Rapid Analysis of Drugs

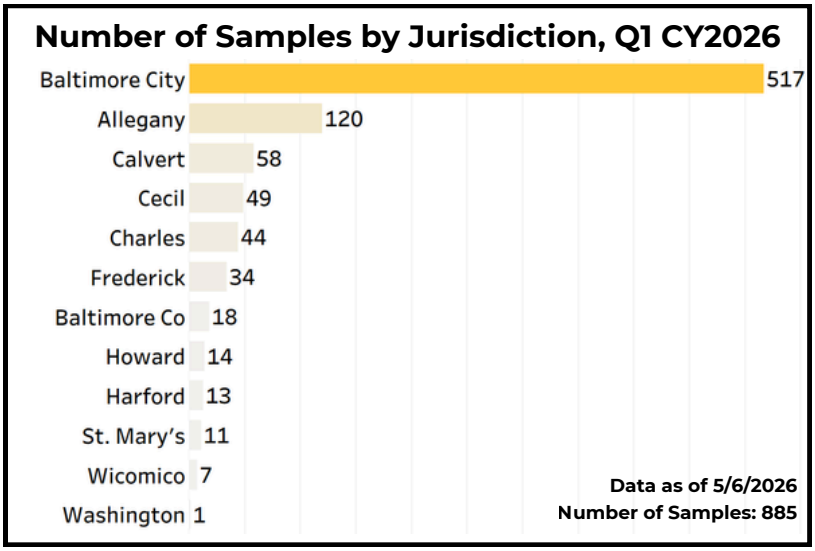
2026 Calendar Year Q1 Newsletter

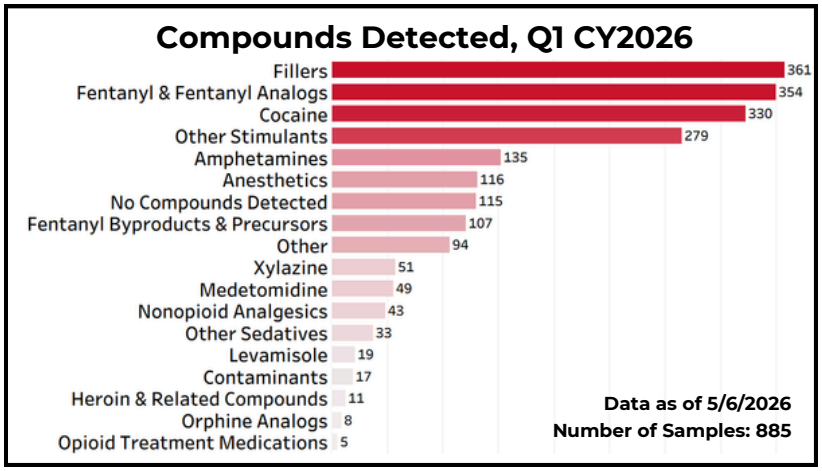
Maryland DEPARTMENT OF HEALTH

RAD BACKGROUND AND DATA DISCLAIMER

The Rapid Analysis of Drugs (RAD) is a statewide drug checking program that tests routinely returned paraphernalia voluntarily provided by Maryland Opioid Associated Disease Prevention and Outreach Programs (OADPOP) participants in partnership with the National Institute of Standards and Technology (NIST). RAD was piloted in eight OADPOPs from Oct 2021 through Sept of 2022, when it expanded to be an ongoing service for any interested OADPOP. Since Oct 2021, a total of 6,926 samples have been collected.

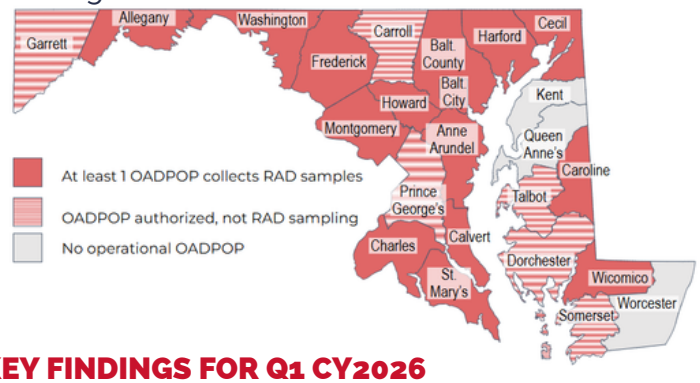
RAD gives us insight into the near real time drug supply in MD, but is not fully representative. RAD is completely voluntary for OADPOPs and their participants, making it a convenience sample. No personally identifiable information is collected, therefore we do not know how many individuals account for the sample size. All data in this report comes from the RAD database, as of 5/6/2026.





GOALS OF RAD

1. Increase stakeholder understanding of the Maryland drug market landscape.
2. Empower people who use drugs with knowledge about the drug supply that enables them to make informed decisions and employ risk reduction strategies.
3. Provide critical, timely information about new and emerging trends in the drug supply, informing the statewide and local response to mitigate harm.



KEY FINDINGS FOR Q1 CY2026

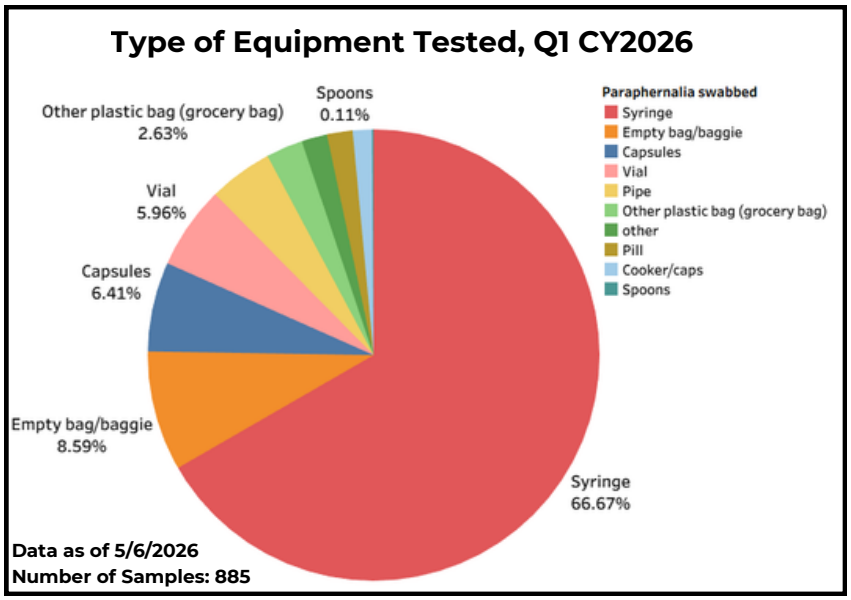
In Q1 CY2026 (1/1/26-3/31/26), **885 samples** were collected from 21 OADPOPs in 14 jurisdictions. Of those samples:

- **53.9% contained opioids**
  - Of those samples, 96.6% contained fentanyl.
- **37.29% contained cocaine**
- **15.25% contained amphetamines**
- **5.54% contained medetomidine**
- **5.76% contained xylazine**

56.95% had multiple active ingredients.

Identification of **emerging substances** in MD:

- **Stimulants** have increased in prevalence from CY2024 (49%) to CY2025 (64%). (pg 2)
- **Kratom/ Mitragynine** - seen in 14 samples from 5 jurisdictions (Baltimore County, Baltimore City, Cecil, Frederick, and St. Mary's)
- **Cychlorphine** (N-Propionitrile Chlorphine) - A type of synthetic opioid (orphine), with high potency. Seen in 8 samples in Q1 2026 (pg 4).
- **Synthetic Cannabiniods** - Identified in Frederick and Charles. Present in 0.34% (n=3) of statewide Q1 2026 RAD samples. Other preliminary data has show an increased risk among individuals in carceral settings.



RAD DATA DASHBOARD

The Maryland public facing dashboard now contains Rapid Analysis of Drug data.

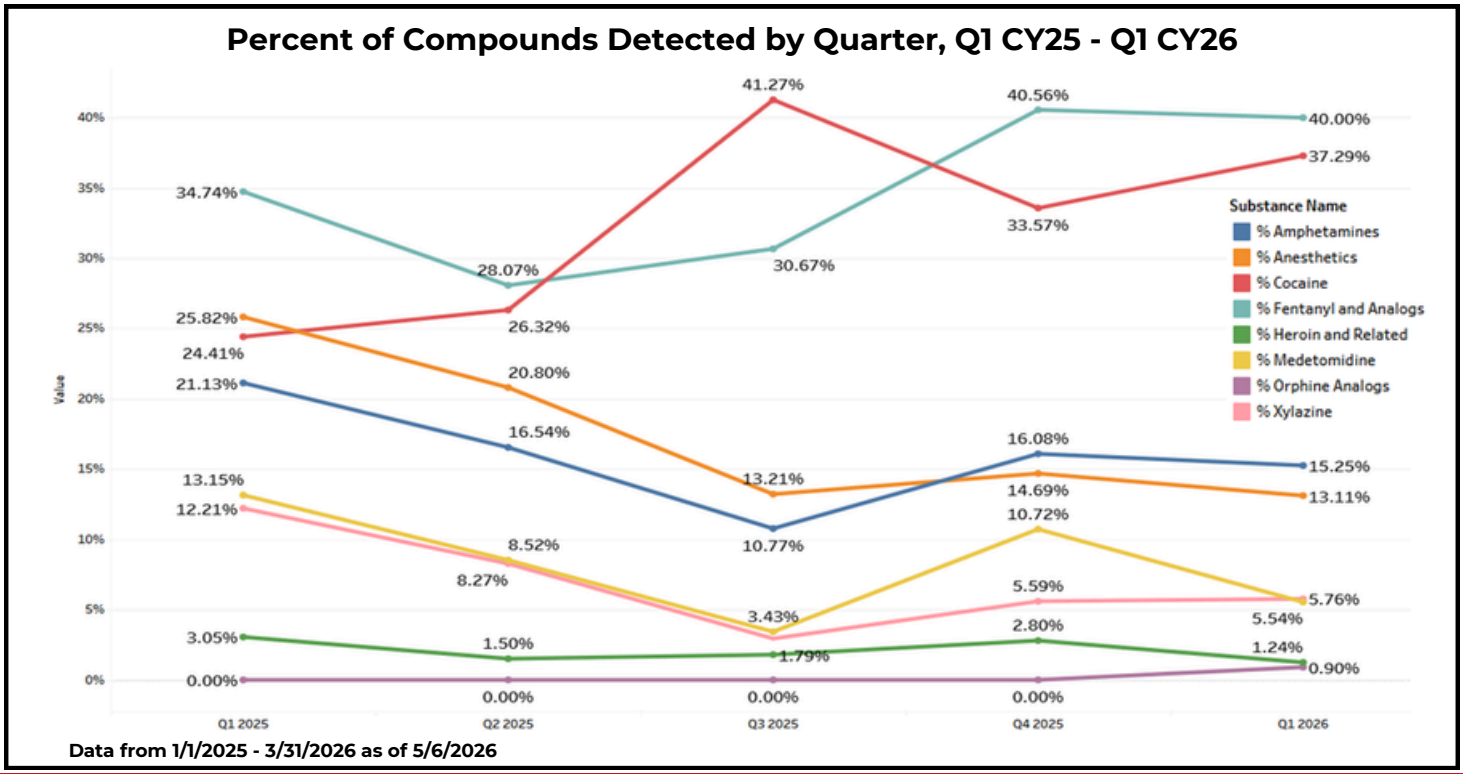
The RAD module is updated monthly and can be filtered by jurisdiction and time period from October 2021 to present.

View the dashboard
bit.ly/OverdoseData

The map shows the percentage of samples from each jurisdiction by default, and can be changed to show the percentage of a selected substance within each jurisdiction.

Sixty-seven percent of samples tested in Q1 of CY2026 were syringes, followed by baggies (9%), and capsules (6%). Syringe testing is the most common method of RAD testing since OADPOP participants are often returning syringes for safe disposal. RAD is an authorized OADPOP program activity and therefore included in legal protections of OADPOPs through MD General Health Code Ann. § 24-901 through 24-909.

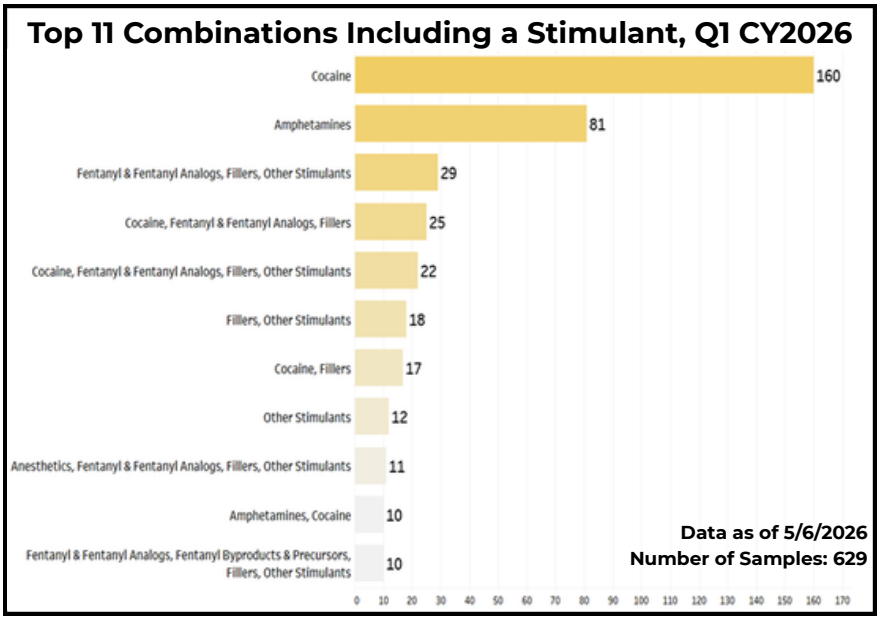
In Q1, fentanyl and fentanyl analogs were the most prevalent compound detected through RAD, found in 40% of samples. Cocaine was detected in 37% of Q1 RAD samples. Amphetamines were found in 15% of samples. The presence of stimulants in RAD samples has increased from 2024 (49%) to 2025 (64%) and is continuing to trend upward in Q1 of 2026 (67%). As stimulant use continues to rise, it is important to recognize and reduce the harms of overamping. Here are two great resources from NASTAD and NHRC. Anesthetics (13%) decreased slightly in Q1, leveling off after decreasing from Q1 - Q3 of 2025. Medetomidine prevalence decreased from Q4 (11%) to Q1 (6%), after an increase from Q3 to Q4 in 2025. The NIST's Monthly Newsletters provide similar trends for east coast samples.

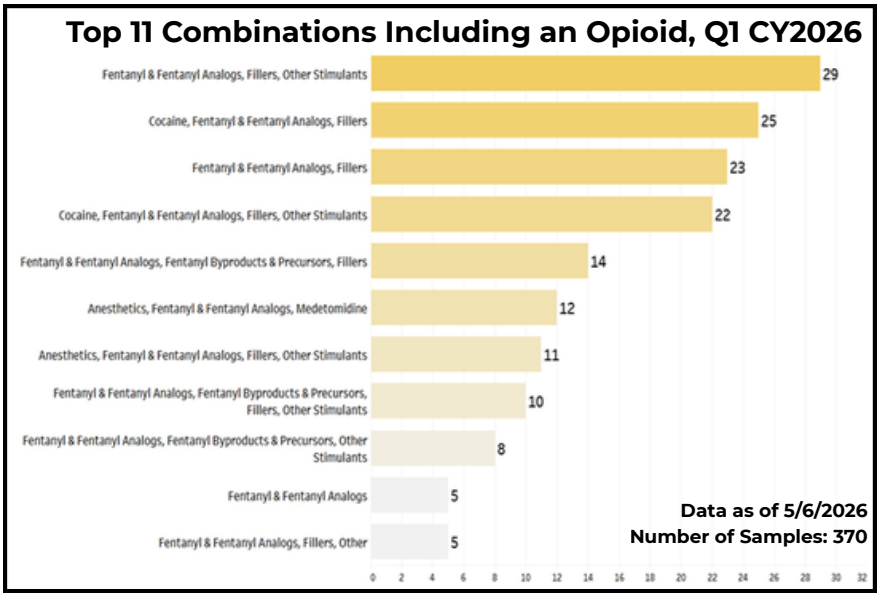


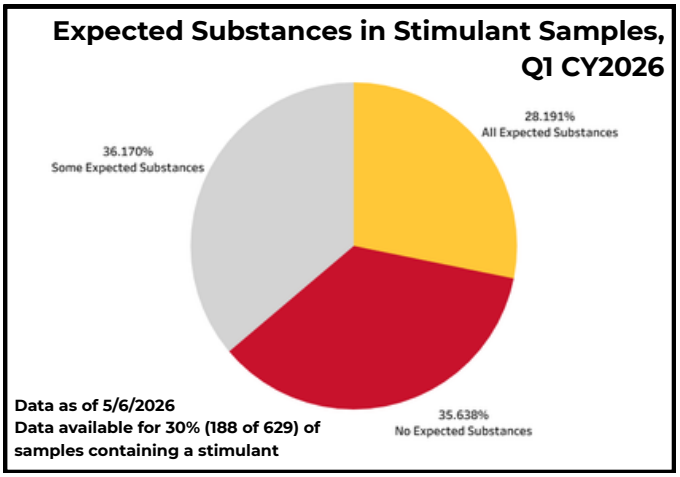
RAD gives us insight into common polysubstance combinations. RAD can't always differentiate between intentional and unintentional polysubstance use or whether the substances were used together or used separately with the same equipment. In the analysis of this page, we look at the top 11 combinations including an opioid or stimulant in Q1 of CY2026. We also compare the expected substance data for samples containing opioids to samples containing stimulants in Q1 of CY2026. Data on what the person expected to be in the sample is optional. Of the 885 samples in this analysis, 267 had data on expected substances.

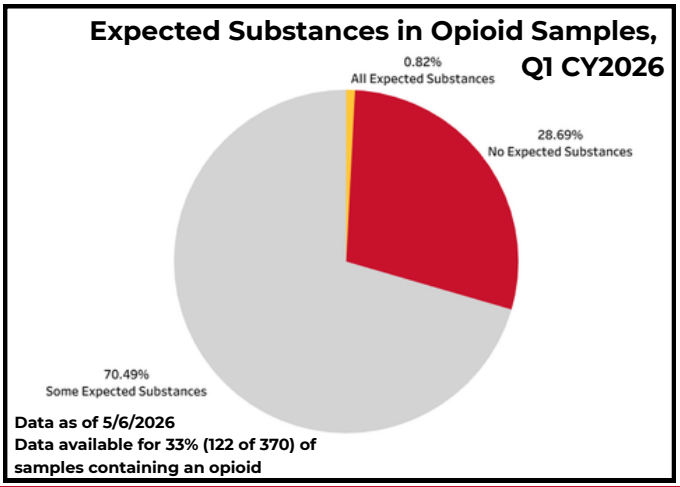
Stimulants were found in a total of 629 samples and opioids were found in 370 samples in Q1 of CY2026. However, stimulants are found as the only substance in the sample more often than opioids. Cocaine was present alone in 25% of stimulant samples. Amphetamines were present alone in 13% of samples with a stimulant. The combination of fentanyl, fillers, and caffeine (4.6%) was the next most common. Of stimulant samples with expected substance data, nearly a third included only the expected substance (28%).

The opioid combinations in RAD have more variation. The combination of fentanyl, fillers, and caffeine made up 7.8% of samples containing opioids. Cocaine, fentanyl, and fillers made up 6.8% of samples containing opioids. Fentanyl alone only made up 1.4% of all samples containing an opioid. Of opioid samples with expected substance data, less than 1% included only the expected substance. Most contained at least one unexpected ingredient (99%). This analysis shows that polysubstance use, intentional or unintentional, is the norm within the opioid supply being tested through RAD. While single substance samples are more common with stimulants sampled through RAD, 62% of samples containing a stimulant also contained another substance.









The analysis on page 3 also illustrated that people who use opioids are less likely to receive what they expect to be in their supply, with less than one percent of samples containing everything the person expected. While 28% of samples containing stimulants contained all expected substances, around 72% contained at least one unexpected ingredient.

These results put emphasis on the importance of using test strips prior to use and carrying naloxone, even if you think you know what is in your drugs. Visit your local OADPOP or ORP for supplies.

RESOURCE CORNER:

RAD Website

Find Naloxone Near You

Find an OADPOP Near You

NIST Monthly Newsletters

Samples Containing Orphines, Q1 CY2026

Jurisdiction	Sample #	Compound Name
Baltimore City	Sample 1	Lidocaine Fentanyl Mannitol N-Propionitrile Chlorphine
	Sample 2	Bupivacaine Lidocaine Fentanyl 4-ANPP Mannitol Quinine Medetomidine N-Propionitrile Chlorphine Caffeine Xylazine
	Sample 3	Lidocaine Fentanyl Mannitol N-Propionitrile Chlorphine
	Sample 4	Lidocaine Cocaine Fentanyl Tetramethyl-4-AP Mannitol Medetomidine N-Propionitrile Chlorphine Triisopropanolamine Caffeine Xylazine
	Sample 5	N-Propionitrile Chlorphine
Calvert County	Sample 6	N-Propionitrile Chlorphine
	Sample 7	N-Propionitrile Chlorphine
	Sample 8	N-Propionitrile Chlorphine

Data as of 5/6/2026
Number of Samples: 8

Synthetic opioids are common in the unregulated drug supply, and often seen in combination with traditional opioids (fentanyl, heroin, etc). Synthetic opioids are often highly potent and can contribute to increased overdose risk. Orphine analogues, a type of synthetic opioid, emerged in the drug supply throughout the US at the end of 2025.

N-Propionitrile Chlorphine, known as Cychlorphine, has been observed in 8 RAD samples in Q1 of 2026. Prior to that, no orphines had been detected through RAD in MD. Pharmacology data shows cychlorphine to be 10x more potent than fentanyl. You can read more about Cychlorphine in and other orphine analogues in the linked CFSRE Reports from January and February 2026.

Cychlorphine has been detected in 5 Baltimore City samples and 3 Calvert County samples. Four of the eight samples contained Cychlorphine alone. Four samples contained between 3 and 9 additional active ingredients, including other opioids, sedatives, anesthetics, and stimulants.

Cychlorphine and other orphine analogues are opioids and naloxone is effective in overdose response. Compassionate overdose response standards should still be followed - using the lowest available dose of naloxone and administering rescue breathing. Visit the MDH Naloxone website to learn how to use naloxone and find naloxone near you.