

# EU Drug Market: New psychoactive substances — Distribution and supply in Europe: New opioids

## Background

New opioids are sold as substances in their own right and as replacements for controlled opioids. They are also mis-sold as or used to adulterate heroin and other controlled opioids for unsuspecting consumers. In some cases, they are used to make fake tablets of opioid analgesic medicines, such as oxycodone. Recent signs of the emergence in Europe of mixtures of benzodiazepines and xylazine with new opioids – seemingly copied from North America – also raise concerns. Occasionally, new opioids are found in non-opioid controlled drugs, such as cocaine.

New opioids are typically found as powders and, to a lesser degree, tablets and capsules. Other physical forms, such as liquids, are also reported but are far less common.

Most use of new opioids is by high-risk drug users, including those who inject heroin and other opioids. A smaller number of people use them recreationally. In the latter case, this includes substances such as tramadol.

New opioids play a relatively small role in the drug market in most parts of Europe. However, many are highly potent and are a particular concern for public health because of the high risk of life-threatening poisoning from respiratory depression. Timely use of the antidote naloxone and supportive care are essential to treat overdoses.

While new opioids started to appear on the NPS market 15 years ago, since then they have been identified more often in some countries and may become more widespread in Europe. Related to this, while sporadic, cases of new opioids mis-sold as or used to adulterate heroin

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and other established opioids may be increasing. The use of synthetic opioids increases the risk of life-threatening poisoning for consumers, and can manifest as outbreaks that occur without warning.

In most cases, changes in the opioid market are driven by supply-side factors. Important factors leading to the use of new opioids include ease of production, lower price, higher potency, ease of transportation and smuggling compared with established opioids, and perhaps especially because the production of heroin is both labour- and time-intensive and reliant on many other factors (Zagorski et al., 2020). In addition, as many new opioids are not controlled under drug legislation, they can be manufactured, sold and transported relatively freely. In some cases, the use of new opioids may be a temporary response to reduced supply or increased costs of heroin and other established opioids.

## Production

The new opioids currently on the market in Europe, such as the nitazene opioids, are thought to be produced in China. Notably, however, carfentanil is thought to come from Russia, while India appears to be an important supplier of tramadol.

The production of synthetic opioids in the European Union has been reported infrequently, and this mostly concerns fentanyl and methadone, rather than new opioids (see Section [Synthetic opioid production in Europe: a marginal phenomenon](#), in EU Drug Market: Heroin and other opioids — Production of opioids).

However, between 2017 and 2021, four sites associated with the production of new opioids were dismantled in the European Union and reported to the EMCDDA. All sites were 'mixing and packaging' facilities, where synthesis of the substances did not appear to take place. Two of these sites processed U-47700 (one in 2017 in Belgium and one in 2018 in Spain), one mixed and packaged 'difluoromethylfentanyl' (sic) (dismantled in 2018 in Germany), and the remaining site is reported to have produced 'fentanyl and analogues' (dismantled in 2019 in Germany). The processing of other new psychoactive substances (namely synthetic cannabinoids) was reported in at least two of the dismantled sites.

Data reported to the EMCDDA revealed one additional site dismantled in Latvia in 2020. This was a small-scale facility where isotonitazene was processed and packaged for sale in the domestic market (EMCDDA, unpublished; UNODC, 2022). Approximately 1.1 kilograms of isotonitazene was seized, with an estimated market value of EUR 110 000 (Latvian Ministry of Interior, 2020).

More recently, in 2023, a Latvian site was dismantled where fentanyl may have been produced. The discovery was made in a rented garage, and the laboratory was already in the process of being dismantled and packed up by the criminals. Almost 2 kg of fentanyl were seized, along with various precursors and chemicals essential for the production of this

substance, and firearms. Information suggests that the drug was intended for the local market and that there may have been issues with manufacturing or distribution (see Photo [Dismantled laboratory in Latvia where fentanyl was seized, March 2023](#)) (Latvian Police, 2023).



**Dismantled laboratory in Latvia where fentanyl was seized, March 2023. Source: Latvian Police.**

While fentanyl derivatives can be produced by relatively well-established methods that are available in the scientific literature (including 'one-pot' procedures that occur at room temperature), the production of carfentanil is generally considered to be more complex, requiring knowledge of chemistry (EMCDDA and Europol, 2018). Common to all synthetic opioids, one of the main risks is accidental exposure from handling solutions and powders containing the final products.

Despite the relatively few detections of facilities producing synthetic opioids in Europe, the production of these substances constitutes a major public health and security threat to Europe (see Box [Factors that could increase the threat of synthetic opioid production in Europe](#) in EU Drug Market: Heroin and other opioids — Production of opioids). Not only are there established access routes for precursor chemicals (including controlled precursors), there is also well-established infrastructure for the production of synthetic drugs in Europe, managed by trained illicit laboratory operators. Recent and historical cases of production of fentanyl and its derivatives in Europe, dating back to at least 1995, highlight the possibility of

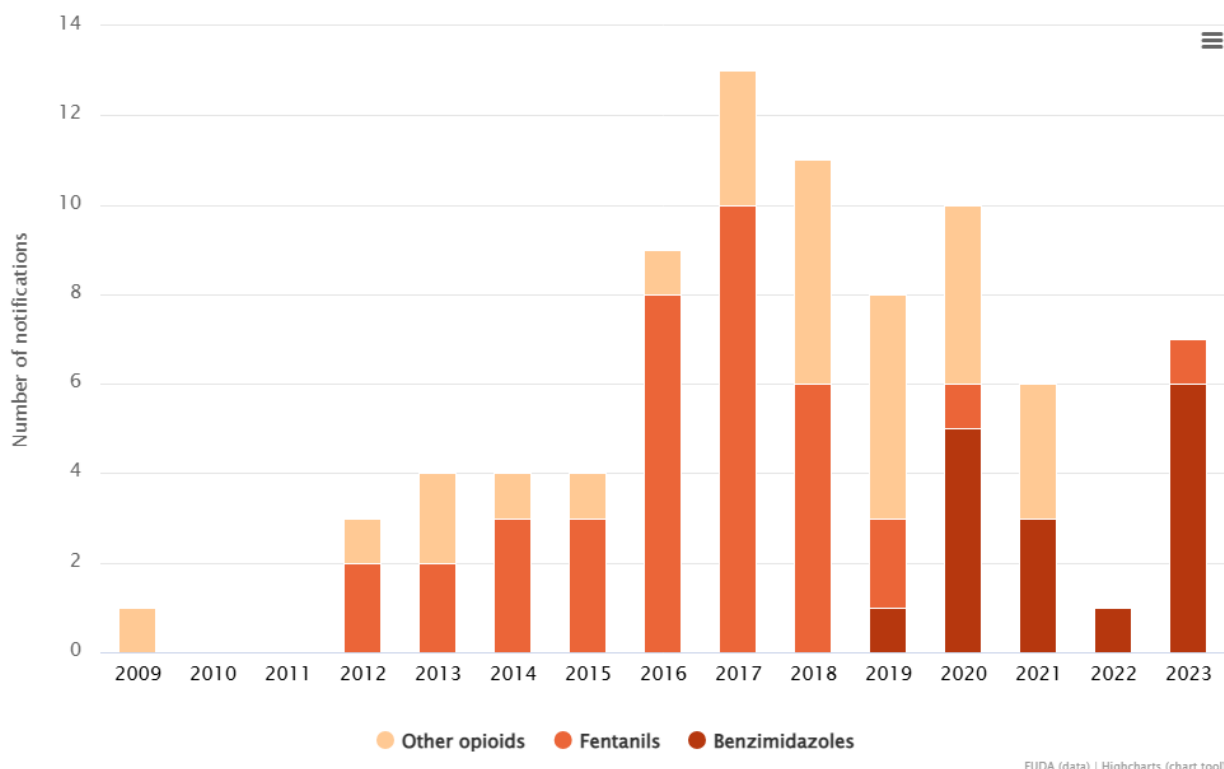
these substances being produced within the European Union. In light of this, signals of possible fentanyl production in the Netherlands are particularly concerning (see Box [Signals of possible fentanyl production in the Netherlands](#) in EU Drug Market: Heroin and other opioids — Production of opioids). Similarly, historical occurrences of etonitazene on the drug market, first in Italy in 1966 and then in Germany in 1987, as well as in other countries outside Europe, also suggest the potential for illicit production of nitazene opioids (EMCDDA, 2020). Global demand and high profits may therefore motivate already operational criminal networks to expand their drug production activities to new synthetic opioids.

## Situation

The EMCDDA currently monitors 81 new opioids, making them the fourth-largest group of substances monitored (excluding the 'others' group). This number includes seven substances that were reported for the first time during 2023 (see Figure [Number and types of new opioids notified to the EU Early Warning System for the first time, 2005-2023](#)).

In 2023, the shift away from new fentanyl derivatives appearing on the market (that started in around 2018-2019) continued with the emergence of the 'nitazenes' (chemical derivatives of 2-benzyl benzimidazole). During the year, six new nitazenes were notified, bringing the total number monitored to 16. Overall, the nitazenes account for 20 % of the total number of opioids monitored by the EU Early Warning System. Of concern is that many of the nitazenes are as potent as fentanyl, if not more so (Ujváry et al., 2021).

## Number and types of new opioids notified to the EU Early Warning System for the first time, 2005-2023

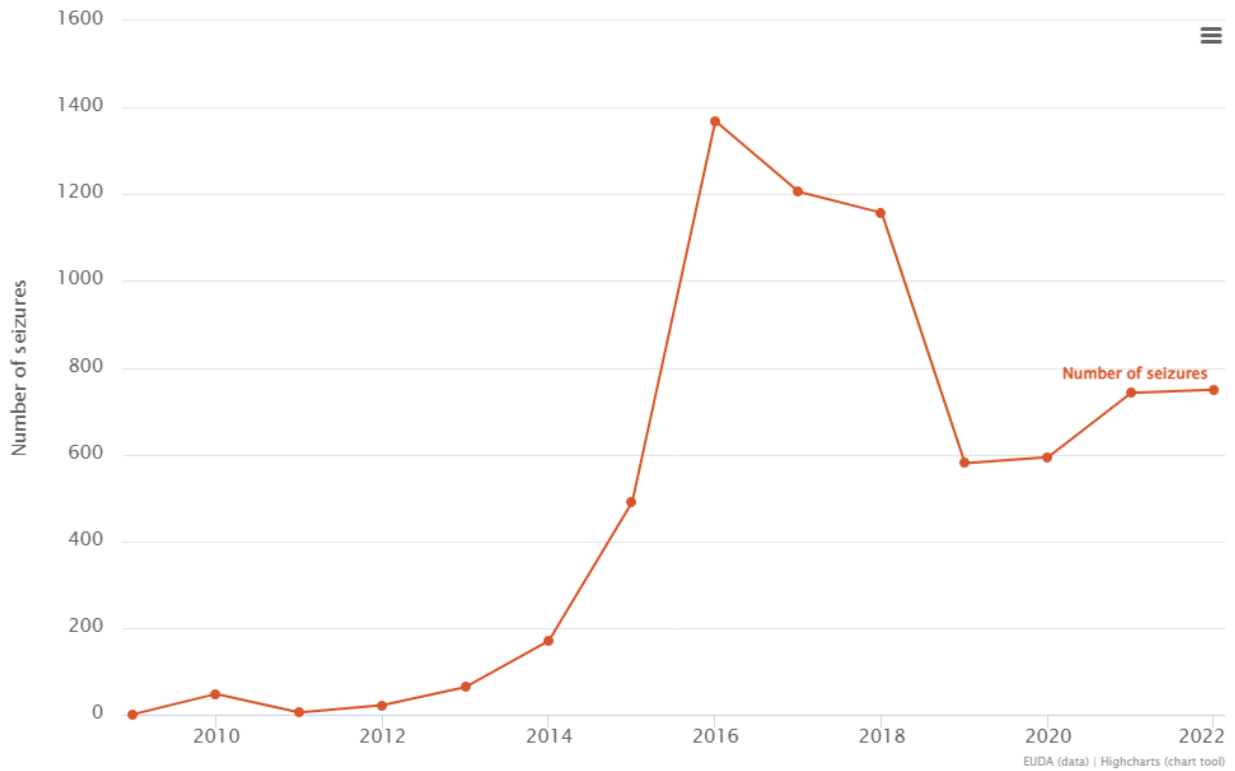


In 2022, almost 750 seizures of new opioids were reported to the EU Early Warning System by Member States, representing around 3 % of the total number of seizures of new psychoactive substances. This amounted to approximately 16.6 kilograms of material (see Figure [Seizures of new opioids reported to the EU Early Warning System: trends in numbers of seizures and quantities seized for all forms reported in weight, by type of opioid, European Union, 2005-2022](#)). In total, 302 (40 %) of the seizures and 8.2 kilograms (49 %) of the material was carfentanil. Reflecting changes in the market and a decline in fentanyl derivatives other than carfentanil, 253 (34 %) of these seizures and 3 kilograms (18 %) of the material seized were nitazenes.

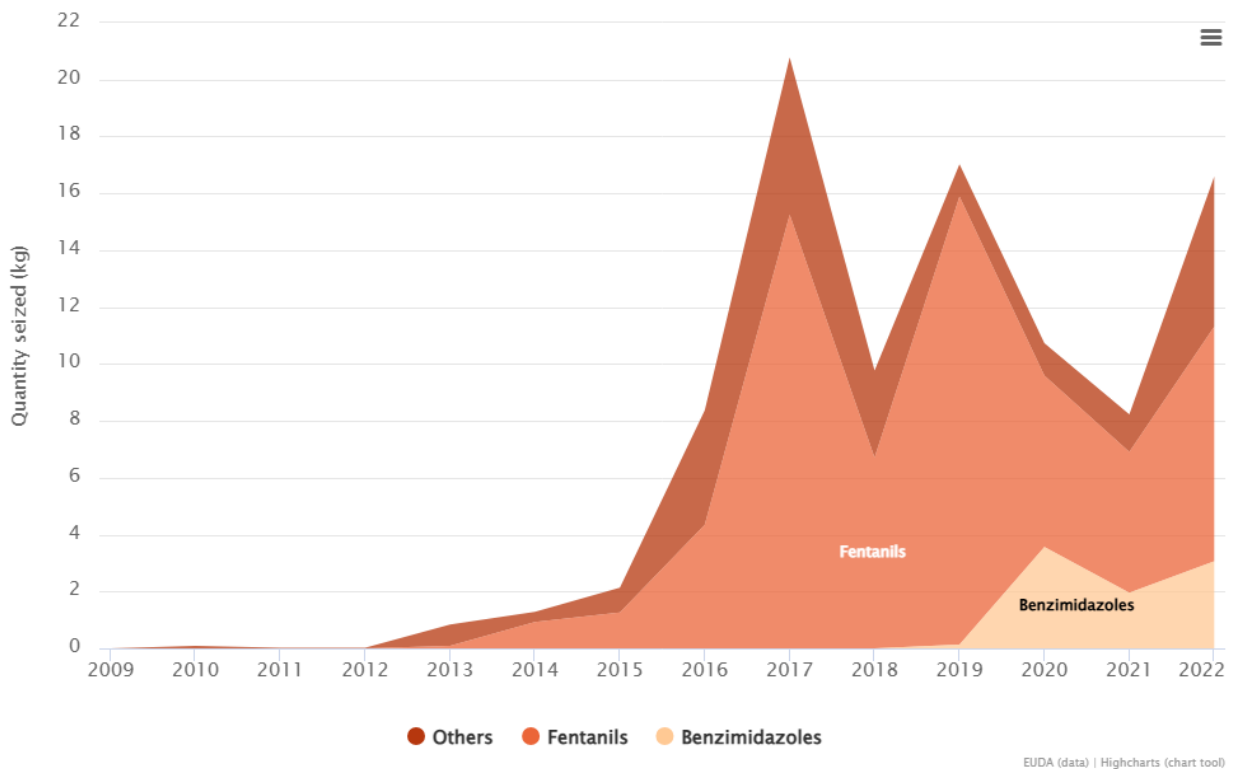
Most of the seizures occurred in northern Europe, particularly the Baltic States. Latvia, Lithuania and Estonia reported 563 (75 %) of the seizures and 10.6 kilograms (64 %) of the material seized (see Figure [Seizures of new opioids reported to the EU Early Warning System by country: numbers of seizures and quantity seized for all forms reported in weight, European Union, 2022](#)).

With the exception of carfentanil, and reflecting a general decrease in the number of countries reporting seizures of fentanyl derivatives since 2019, during 2022 no other seizures of powders containing fentanyl derivatives were reported (separately, almost 6 800 tablets containing the derivative furanylfentanyl were reported in three cases).

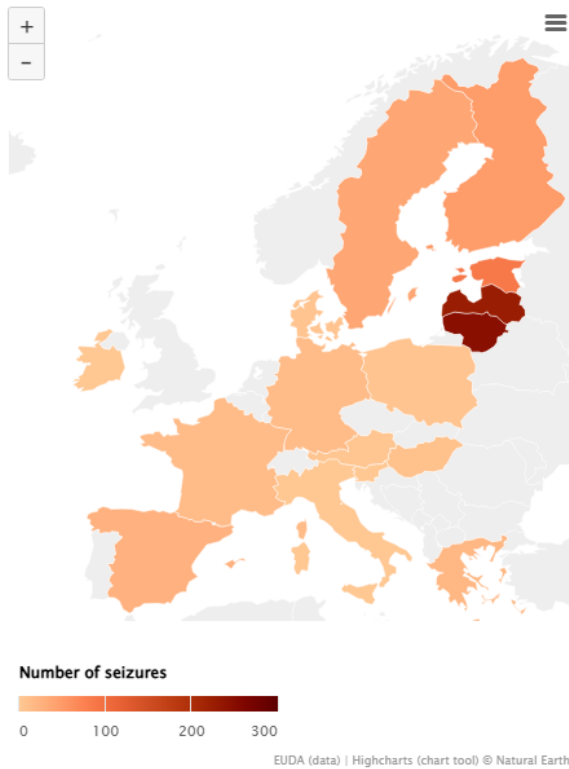
**Seizures of new opioids reported to the EU Early Warning System: trends in numbers of seizures, European Union, 2005-2022**



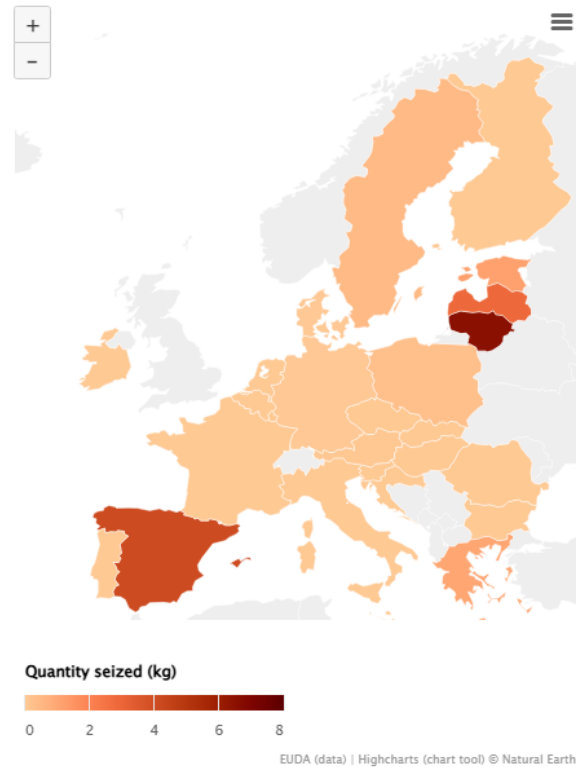
**Seizures of new opioids reported to the EU Early Warning System: quantities seized for all forms reported in weight, by type of opioid, European Union, 2005-2022**



**Seizures of new opioids reported to the EU Early Warning System by country: numbers of seizures, European Union, 2022**

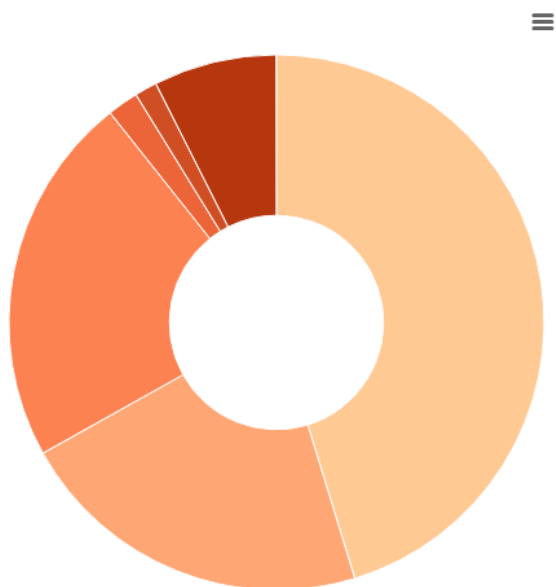


**Seizures of new opioids reported to the EU Early Warning System by country: quantity seized for all forms reported in weight, European Union, 2022**



While the number of seizures of carfentanil was similar in 2021 and 2022, the quantity seized effectively doubled in 2022. Regarding the nitazenes, the number isotonitazene seizures and the quantity seized fell in 2022 compared with 2021, possibly reflecting the international control of this substance, which came into effect in November 2021 (CND, 2021a). Notably, seizures of the replacement substances metonitazene and protonitazene increased in 2022 (see Figures [Top five new opioids seized by number of seizures and quantity seized reported to the EU Early Warning System, European Union, 2021 vs 2022](#)). Following the control of these two substances in 2022 (CND, 2022) and 2023 (CND, 2023), respectively, it is expected that producers and suppliers will switch to other non-controlled nitazenes in due course. The second most commonly seized new opioid in 2023 was tramadol, with around 5 kilograms of material seized.

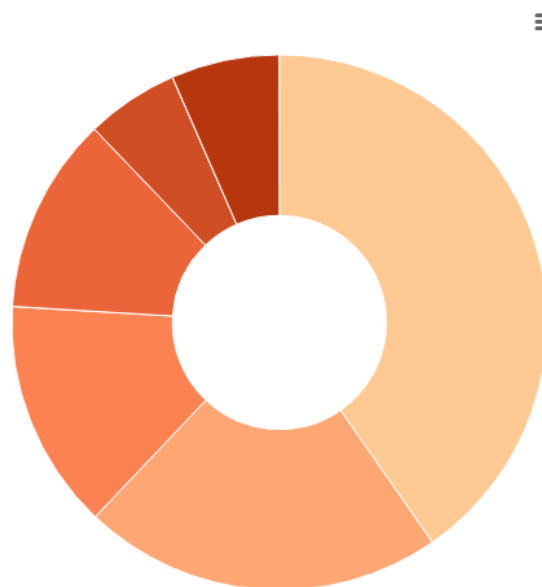
**Top five new opioids seized by number of seizures reported to the EU Early Warning System, European Union, 2021 (740 seizures)**



- Carfentanil
- Tramadol
- Ocfentanil
- Isotonitazene
- ODT
- Other opioids

EUDA (data) | Highcharts (chart tool)

**Top five new opioids seized by number of seizures reported to the EU Early Warning System, European Union, 2022 (749 seizures)**

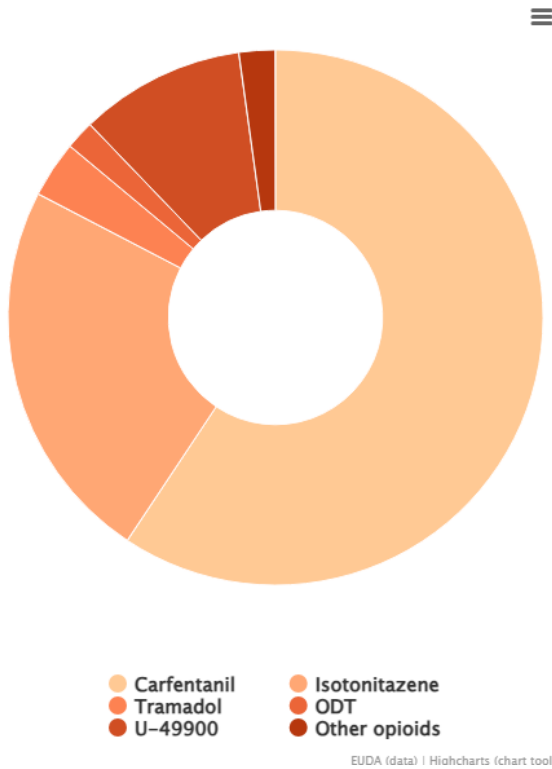


- Carfentanil
- Tramadol
- Isotonitazene
- Tramadol
- Protonitazene
- Metonitazene
- Other opioids

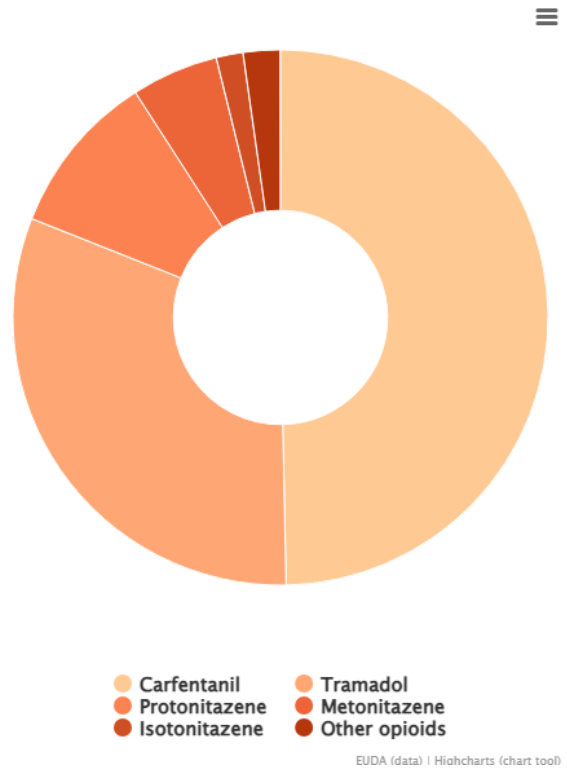
EUDA (data) | Highcharts (chart tool)



**Top five new opioids seized by quantity seized reported to the EU Early Warning System, European Union, 2021 (8.2 kg seized)**



**Top five new opioids seized by quantity seized reported to the EU Early Warning System, European Union, 2022 (16.6 kg seized)**



Despite the relatively small quantities of new opioids seized overall, the high potency of many of these substances means that even small quantities could produce many thousands of street doses.

While most seizures of nitazenes are in northern Europe, their presence on drug markets is probably more widespread, as 21 (78%) of the 27 EU Member States and Norway have reported the identification of one or more nitazene opioids in either seizures, biological samples or collected samples since 2019 (see Figure [Countries in Europe reporting identifications of nitazene opioids, 2019-2023 \(all types of identification\)](#)).

## Countries in Europe reporting identifications of nitazene opioids, 2019-2023 (all types of identification)



## Recent changes to the new opioid market in Europe

In 2022 and 2023, signals from northern Europe, and especially the Baltic countries, have suggested increasing availability of new opioids and a greater number of poisonings, including deaths, associated with these substances – particularly the nitazenes and carfentanil. In Estonia, the nitazenes now account for a significant proportion of overdose deaths, while preliminary data from Latvia in 2023 also suggest that deaths linked to nitazenes are being increasingly detected. In Lithuania, seizures of carfentanil have increased and the drug accounts for a significant proportion of overdose deaths.

In 2022, the Estonian Police reported seizing powders of metonitazene mixed with bromazolam, a new benzodiazepine. They have also reported seizing mixtures containing protonitazene, metonitazene and the animal sedative and analgesic xylazine. These mixtures, known respectively as ‘benzo-dope’ and ‘tranq-dope’, have been a feature of the opioid epidemics in North America for the past few years, and are linked to increases in harms,

including poisonings.

The reason for mixing benzodiazepines or xylazine with opioids is unclear. However, it appears that suppliers, rather than consumers, are adding these substances, and they may be copying similar trends in North America. It has been suggested that they are added to prolong or otherwise alter the effects of the opioids or because they are cheap and easily available, as they are not controlled in most countries. Nonetheless, the true purpose of adding benzodiazepines and xylazine remains unknown.

So far, seizures of benzo-dope have been reported by Estonia and Latvia. In both countries, the same mixtures have also been identified in residues from used syringes.

Overall, the adulteration of opioids with xylazine has been detected in four EU Member States so far. Most detections are in Estonia and Latvia, including in residues from used injecting equipment and in toxicological reports following deaths. In addition, in 2023, 1 kilogram of xylazine powder that originated in Germany was intercepted by Swedish customs.

In 2023, outbreaks of poisonings, including deaths, caused by nitazene opioids were reported in France, Ireland and the United Kingdom. In France and Ireland, it appears that the nitazenes were mis-sold as heroin. The outbreak in France was limited, but involved a small number of non-fatal overdoses and one death. The outbreaks in Ireland occurred in Dublin in November 2023 and Cork in December 2023. These were more extensive than the outbreak in France, and suspected to involve 57 and 8 non-fatal overdoses in Dublin and Cork, respectively (it is unknown whether the outbreaks involved deaths).

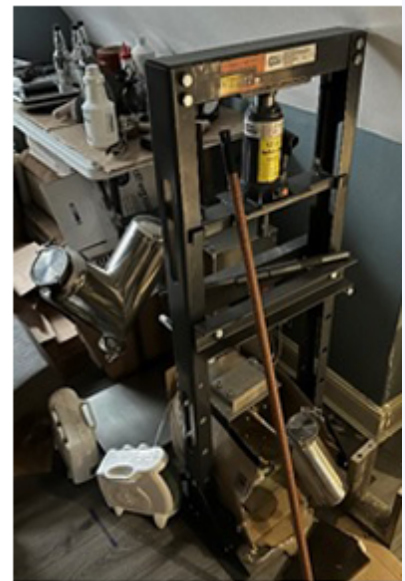
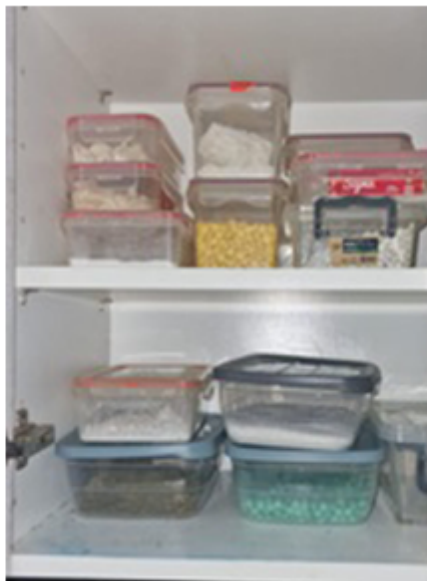
In the United Kingdom, alongside many suspected non-fatal overdoses, at least 65 deaths have been confirmed. In these outbreaks, heroin adulterated with nitazene opioids and fake opioid (oxycodone) and benzodiazepine (Xanax and Valium) medicines containing nitazenes were implicated (see Box [150 000 tablets containing nitazene opioids seized in the United Kingdom, October 2023](#)). These outbreaks follow a similar outbreak in southern England in 2021, which was linked to the adulteration of heroin with isotonitazene and the possible contamination of cocaine with this potent opioid (Advisory Committee on the Misuse of Drugs, 2022; De Baerdemaeker et al., 2023).

### **150 000 tablets containing an unspecified nitazene opioid seized in the United Kingdom, October 2023**

Since July 2023, the United Kingdom has experienced several outbreaks of overdoses, including deaths, involving nitazene opioids. These have been linked to the adulteration of heroin as well as fake oxycodone tablets containing these potent opioids.

In October 2023, police and border force raided several addresses in London as part of a national UK law enforcement effort to investigate the increase in availability of synthetic opioids in the drug supply (Metropolitan Police, 2023). They recovered approximately 150 000 tablets containing an unspecified nitazene at a processing site. A pill-pressing machine, as

well as a substantial amount of controlled drugs, a firearm, and over GBP 60 000 in cash and GBP 8 000 in cryptocurrency stored on various hard drives were also seized, along with a large quantity of mobile phones and laptops. It is suspected the tablets were sold via the darknet, using encrypted chat applications and social media. Eleven people were arrested between 21 August and 21 November.



**Tablets containing an unspecified nitazene opioid, along with other drugs and chemicals, a mixing machine and a pill-pressing machine, seized by police in the United Kingdom in October 2023. Source: Metropolitan Police, United Kingdom.**

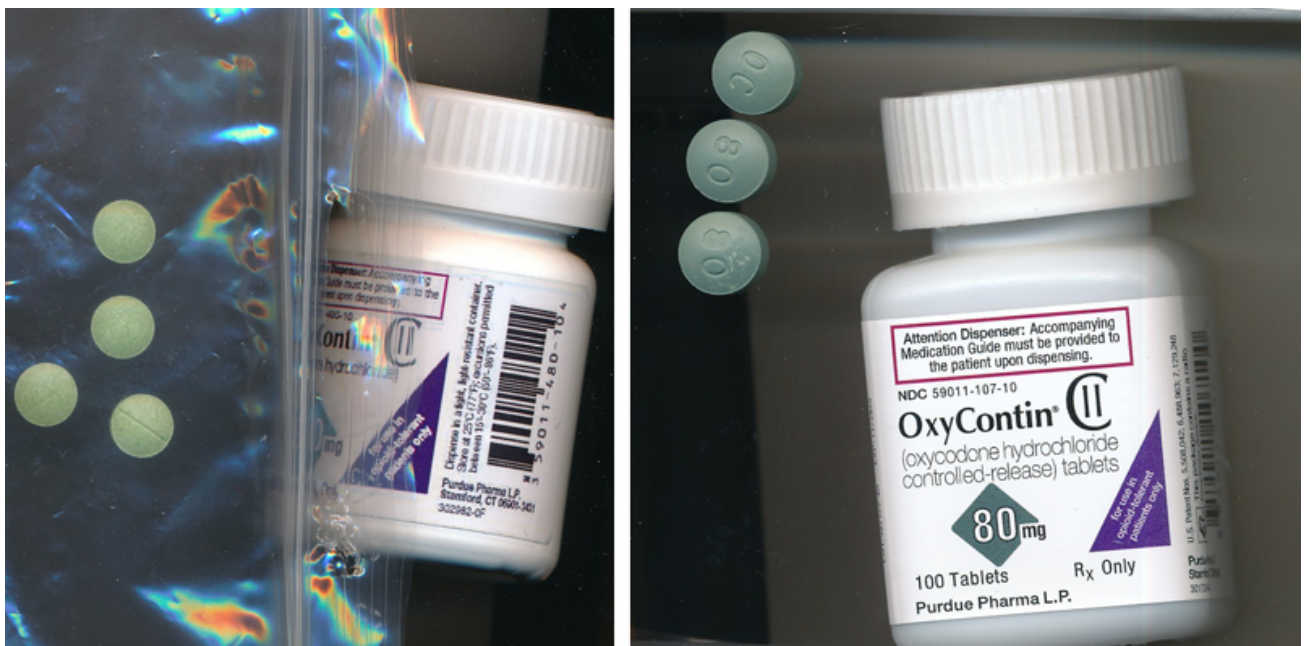
Tablets containing new opioids pose a high risk of poisoning because they are highly potent substances, can contain a high dose, and are often presented as fake medicines such as oxycodone without consumers knowing their real content.

So far, six EU Member States and Norway have reported seizures of tablets or capsules containing nitazene opioids. In 2022, a total of 430 tablets and capsules were seized, compared with 189 seized in 2021. In the majority of reported cases, there is no contextual

information available on whether these tablets were fake medicines or not.

Despite this lack of information, fake oxycodone tablets containing metonitazene, etonitazepyne and the related substance brorphine have been reported in at least four countries (Ireland, Slovenia, Sweden, Norway) between 2021 and 2023.

In some cases, these fakes were sold on the darknet and were advertised as containing oxycodone. In the cases reported by customs in Ireland and Norway, the reported country of origin was the United Kingdom. In two recent cases from 2023, reported by Swedish customs, fake oxycodone tablets were seized from individuals travelling from Poland (see Photos [Fake oxycodone tablets containing metonitazene, seized in Sweden in 2023](#)).



**Fake oxycodone tablets containing metonitazene, seized in Sweden in 2023. Source: Swedish Customs Laboratory.**

Also in 2023, the Finnish Police reported the seizure of fake Subutex (buprenorphine) tablets containing metonitazene (see Photo [Fake Subutex tablets containing metonitazene, seized in Finland in 2023](#)).



**Fake Subutex tablets containing metonitazene, seized in Finland in 2023. Source: Elisa Kohtamäki, National Bureau of Investigation, Finland**

Cases of poisonings involving such fakes have been reported in Europe. The prevalence of fake oxycodone and buprenorphine tablets containing nitazene opioids in Europe is unknown. Given the nature of the international supply chains for such fakes, such as sales on the darknet, their availability elsewhere in Europe cannot be ruled out.

All of the source data used in graphics and data tables may be found in our [Data catalogue](#).

## References

Consult the list of [references](#) used in this module.

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