

Massachusetts Drug Supply Data Stream (MADDS)

Public Health Bulletin

Synthetic Cannabinoid “MDMB-4en-PINACA” Detected in Heroin/Fentanyl/Dope

- Multiple samples sold as fentanyl (n=6), heroin (n=1), and heroin/fentanyl/dope with cocaine (i.e., speedball, n=1) have been confirmed to contain MDMB-4en-PINACA. Samples were detected across four cities and towns in MA (Boston, Lynn, Pittsfield, North Adams) from February 2020 to January 2021.
- MDMB-4-en-PINACA is a synthetic cannabinoid receptor agonist first identified in 2017. MDMB-4en-PINACA was found in powdered samples and in the residue of cookers and cottons used for injecting drugs. All samples were collected in collaboration with local harm reduction agencies or were acquired as found property by police departments and submitted for MADDS testing.
- From user experience reports, the MDMB-4en-PINACA presence was not suspected, intended, or desired. Consumers did not report knowing about its presence until after use. All cases were associated with a negative experience and/or concerning health effects, such as: “‘bad reaction’; ‘out of body experience’; ‘really strong, something feels wrong about it’; ‘overdosed’; ‘speedy’; ‘jittery’; ‘lost control of my arms.’”

How to Identify the Drug

- While difficult to identify without analytical testing, MDMB-4en-PINACA appears as a white, beige, or yellowish powder and blends into other available powder street drugs. All samples detected in MA were in powder form and prepared for use by injection or insufflation.
- Media and poison control center reports indicate that MDMB-4en-PINACA is usually sprayed onto plant material and smoked, and it can also be vaped, injected or consumed orally. There are reports of e-liquids containing MDMB-4en-PINACA, which is then vaped using an e-cigarette. MDMB-4-en-PINACA can be impregnated onto blotter paper and smoked. None of these forms were reported in the MA samples.
- If you have suspicions about the makeup of your drugs, contact MADDS about drug checking.

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Health Effects

- Cardiovascular effects (such as elevated blood pressure, fast heart rate, heart attack, and stroke), rapid loss of consciousness, unresponsiveness, seizures, vomiting, delirium, psychosis, aggressive and violent behavior, and sudden death have all been reported related to MDMB-4-en-PINACA exposure.
- MDMB-4-en-PINACA has caused severe poisoning and/or death in multiple cases. In most of the deaths it was mixed in with other substances.
- Understanding of the pharmacology and mechanism of toxicity is poor for MDMB-4-en-PINACA as data are limited. The toxic and lethal dose of MDMB-4en-PINACA is unknown. Chronic exposure could pose risk of dependence and a withdrawal syndrome on cessation of use. Because this is a synthetic drug made in a laboratory, there is a risk that dosing can be different, even within the same batch. A bad reaction or an overdose with MDMB-4en-PINACA may be more likely because of these inconsistencies.

Harm Reduction

- Always use with a friend, keep Narcan nearby, and call 911 immediately if any health effects noted above arise.
- Drink plenty of water to keep hydrated and take care of your body by going for regular check-ups with your doctor and taking any prescribed medications.
- If you are concerned about what is in drugs, please contact a local harm reduction community organization to get additional advice on safe use and availability of drug checking with MADDS.

MADDS is a state-funded collaboration between Brandeis University researchers, the Massachusetts Department of Public Health, various town police departments and local harm reduction agencies. Contact us at maddsbrandeis@gmail.com