



# OVERDOSE RESPONSE STRATEGY

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October 2024  
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## Emerging Threat Bulletin

### The Rapid Emergence of an Industrial Chemical in the Fentanyl Supply Across the U.S.

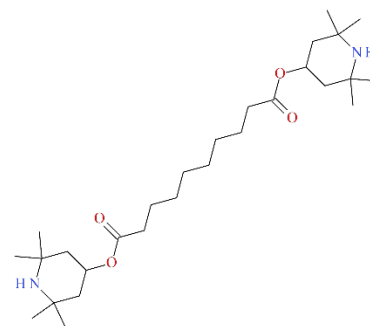
#### Purpose:

(U): The objective of this bulletin is to notify Arkansas law enforcement officials about a puzzling and disturbing new trend in the United States illicit drug market.

#### Overview:

(U) A new industrial chemical has been showing up in both fake blue M30 pills and fentanyl powder across the United States. The substance has been identified as Tinuvin 770 or bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate, also known as BTMPS (bee-temps).<sup>1,2</sup> The chemical has UV light-blocking properties and is added to a wide variety of household products such as adhesives, caulk, tires, outdoor furniture, and plastic packaging.<sup>3,4</sup> It is currently unclear why this chemical is showing up in the drug supply and what the effects of it may be.

(U) BTMPS is mostly being found in products containing fentanyl or purporting to contain fentanyl but has also been found in other synthetic opioids like para-fluorofentanyl, as well as methamphetamine, cocaine, medetomidine, and xylazine.<sup>5</sup> To date, BTMPS has not been detected in any drug samples submitted to the Arkansas State Crime Lab for testing, though with how quickly this has spread across the country it may only be a matter of time before it reaches Arkansas.



Source: CFSRE BTMPS molecule

#### Background

(U) In June 2024, bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (BTMPS) was first detected in Pennsylvania and on the West Coast by drug checking harm reduction programs. Within a month BTMPS was appearing up and down the West Coast. By September BTMPS was showing up in drug samples in Michigan, New York, Colorado, New Mexico, Maine, Delaware, Maryland, Nevada, and North Carolina.<sup>6</sup>

(U) Researchers from UCLA, the National Institute of Standards and Technology, other academic institutions, and harm reduction groups conducted testing on more than 170 samples that had been sold as fentanyl in Los Angeles and Philadelphia this summer.<sup>7</sup>



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- They found that about 25% of the drugs contained BTMPS
- By the end of August BTMPS was found in 41% of the fentanyl samples tested in Los Angeles.
- The amount of BTMPS in many of the drug samples greatly exceeded the amount of fentanyl.

## Details

(U) Researchers are calling it the most sudden change in the U.S. illegal drug supply in recent history.<sup>8</sup> Changes to the US drug supply historically unfold slowly with predictable patterns of geographic diffusion. Drug checking program results from around the United States indicate a rapid shift in the illicit drug supply with important implications for public health.<sup>9</sup>

(U) According to the Denver Police Department who have been tracking this type of adulterant since August, “We have 40 cases where we have reported a Non-Controlled Substance that contain BTMPS. These cases either contain no fentanyl or fentanyl below our analytical threshold. All but one of those cases were blue M30 tablets. The one case was an off-white chunk material.” They also report an additional 33 cases of M30 pills that did contain fentanyl or a fentanyl analog but did contain BTMPS.<sup>10</sup>

## Health Hazards

(U) Unlike other adulterants added to fentanyl for their psychoactive effects there is no indication that the substance causes users to get high.<sup>11</sup> There is limited data on BTMPS’s effects in humans. Studies in rodents indicate that it may be toxic and could function as a calcium channel blocker (CCB), which could lower blood pressure.<sup>12</sup> BTMPS is an industrial chemical with no approved use in humans but is not a controlled substance. It doesn’t cause overdose or immediate death; however, it does come with some nasty side effects and can exacerbate the risks associated with fentanyl usage.<sup>13</sup>

(U) The chemical is reported by users to have an unusual chemical or rubbery taste and a bad odor similar to bug spray. Some of the symptoms reported by users are heavy coughing, coughing up blood, ringing in the ears, nausea, vomiting, blurry vision, and a burning sensation when injected.<sup>14, 15, 16</sup>

(U) Nicolas Tentoni, from the Department of Pharmacology and Toxicology at the University of Buenos Aires states that BTMPS’s toxicological profile exacerbates the already dangerous nature of fentanyl due to it’s potential to cause “hemodynamic changes and cardiovascular disturbances” as a byproduct of BTMPS’s “blocking of L-type calcium channels and inhibiting nicotinic acetylcholine receptors.”<sup>17</sup>

(U)The UCLA and NIST teams that were conducting research this summer on this new adulterant found that people who use drugs found the drugs with high levels of BTMPS “highly undesirable”.<sup>18</sup> Several fentanyl users on the subreddit forum r/fentanyl also report M30 pills with this new adulterant as very low in quality, with



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some expressing extreme frustration with the various adulterants being added into their fentanyl.<sup>19</sup> There are currently no rapid test strips available for BTMPS, and it is not routinely screened by healthcare professionals.<sup>20</sup>

## Implications

The introduction of an industrial chemical to the illicit drug supply at this speed and scale is unprecedented and concerning. Typical patterns for new substances in the drug market show it appearing in one geographical location and spreading to other areas over a period several months and sometimes even years. In this instance, BTMPS began appearing all over the United States in a period of a few weeks. The speed at which this adulterant spread and gained prevalence strongly suggests that BTMPS is being added into fentanyl high up in the supply chain. Further research is needed to determine why it is present in the fentanyl supply and to understand its effects on human health.

For questions or to provide additional information please contact [ARORSA@gchidta.org](mailto:ARORSA@gchidta.org).

Feedback can be provided at: <https://www.nhac.org/SurveySite/SurveyPage.aspx?LMSID=f55a2108-2866-4ad3-98ea-b86117328e4a>

This report was prepared based on information received from:

<sup>1</sup> [An industrial chemical is being mixed with fentanyl - Los Angeles Times \(latimes.com\)](#)

<sup>2</sup> [WA State Drug Brief: BTMPS: New Substance Found in Community Drug Checking Samples | Addictions, Drug & Alcohol Institute \(uw.edu\)](#)

<sup>3</sup> [Chemical Detail: Bis\(2,2,6,6-Tetramethyl-4-Piperidyl\) Sebacate \(epa.gov\)](#)

<sup>4</sup> [Chemical Detail: Bis\(2,2,6,6-Tetramethyl-4-Piperidyl\) Sebacate \(epa.gov\)](#)

<sup>5</sup> [BTMPS \(Tinuvin 770\) adulterated drugs increasing in reports : r/DrugsData \(reddit.com\)](#)

<sup>6</sup> [Mystery Substance Summer 2024 bis\(2,2,6,6-tetramethyl-4-piperidyl\) \(opioiddatalab.ghost.io\)](#)

<sup>7</sup> [An industrial chemical is being mixed with fentanyl - Los Angeles Times \(latimes.com\)](#)

<sup>8</sup> [An industrial chemical is being mixed with fentanyl - Los Angeles Times \(latimes.com\)](#)

<sup>9</sup> [Rapid emergence of UV stabilizer Bis\(2,2,6,6-tetramethyl-4-piperidyl\) sebacate \(BTMPS\) in the illicit fentanyl supply across the United States in July-August 2024: Results from drug and drug paraphernalia testing \(medrxiv.org\)](#)

<sup>10</sup> Denver Police Department Forensics and Evidence Division direct communication

<sup>11</sup> [Fentanyl pipeline into the U.S. may be drying up : NPR](#)

<sup>12</sup> [BTMPS \(Tinuvin 770\) adulterated drugs increasing in reports : r/DrugsData \(reddit.com\)](#)

<sup>13</sup> [Fentanyl pipeline into the U.S. may be drying up : NPR](#)

<sup>14</sup> [Mystery Substance Summer 2024 bis\(2,2,6,6-tetramethyl-4-piperidyl\) \(opioiddatalab.ghost.io\)](#)

<sup>15</sup> [nmhealth.org/publication/view/general/8989/](#)

<sup>16</sup> [BTMPS \(Tinuvin 770\) adulterated drugs increasing in reports : r/DrugsData \(reddit.com\)](#)

<sup>17</sup> [Risks of BTMPS in Fentanyl Highlight Urgent Need for Change - Investors Hangout](#)

<sup>18</sup> [An industrial chemical is being mixed with fentanyl - Los Angeles Times \(latimes.com\)](#)

<sup>19</sup> [Fentanyl \(reddit.com\)](#)

<sup>20</sup> [BTMPS \(Tinuvin 770\) adulterated drugs increasing in reports : r/DrugsData \(reddit.com\)](#)



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