

## ILLICIT FENTANYL AND FENTANYL ANALOGS

Fentanyl is a powerful synthetic opioid approved by the FDA for use as an analgesic and anesthetic; it is 50-100 times more potent than morphine and 30-50 times more potent than heroin. It requires only a very small amount to cause a severe or potentially fatal reaction; as little as 2mg is a lethal dose for most people<sup>1</sup>. Fentanyl analogs can be even more potent than fentanyl. For example, carfentanil is approximately 100 times more potent than fentanyl, and 10,000 times more potent than morphine<sup>1,2</sup>. The figure below shows a comparison of likely fatal doses of heroin, fentanyl and carfentanil.

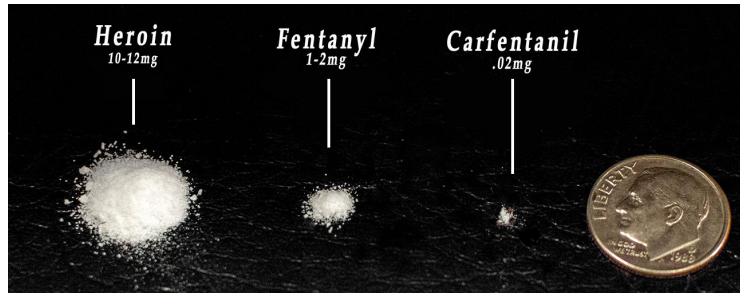


Photo by Mason Callejas via [www.inmaricopa.com](http://www.inmaricopa.com)

Illicitly manufactured fentanyl is now a major driver of opioid overdose deaths in many states, with a variety of fentanyl analogs increasingly involved, if not solely implicated, in these deaths<sup>3</sup>. These illicitly manufactured fentanyl and fentanyl analogs are mixed with heroin and/or cocaine, with and without users' knowledge. Additionally, illicit fentanyl and fentanyl analogs are used to create counterfeit prescription pills such as oxycodone, Percocet, and Xanax. These practices often result in overdose and fatality<sup>4,5</sup>.

The rapid spread of illicit use of fentanyl and fentanyl analogs is largely due to the high profit margin for traffickers. According to DEA reporting these pills containing fentanyl or fentanyl-related compounds are being sold at retail at prices between \$10 and \$20 per pill in U.S. illegal drug markets<sup>1</sup>.

Precision Diagnostics offers Fentanyl and Fentanyl Analog testing. Our Fentanyl Analog testing platform was developed utilizing the DEA's most recent Emerging Threat Report<sup>4</sup>.

Illicit Fentanyl Analog	Potential Metabolite
Acetylfentanyl	Acetylnorfentanyl
Butyrylfentanyl	Butyrylnorfentanyl
Carfentanil	Norcarfentanil
Cis-3-Methylfentanyl	Cis-3-Methylnorfentanyl
Acrylfentanyl	
Furanylfentanyl	
U-47700*	
N-Aesmethyl-U-47700*	

\* Non-Fentanyl analog illicit synthetic opioid

**A Precision Diagnostics trained Clinical Support Specialist can assist with further review of your patient's results**

**(800) 635-6901 Option 2**

References:

1. Fentanyl FAQs. [www.dea.gov/druginfo/fentanyl-faq.shtml](http://www.dea.gov/druginfo/fentanyl-faq.shtml)
2. Global Smart Update. Fentanyl and its Analogs- 50 years on. [https://www.unodc.org/documents/scientific/Global\\_SMART\\_Update\\_17\\_web.pdf](https://www.unodc.org/documents/scientific/Global_SMART_Update_17_web.pdf)
3. CDC Morbidity and Mortality Weekly Report. [https://www.cdc.gov/mmwr/volumes/66/wr/mm6634a3.htm?s\\_cid=mm6634a3\\_w#contribAff](https://www.cdc.gov/mmwr/volumes/66/wr/mm6634a3.htm?s_cid=mm6634a3_w#contribAff)
4. DEA Emerging Threat Report. <https://ndews.umd.edu/sites/ndews.umd.edu/files/emerging-threat-report-2017-quarter3.pdf>
5. DEA Microgram bulletin: Volume 43, Number 7, July 2010. <https://www.dea.gov/pr/micrograms/2010/mg0710.pdf>

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Precision Diagnostics, a leader in clinical laboratory testing and medication adherence monitoring, is transforming healthcare through the delivery of comprehensive, insightful clinical data that can help improve patient outcomes and manage costs. Specializing in providing quantitative drug testing, Precision Diagnostics' innovative state-of-the art technology provides insurers, pharmacies, medical practitioners, and patients with new levels of visibility and transparency that allows doctors to better assess patients' medication adherence, ensure patient compliance, and improve outcomes.

**Precision Diagnostics**

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