses: Trends, Concerns, and Recommendations. Am J Public Health. 2022;112(8):1212-1216. doi:10.2105/AJPH.2022.306881



# Laboratory Report

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### Clinic Information

**Client:** Recovery Clinic  
123 Main Street  
Anytown, USA  
**Requesting Provider:**  
Dr. Healthcare

### Patient Information

**Patient Name:** John Doe  
**Patient ID:**  
**Date of Birth:** 01/01/1984  
**Male/Female:** Male

### Sample Information

**Lab Sample ID:** 123456789  
**Specimen Type:** Urine  
**Collected:** 9/8/2022  
**Received:** 9/12/2022  
**Reported:** 9/15/2022

### Medication(s) Prescribed

None Indicated

### Test(s) Requested

00199J - PainComp QMP 199	04200 - Hallucinogens/Dissociatives	04201 - NPS Other
04420 - Barbiturates	04466 - Kratom (Mitragynine)	04140 - Synthetic Cannabinoids
04120 - Designer Benzodiazepines	01490 - LSD Healthcare	04110 - Synthetic Stimulants
04160 - Designer Opioids	04440 - Marijuana	

### Medication Compliance

Drug and/or Metabolites	Result Interpretation	Result	Comment
Fentanyl	PRESENT	300 ng/mL	A prescription drug, not indicated as prescribed on the requisition form, was detected.
Gabapentin	PRESENT	7 mcg/mL	A prescription drug, not indicated as prescribed on the requisition form, was detected.
Cocaine	PRESENT	>3500 ng/mL	Test result indicates patient has used a non-prescribed drug within 5 days of the date of the urine collection.
Xylazine	PRESENT	POSITIVE	Test results indicate use of a non-prescribed drug. Based on limited scientific information, the detection period for xylazine in urine by LC/MS/MS should be no more than 3 days from last use.

Result	Comment
EXPECTED	Test result is consistent with routinely analyzed human urine.

### Test(s) Requested Contents

Tested For	Result	Laboratory Result
Hallucinogens/Dissociatives	NONE DETECTED	
Buprenorphine	NONE DETECTED	
Alcohol Metabolites		
Ethyl Glucuronide	NONE DETECTED	
Ethyl Sulfate	NONE DETECTED	
NPS Other		
<b>Xylazine</b>	<b>POSITIVE</b>	
Synthetic Stimulants	NONE DETECTED	
Kratom (Mitragynine)	NONE DETECTED	
Amphetamines	NONE DETECTED	
Tapentadol	NONE DETECTED	
Designer Benzodiazepines	NONE DETECTED	
Benzodiazepines	NONE DETECTED	
Synthetic Cannabinoids	NONE DETECTED	
Cannabinoids (Marijuana)	NONE DETECTED	
Gabapentin/Pregabalin	NONE DETECTED	
<b>Gabapentin</b>	<b>POSITIVE</b>	7 mcg/mL
Cocaine Metabolite		
<b>Benzoylcegonine (Cocaine)</b>	<b>POSITIVE</b>	>2500 ng/mL
<b>Cocaine</b>	<b>POSITIVE</b>	>1000 ng/mL
Designer Opioids	NONE DETECTED	
Opiates	NONE DETECTED	
6-Monoacetylmorphine	NONE DETECTED	
Methadone	NONE DETECTED	
Meperidine	NONE DETECTED	
Fentanyl		
<b>Norfentanyl</b>	<b>POSITIVE</b>	275 ng/mL
<b>Fentanyl</b>	<b>POSITIVE</b>	24 ng/mL

These tests were developed and their performance characteristics determined by Aegis Sciences Corporation. They have not been cleared or approved by the US Food and Drug Administration.  
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Novel Psychoactive Substances  
Sample Report