



EUROPEAN DRUG TRENDS MONITOR



About this report

This is the second issue of the Global Initiative Against Transnational Organized Crime's (GI-TOC) European Drug Trends Monitor, an output of our Observatory of Organized Crime in Europe. This series of bulletins tracks developments in European drug markets to provide an analysis of trends in availability, pricing and criminal dynamics across 12 major cities.

European drug markets are undergoing considerable changes, triggered by the confluence of several major trends in supply and demand. These include an oversupply of cocaine, a growing crack epidemic, significant shifts in the production of opium in Afghanistan, the gradual emergence of synthetic opioids, the partial legalization of cannabis in some countries and the rise of synthetic stimulants such as synthetic cathinones, especially

against the backdrop of Russia's war against Ukraine. At the same time, we seek to document the growing illicit market of diverted or falsified prescription drugs, such as painkillers, tranquillizers and anaesthetics.

As drug markets rapidly transform, with consequences for public health, criminal dynamics and related violence, the European Drug Trends Monitor seeks to provide up-to-date analysis to inform public debate and supplement data from governments and international organizations. Trends are being monitored in Antwerp, Barcelona, Bucharest, Eindhoven, Hamburg, Istanbul, Kyiv, London, Marseille, Milan, Prague and Stockholm. In each city, information is gathered on drug availability, retail and wholesale prices, and criminal dynamics in trafficking activities.

The monitor relies on field research, analysis of data provided by authorities, information gained through interviews, and tracking of media reports and incidents such as drug seizures. It also draws on the monitoring and analysis of hundreds of social media channels and encrypted messaging apps such as Telegram and Signal, as well as dozens of dark web marketplaces where illicit drugs – alongside diverted, falsified and counterfeit prescription drugs – are being commercialized.¹ Discussions on dark web forums where users, producers and sellers openly exchange information and tips provide valuable insights on emerging trends, supply chains and distribution methods. The field research findings are referred to in the text but are not referenced throughout.

The European Drug Trends Monitor completed its second round of data gathering and field research in January 2025. This issue summarizes key findings for two sets of substances that are of major concern: synthetic cathinones and ketamine. It also provides an update on captagon and captagon-branded stimulants, given the latest developments in Syria. There are methodological limitations and caveats on how to interpret the findings: no toxicological analysis of the surveyed substances can be conducted, therefore caution needs to be applied in analyzing the data; the analysis lacks comparisons due to the absence of previous data; and the research focuses only on the supply of illicit drugs, not the potential demand for them, limiting explanations of the size of drug markets.

KEY TREND 1: Ketamine is becoming increasingly popular.

Ketamine is widely available across Europe, especially in nightlife settings and self-medicating communities. Dark web platforms supply bulk ketamine at significantly lower prices than social media and nightlife environments.

Ketamine is a dissociative anaesthetic that is widely used in human and veterinary medicine. In addition to its pain-relieving properties, it is increasingly used as a therapy tool for treatment-resistant depression and promoted through celebrity use.² In Europe, its medical use as an anaesthetic is mostly limited to veterinary medicine and specific emergency and paediatric settings, but in the global south it is a common surgical anaesthetic.³ In lower dosages, ketamine produces stimulant and psychedelic effects that have made it popular among recreational drug users, especially in nightlife settings. It is perceived to be less risky than substances such as opioids because it does not cause respiratory failure.⁴ Nonetheless, there are frequent reports of adverse health effects, especially in high frequency user populations.⁵

Ketamine is not subject to international scheduling within the UN drug control conventions. The International Narcotics Control Board and some UN member states of the Commission on Narcotic Drugs have made several attempts to schedule ketamine under international control.⁶ However, civil society⁷ and the World Health Organization's Expert Committee on Drug Dependence⁸ have opposed scheduling. The key argument was that ketamine is an essential medicine and plays a key role in medical procedures in low- and middle-income countries.

In Europe, ketamine seizures started to signal a growing non-medical market in the 1990s.⁹ The use of ketamine has proliferated in nightlife and chemsex settings (the consumption of stimulants while engaging in sexual activity), and as a means of self-medication for depression.¹⁰ The latest available wastewater

analysis data collected by the European Union Drugs Agency (EUDA) in 2023 indicates growing ketamine use in 12 of 22 participating cities, with locations in Belgium, France, the Netherlands and Spain displaying the highest levels of use. Within the context of general consumption patterns, however, ketamine use is low,¹¹ in common with many other recreational drugs, ketamine residue in wastewater shows a higher concentration over weekends in a large share of the cities examined.¹²

Recently, some European countries have reported an increase in ketamine prevalence data and seizures. France reports a 4.8% lifetime prevalence of ketamine use among 25- to 34-year-olds and a statistically significant increase in ketamine use over the past five years.¹³ In the UK, a ketamine use prevalence of 1.3% is reported in 16- to 24-year-olds.¹⁴ The Netherlands has identified a growing prevalence among young people in nightlife settings¹⁵ and Spain reports a lifetime prevalence of 0.8%.¹⁶

Single seizures have substantially increased across Europe in the past two decades. In 2006 there were fewer than 500 seizures but in 2022 there were about 3 500.¹⁷ The amount seized grew from 0.87 tonnes in 2021 to 2.8 tonnes in 2022.¹⁸ While this was less than 10% of the total seized in East and South East Asia,¹⁹ for example, the trend is clearly upwards.

Although ketamine has played a noticeable role in recreational settings for some time, its growing use as a legitimate depression medication seems to have contributed to its enhanced popularity. Circumventing limited access to ketamine-assisted depression treatment and strict medical requirements, users seem increasingly to tend towards self-medication and barely restricted online access, as research and media reports show.²⁰ The general perception uncovered by field research was of increasing popularity and demand across western Europe especially, reflecting ketamine's emergence as 'Gen Z's drug of choice'.²¹

However, unlike opioids and cocaine, ketamine in Europe does not play a major role in traditional drug user settings and is seldom trafficked at physical drug market hotspots. In Hamburg, Marseille and Milan, for example, it is rarely available on the streets; its supply is limited to social media channels, the dark web and party settings where face-to-face retailing does happen. This is a different pattern from injecting drug user settings in South America, where ketamine is reportedly used.²²

The high availability of ketamine online could be regarded as surprising when prevalence rates remain low. However, this apparent anomaly may be explained by a general tendency of under-reporting in prevalence surveys and by the absence of ketamine in traditional drug market settings, contributing to lower visibility compared with other drugs.

Our latest research shows that ketamine is widely available across most of Europe, with medium to low availability reported only for Kyiv. It is much cheaper than cocaine and has perceived higher levels of purity, as reported by users and drug checking services.²³ Its relatively low price ranges appear to apply for both retail and wholesale transactions. For example, in London, in January 2025, according to law enforcement sources, a kilogram of ketamine

cost £4 000–£6 000, compared with £25 000–£30 000 for a kilogram of cocaine.

Our field research shows that with the exception of the UK, social media channels offer ketamine at considerably higher prices than dark web marketplaces, where bulk trafficking is more common in most countries.

In the monitored online and offline drug markets, ketamine was available in five sometimes overlapping forms: powder ('sugar'); small crystals ('needles'); larger crystals ('rocks' or 'shards'); combined preparations commonly known as 'pink cocaine', 'tucibi' or 'tusi' (or wrongly referred to as 2C-B),²⁴ frequently containing MDMA, methamphetamine and other substances; and liquid (pharmaceutical vials diverted from the legal supply chain or clandestinely produced spray formulations).²⁵ The term 'shards' appears to be used for both small and large crystals, making the size differentiation not always clear-cut. The availability of ketamine-only pills, though sometimes reported,²⁶ could not be confirmed during the period of investigation, while in some cities 'tucibi' pills were available but considered rare. The presence of ketamine-infused drinks ('k-powdered milk' or 'happy water') or lollipops, now emerging in Asia,²⁷ could not be confirmed.

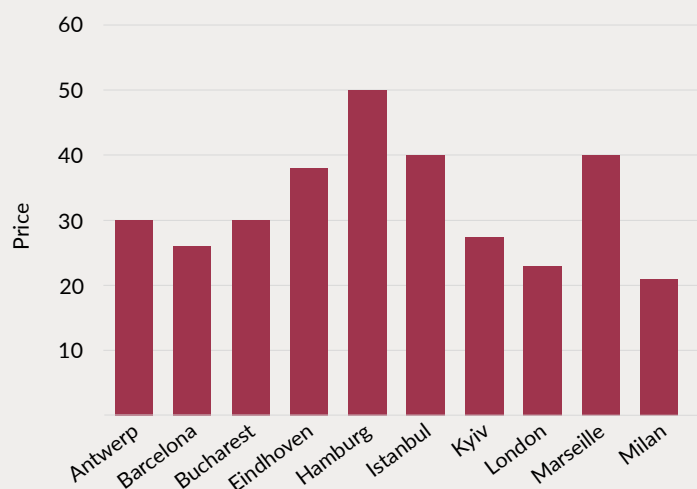


FIGURE 1 Ketamine, € per gram (mean) in selected cities, online and offline prices.

SOURCE: GI-TOC field research findings, December 2024 and January 2025

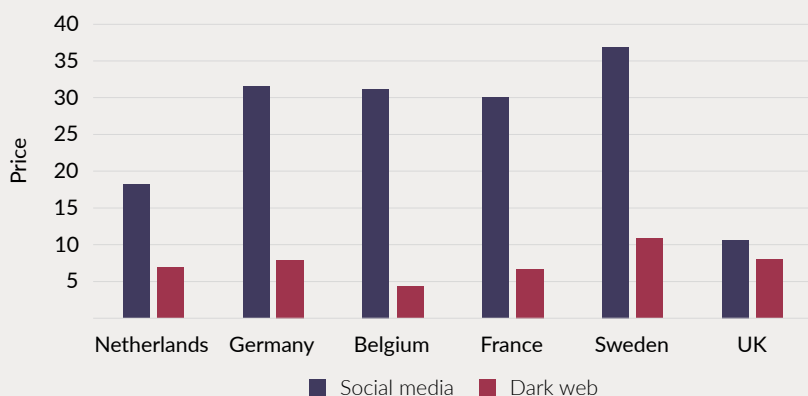


FIGURE 2 Ketamine, € per gram (mean) on social media and dark web platforms in selected countries.

SOURCE: GI-TOC field research findings, December 2024 and January 2025



'Sugar': a February 2025 Swedish vendor's advert on a dark web marketplace offers ketamine in a fine, crystalline powder, with shipment across Europe reportedly taking 4-8 working days.



'Needles': a February 2025 advert from a UK Telegram vendor, with DHL express shipping available for buyers in western Europe. The vendor claims to have imported the ketamine directly from India.



'Rocks': a March 2025 Dutch vendor's advert on a dark web marketplace. The image includes an October 2021 cover of the German weekly *Der Spiegel*, which refers to the Netherlands as a 'narco state'.



'Tucibi': a January 2025 Dutch vendor's advert on a dark web marketplace offering tucibi claimed to contain ketamine, MDMA and 2C-B. The listing offers worldwide shipping, with prices starting at €8 per gram.

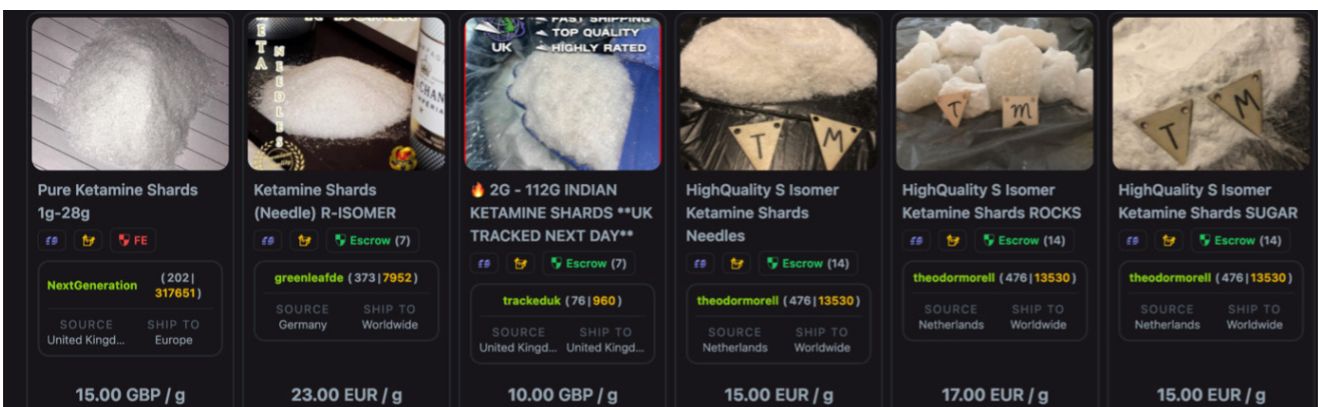


Pharmaceutical vials and non-pharmaceutical nasal spray from German and Swiss vendors on a dark web marketplace, January 2025.

The most common means of ketamine consumption is snorting, but it can also be injected and smoked. Needles, shards and rocks are usually crushed into powder before snorting.

On dark web marketplaces, self-made nasal sprays are also occasionally on offer.²⁸ Liquid ketamine, offered in vials, was available on dark web marketplaces as well as in street-based drug market settings in Prague and Istanbul. It was uncommon in the street-based drug markets of other European countries.²⁹

In terms of quality, needles and especially rocks/shards are perceived by users to have higher levels of purity and are therefore pricier on online markets. The specific variety of ketamine (S-ketamine/esketamine, R-ketamine/arketamine) also plays a role in pricing, with the more potent S-ketamine significantly more expensive than non-specified ketamine. In most cases, however, and especially on social media channels, the variety was not identified.



Different forms of ketamine advertised on a dark web marketplace, February 2025.

KEY TREND 2: Wholesale supplies of ketamine appear to come directly from Asia, while the Netherlands is a major ketamine hub in Europe.

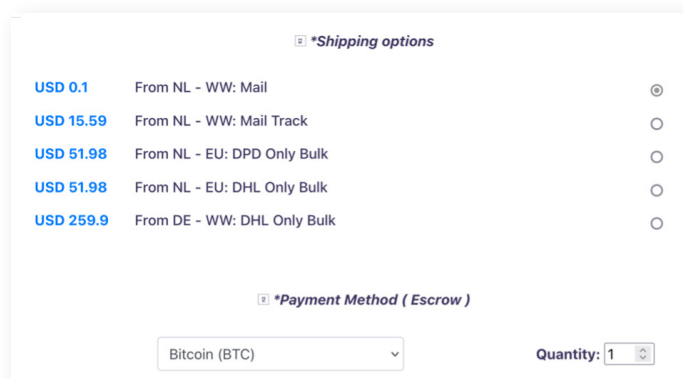
What was once a secondary drug market reliant on ketamine diverted from licit sources has become a low-risk and organized criminal enterprise supplying a growing user population. Dark web marketplaces appear to play a role as bulk suppliers, offering shipment of major quantities directly from Asia or through nearshored local brokers. It is unclear how much production takes place in Europe.

While our field research found limited evidence of ketamine being diverted from licit sources, the dominance of sugar, needles and shards/rocks in bulk quantities in online marketplaces suggests the development of a separate value chain. The European ketamine market was long considered a secondary market based on diversion from licit sources, but lately there are signs of a highly consolidated and professionalized illicit market that has been taken over by organized crime.³⁰

Official reports³¹ hint at India as a principal country of origin of ketamine in Europe, with Pakistan and China playing minor roles. India is also considered a major supplier of illicit ketamine in Asia.³² Field research suggests that European vendors operate as the supply chain link between wholesale supply from Asia and retailing in Europe, but the actors and structures behind this business remain unclear. Like the overall market for prescription drugs,³³ these new booming online drug markets remain poorly understood.

According to our field research, Chinese gangs formerly dominated the illicit ketamine market in Milan when it was confined to Asian user settings. With the expansion of the market, supply is now reported to be sourced from north of the Alps. In the UK, ketamine trafficking has been reported to be predominantly run by domestic organized crime groups with links to the Netherlands. Beyond such isolated accounts, the organized crime structures behind the new market remain unclear, and few cases make it to court. The same applies to trafficking in ketamine precursors, another topic on which official data is weak.³⁴ A European police forensic expert also confirmed that seized ketamine is not analyzed in a standardized way to determine its origin in licit or illicit markets, a major challenge when seeking to understand trends.³⁵

The EUDA reports that ketamine imports may be processed through shell companies in Europe, including some in the Netherlands and Belgium.³⁶ Beyond potentially diverted official imports, the key links between Asian bulk supply and European retail demand are dark web marketplaces. Compared to traditional drug markets, the ketamine wholesale market appears to



Shipping options on a Dutch dark web ketamine platform, February 2025.

be heavily supplied by online vendors, enabling local suppliers to acquire significant quantities through postal services. Further down the chain, the monitored social media marketplaces, predominantly on Telegram, are strongly localized and function at the city level through ad hoc delivery.

As potentially signalled by the comparably modest prices for ketamine across Europe, the dark web trafficking pipeline is a low-risk endeavour for organized crime. While policing the maritime cocaine trade from Latin America is a top priority for western European authorities, maritime trade and air freight from Asia, as well as the parcel business, are subject to less scrutiny.³⁷ Directly sourcing synthetic drugs such as ketamine from Asia is therefore considerably less risky than traditional trafficking in bulky plant-based drugs, considering the sheer amount of parcels from Asia arriving to Europe daily. For example, the DHL hub alone at Leipzig Airport in Germany, a key node for European commercial trade with Asia, handles more than 2 500 tonnes of freight per day.³⁸ The increasing risk of detection of localized social media markets may explain the price gap between dark web markets – operating through low-risk mailing services – and Telegram channels that offer in-person deliveries.

As with other dark web marketplaces, Bitcoin is still a dominant payment method, and Monero's better protection of privacy has made it equally popular. On more localized social media and encrypted messaging apps, payment options tend to be more flexible. Bitcoin, Monero and other cryptocurrencies are popular but on Telegram the built-in payment option (Tether) is often used. Cash payment upon receipt is also common, especially for local deliveries. Once trust has been built between sellers and buyers – by frequent orders, for example – some sellers also accept direct money transfers through services such as PayPal, Revolut, or Tikkie in the Netherlands. The encrypted payment methods further reduce the risk of detection.

Dutch and to a certain degree East Asian platforms, mostly from China and Hong Kong, are the most common dark web bulk suppliers for ketamine identified in our monitoring effort. These platforms frequently offer 'Indian ketamine', terminology that seems to be used to invoke a perception of higher quality, comparable to the use of similar phrasings in the same marketplaces for substances such as 'Mexican meth', 'Afghan heroin' or 'Colombian cocaine'.

There is some evidence to support the existence of illicit ketamine production facilities in Europe. Most identified sites have been in the Netherlands, with one in Belgium.³⁹ The significance of these facilities in the European illicit ketamine marketplace is unclear. In general, poor access to precursor chemicals was thought to be a disincentive to localized synthesis attempts, but it is evident that the illicit production of ketamine may have become a viable enterprise on the continent.⁴⁰ Bearing in mind the established synthetic drug production infrastructure in the Netherlands and Belgium – particularly for MDMA and amphetamines – and the strong role Dutch suppliers play in online markets for ketamine, it is likely that a share of the illicit ketamine supply sold and used in European cities is produced at clandestine local labs.

Europe also appears to be a point of origin and transit for ketamine trafficking, particularly through passenger flights. There have been recent cases of ketamine being seized from transatlantic

passengers leaving European countries for North American destinations.⁴¹ There have also been cases of ketamine being trafficked from Germany and the Netherlands to Vietnam and South Korea, a reversed pattern from what has been observed on European dark web markets.⁴²

The growing popularity of ketamine and the blending of licit and illicit markets has become a public health challenge across Europe. At the same time, the dominance of online trafficking and supply channels creates severe obstacles for traditional policing methods. The illicit ketamine business is lucrative, low-risk, and becoming visibly more professionalized and organized. A new type of transnational organized crime has emerged that supplies the booming ketamine market in Europe and beyond. It appears to rely on a mostly digitalized supply chain, making traditional interventions from authorities difficult and enhancing under-reporting.

Experiences of a rapidly growing ketamine market in East and South East Asia show that the drug may become a critical challenge in Europe if authorities do not adapt their strategies in monitoring and controlling supply. The interplay of potential domestic production, import diversion, dark web bulk supply and social media commercialization is barely understood. Further research efforts are needed to decipher a growing illicit market and a new form of organized crime.

INDIAN KETAMINE NEEDLES
Dissociatives » Ketamine ★ 5.0/5 1 reviews

15.00 EUR Unit Price	g Unit	1 Minimum quantity
997 In stock	Payments accepted	Escrow (14) Payment option

Shipping from **Netherlands** to **Worldwide**
Shipping options*
Free Shipping - FREE

Quantity*

Bulk prices

≥ 5 g	10.00 EUR/g = 50 EUR
≥ 10 g	9.00 EUR/g = 90 EUR
≥ 20 g	8.00 EUR/g = 160 EUR
≥ 50 g	7.00 EUR/g = 350 EUR

DutchFlavours
Last activity: A day ago

Message

99 Sales	1642 H. Sales	4.7 Rating	6 Level
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Does the vendor not follow the rules? Report it!

Ketamine Needles Isomer India / from Tripper
Dissociatives » Ketamine ★ 3.0/5 2 reviews

8.00 EUR Unit Price	g Unit	1 Minimum quantity
99974 In stock	Payments accepted	Escrow (7) Payment option

Shipping from **Germany** to **Worldwide**
Shipping options*
Germany Domestic - 2.00 EUR

Quantity*

1

Bulk prices

≥ 5 g	3.50 EUR/g = 17.5 EUR
≥ 10 g	3.40 EUR/g = 34 EUR
≥ 25 g	2.84 EUR/g = 71 EUR
≥ 50 g	2.76 EUR/g = 138 EUR
≥ 100 g	2.72 EUR/g = 272 EUR
≥ 250 g	2.58 EUR/g = 645 EUR
≥ 500 g	2.39 EUR/g = 1195 EUR
≥ 1000 g	2.22 EUR/g = 2220 EUR

Tripper
Last activity: A few hours ago

Message

54 Sales	2487 H. Sales	3.8 Rating	3 Level
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Does the vendor not follow the rules? Report it!

Advertisements for ketamine on dark web platforms in the Netherlands and Germany, February 2025.

KEY TREND 3: Synthetic cathinones are making their way into European markets.

Even without comprehensive and up-to-date seizure data from law enforcement, it is clear that synthetic cathinones are widely available on social media and dark web platforms. Their low prices in comparison to traditional stimulants, and their high perceived quality, are driving increased use and dependency.

In the last decade, Europe has witnessed a significant rise in the presence and use of synthetic cathinones, a class of psychoactive substances that mimic the effects of 'traditional' amphetamine-type stimulants. Among these, α -PVP (α -Pyrrolidinopentiophenone, or alpha-PVP), 3-MMC (3-methylmethcathinone, or metaphedrone), 3-CMC (3-chloromethcathinone, or clophedrone) and 4-MMC (4-methylmethcathinone, or mephedrone) have been the most seized varieties. First appearing in Europe in 2004,⁴³ these substances have received particular attention from law enforcement authorities due to their increased proliferation after the Russian invasion of Ukraine in February 2022 (see key trend 4 for more).⁴⁴

Known sometimes as 'salts', synthetic cathinones are substitutes for stimulants such as amphetamines, cocaine and MDMA. They are often mis-sold as these drugs to unsuspecting users. Typically powders, they are sometimes used to adulterate MDMA pills.⁴⁵

Ten years ago, media outlets in the US widely covered a growing synthetic cathinone market there, identifying China as the source of the drugs.⁴⁶ A decade later, the evolution of synthetic cathinone markets in Europe has been under-researched. Little data of consequence exist on production locations, commodity supply chains, prices, purity and the potential diversities of chemical composition. The latest 2024 EUDA update on seizures of such substances offers data analysis only until 2022.

Recent information on patterns of use is also scarce. In 2022, the European Syringe Collection and Analysis Project Enterprise reported that synthetic cathinones were commonly detected in syringes collected in cities such as Paris, Budapest, Helsinki, Prague, Tallinn, Cologne and Dublin, but no further analysis followed.⁴⁷ The use of synthetic cathinones in European cities, particularly of 4-MMC in London and 3-MMC in France,⁴⁸ has traditionally been associated with chemsex communities. As mentioned above, the term indicates the consumption of primarily stimulants while engaging in sexual activity.⁴⁹

The number of synthetic cathinones notified to the European Union Early Warning System for the first time each year since their first detection in 2005 fell from a peak of 31 substances in 2014 to 10 in 2019 and three in 2023.⁵⁰ Law enforcement authorities in Europe were particularly successful in the 2010s in seizing synthetic cathinones of Chinese and Indian origin at EU borders (particularly in the Netherlands and Spain),⁵¹ and to a lesser extent focused on production in the EU, with the exception of Poland and the Netherlands (see more in the next section). In 2022, 3-CMC accounted for 63.4% of the total volume of synthetic cathinones seized in the EU, while α -PVP and 4-MMC together accounted for only 2.41%.⁵² Once imported, the substances would be packaged and distributed across Europe.⁵³ GI-TOC research conducted on Telegram and dark web portals for this report suggests that 3-CMC marketed as 'made in India' is still available on online markets in the Netherlands and Germany.

Chemically masked derivatives of synthetic cathinones are used to evade law enforcement detection at national borders. Typically, these substances are altered into non-controlled forms and later converted back into the active drug. For example, in 2019 Dutch police seized 350 kilograms of masked 3-MMC, imported from India as N-acetyl-3-MMC.⁵⁴ This derivative could be converted back into 3-MMC using acid hydrolysis. This practice is common in the trafficking of synthetic substances.⁵⁵

Our research on Telegram channels and the dark web indicates that synthetic cathinones are predominantly available online in the Netherlands and Germany, with the Netherlands playing a key logistical role in supplying these drugs to Belgian, French, Swedish and British markets. It would appear likely that the extensive online offerings available on these forums, paired with the ease of geographic trans-shipment and the relatively important production roles of the country, make sourcing from the Netherlands popular for these adjacent populations.

The price per unit decreases significantly when purchasing larger quantities. This suggests a high level of availability and may provide an incentive for middle-level traffickers to stock these substances due to favourable wholesale prices compared to retail prices. Additionally, users might be encouraged to buy more for less.

SUBSTANCE	RETAIL PRICE (per gram)					
	Netherlands	Germany	Belgium	France	Sweden	United Kingdom
3-MMC	€23	€40	€20	€40	€30.5	€35
3-CMC	€30	€25	N/A	N/A	€35	N/A
4-MMC	€30	€40	N/A	N/A	N/A	€20

FIGURE 3 Synthetic cathinone mean retail prices per gram on Telegram channels and dark web platforms in selected countries.

SOURCE: GI-TOC field research findings, October 2024–January 2025

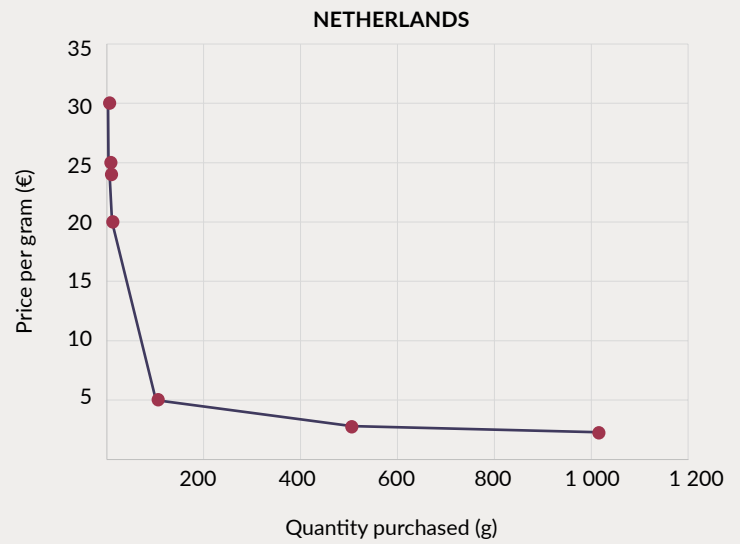
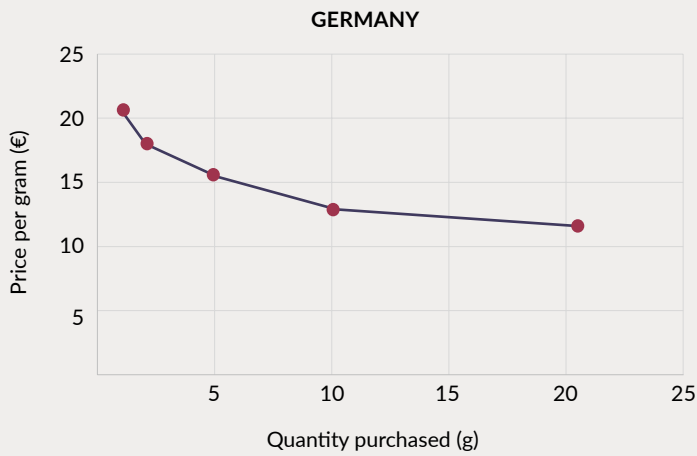


FIGURE 4 3-CMC prices on Telegram and the dark web in Germany and the Netherlands.

SOURCE: GI-TOC field research findings, October 2024–January 2025

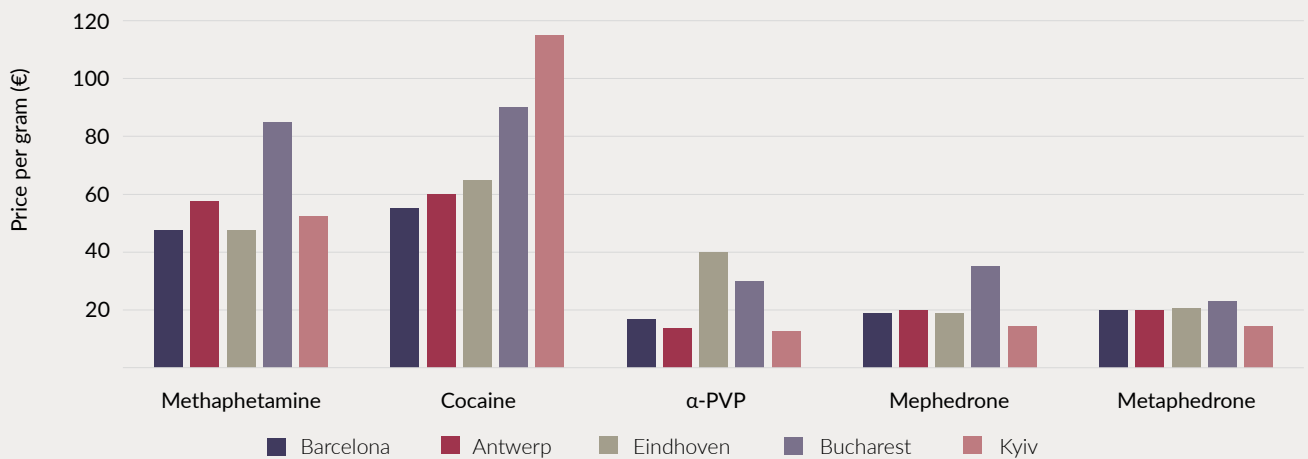


FIGURE 5 Prices of methamphetamine, cocaine and synthetic cathinones in selected cities.

SOURCE: GI-TOC field research findings, October 2024–January 2025

Data collected on the perceived quality of stimulants across cities under analysis suggests an interesting relationship. Unlike methamphetamines and MDMA, which are perceived by users to be of moderate or low purity and quality, synthetic cathinones are

perceived to be substances of higher purity and quality. This is a major selling point when paired with their comparatively low retail prices.

KEY TREND 4: Production of synthetic cathinones is increasing in eastern Europe.

Until recently, European demand for synthetic cathinones was primarily met through supplies from China and India, with the Netherlands as a trans-shipment hub. Other production occurred in Europe, notably Poland. However, since 2021 and 2022 there have been indications of increased production in eastern Europe, accompanied by a rise in trafficking, especially from Poland and Ukraine towards the west.

Until 2020–2021, most of the demand for synthetic cathinones in Europe was met by products manufactured in India and China. After trans-shipment through western Europe, particularly the Netherlands, demand in the east and south of the continent was serviced through the distribution of small parcels of up to five grams shipped by post.⁵⁶ Available seizure data compiled by the EUDA also suggests an established synthesis capability in

Europe. At least 68 laboratories were dismantled between 2013 and 2021, mostly in Poland (36) and the Netherlands (eight).⁵⁷ This is unsurprising because synthetic cathinone manufacture can be achieved through a two-step process that does not require sophisticated equipment or heat, making it easy to execute and scale.⁵⁸

Since 2021, there have been more detections of synthetic cathinones produced in eastern Europe, particularly in Ukraine and Russia.⁵⁹ Confirming a EUDA supposition, GI-TOC field research in the Czech Republic and Poland has found that these production points are securing a supply chain foothold in the wider European stimulants market.⁶⁰

The 2020–2021 surge in European-based synthetic cathinone production coincides with the initial signs of heroin shortages in Ukraine.⁶¹ This suggests a potential correlation between the reduced availability of heroin and the rise in synthetic cathinone availability and use. Contrary to the common assumption that synthetic opioids would have filled the gap generated by heroin shortages, synthetic cathinones have grown in popularity in Ukraine, where people are reported to use them to ease the trauma of the war with Russia, among other reasons.⁶² Recent GI-TOC research has also shown that α -PVP and 4-MMC use in Ukraine has grown considerably among people who use heroin, in particular. It is believed that this rapid behaviour transition is due to the sudden scarcity of heroin after the outbreak of war. Higher retail prices for alternative opioids, such as methadone, are seen as a contributing factor in this transition.⁶³ A similar trend was observed in 2010–2011 in Hungary and Romania, where the EUDA noted increased detection of synthetic cathinone use among people who injected drugs due to a temporary shortage of heroin.⁶⁴

As shown in Figure 6, Kyiv has the lowest retail prices for α -PVP and 4-MMC among cities included in the analysis. It is likely that this is due to well-established local production capacity meeting the high demand.⁶⁵ In another adaptation, most retail sales in Kyiv now happen through dead-drops. These pick-up locations can be secreted anywhere from bushes to drainpipes and are prearranged through the vendor’s Telegram or dark web portal.⁶⁶ This digitalized evolution of drug retailing is the favoured modality across cities analyzed in this study. In many markets, it has almost entirely replaced the traditional retail model of face-to-face street transactions.⁶⁷ By keeping physical interactions to a minimum, this online-based business model for synthetic cathinone sale and distribution is not only highly remunerative for the vendors but greatly reduces detection and disruption risks.

The high number of seizures and frequent clandestine laboratory raids appear to indicate widespread availability of synthetic cathinones throughout much of Ukraine, particularly the Kyiv region.

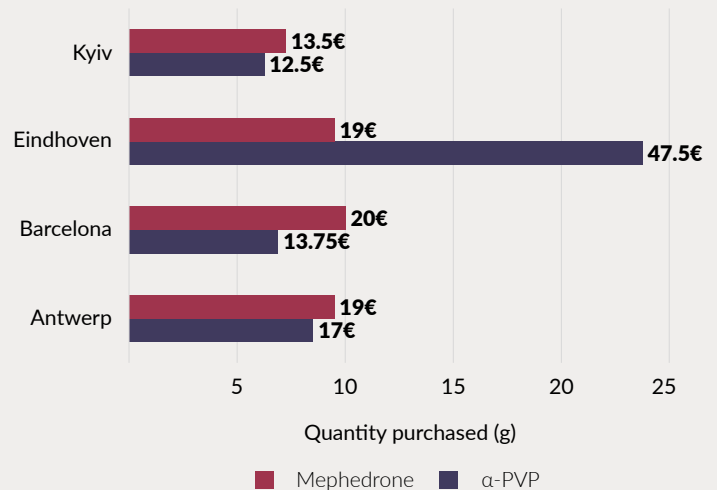


FIGURE 6 Mean retail prices of α -PVP and 4-MMC in selected cities.

NOTE: The mean retail price for α -PVP reported for Eindhoven appears to be an outlier and may not accurately reflect actual market prices.

SOURCE: GI-TOC field research findings, September 2024–January 2025

In 2024, Ukrainian police dismantled 74 laboratories, revealing extensive trafficking networks that underlie this evolved yet covert system of dead-drop and postal service distribution and delivery.⁶⁸ Notably, in a single operation in October 2024, authorities closed 19 laboratories and arrested members of six trafficking groups.⁶⁹

Despite Ukraine’s strong focus on disrupting domestic synthetic cathinone production, the number of laboratory raids declined by 27% in 2024 from 102 incidents in 2023.⁷⁰ This decrease could be interpreted in at least two ways. Assuming similar law enforcement intensity, it might suggest a drop in domestic production, but the almost daily seizures of large quantities of α -PVP and 4-MMC across Ukraine would appear to contradict this. Interestingly, GI-TOC fieldwork in Ukraine found that a substantial portion of synthetic cathinones produced there are sent by private postal service to external markets, particularly Lithuania, Poland and Germany.⁷¹

A second interpretation suggests that with demand for synthetic cathinones rising in the wider region, Ukraine-based production capacities may have moved to neighbouring countries in response to frequent law enforcement disruption efforts. Evidence from eastern European nations appears to support this view. Belarus, for example, has recently witnessed a sharp rise in 4-MMC and α -PVP trafficking. Like Ukraine, the trade in synthetic drugs there is facilitated predominantly by dark web and Telegram vendors, and more than 90% of retail drug sales occur online.⁷² In 2024, criminal cases related to online drug trafficking were 233% higher than in 2023. Summary offence data from cases involving synthetic cathinones show that they were trafficked into the country from Russia or synthesized domestically.⁷³

Similarly, in August 2024 Poland's Central Bureau of Investigation of Police, in collaboration with the Counter Narcotics Department of the National Police of Ukraine, carried out a large operation that dismantled eight industrial laboratories producing α -PVP and 4-MMC in the two countries. The operation led to the arrest of seven members of a transnational criminal network.⁷⁴ In addition to seizing hundreds of kilograms of cathinones and large volumes of chemical precursors, this case underscores the transnational

nature and mobility of Ukrainian 'cooks'.⁷⁵ A dark web portal also advertised job opportunities, particularly for couriers and 'junior' chemists involved in producing cathinones for online distribution in Ukraine, Poland and Latvia, among other countries.⁷⁶ Further highlighting this trend, in October 2024 Europol supported Latvian authorities in successfully dismantling a large-scale clandestine laboratory producing synthetic drugs (including cathinones) intended for western European markets.⁷⁷

KEY TREND 5: Institutional responses to the proliferation of synthetic cathinones are notably weak.

The growing use of synthetic cathinones in Europe presents serious health and security risks. Frequent use leads to dependence and there is a lack of approved treatment options. Digitalized trafficking networks, high purity and insufficient harm reduction responses exacerbate the crisis, while the lack of comprehensive research complicates mitigation efforts.

The increasing prevalence of synthetic cathinones in Europe raises important health and security concerns. These substances, designed to mimic amphetamine-type stimulants, produce short-term effects that encourage frequent use and increase the risk of dependence. Unlike opioids, there is no approved substitution therapy for synthetic cathinone dependence, and traditional harm reduction responses fall short. Harm reduction strategies are limited to warnings about avoiding injection and hygiene-related recommendations when engaging in chemsex.⁷⁸

The lack of medical intervention options exacerbates withdrawal symptoms and contributes to severe mental health crises. As seen in Kyiv, the surge in synthetic cathinone use has been associated with an alarming rise in suicides among youth.⁷⁹ If synthetic cathinone use spreads further across Europe, similar public health crises could emerge elsewhere. The high purity of these substances, often perceived as an important selling feature, increases their potency and the likelihood of overdoses. Additionally, the digitalized nature of trafficking enables widespread availability, making it difficult for law enforcement and healthcare providers to track and mitigate emerging trends.

The absence of comprehensive research on synthetic cathinone consumption patterns further complicates public health responses. Limited data on usage trends, trafficking methods and purity levels hinder policymakers' ability to address the growing problem effectively.

KEY TREND 6: Captagon production starts to take root in Europe amid instability and shifting supply chains in Syria.

With Syrian captagon production in flux after the fall of the Assad regime in December 2024, there is uncertainty about whether or how regional amphetamine supply chains will adapt. Drug producers in Europe are well positioned to capture part of this value chain, valued at up to US\$57 billion annually.⁸⁰

Captagon, a synthetic stimulant originally made from fenethylamine but now consisting exclusively of amphetamine, has long been associated with drug production and use in the Middle East. In recent years it has appeared in Europe's online drug markets, where a pill costs €1–€2. This positions it as a highly affordable stimulant when compared to traditional amphetamines, potentially increasing its attractiveness for some drug-using populations.

The shift from fenethylamine to amphetamine-based tablets has been well documented. The EUDA previously reported that as existing stocks of fenethylamine dwindled and regulatory controls

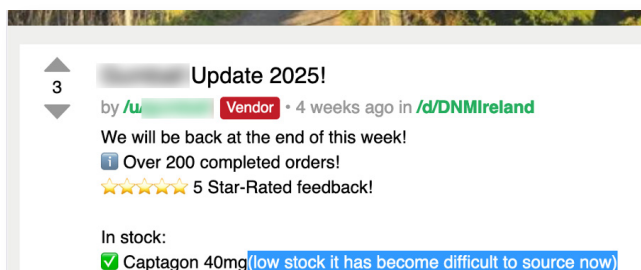
tightened, clandestine manufacturers began producing 'an alternative version of captagon' containing primarily amphetamine.⁸¹ Embossed with similar logos, such as two half-moons or two Cs, these new tablets are similar to the originals. A UN summary of country-based forensic testing data on seized captagon tablets confirms the synthesis transition away from fenthylline-based to amphetamine-based tablets, typically including caffeine and other adulterants.⁸²

Over the past two decades, Syria has been identified as the world's main captagon producer. Reports from governments, international organizations and investigative journalists indicate that production was concentrated in regime-controlled areas, particularly Latakia and Homs, where makeshift laboratories reportedly operated with the tacit approval or direct involvement of elements within the security apparatus.⁸³ Analysts and sanctions designations, including from the US Department of

the Treasury, have linked networks associated with the army's 4th Armoured Division and key figures such as Maher al-Assad to the captagon trade, describing it as an essential economic lifeline amid international sanctions.⁸⁴ While the drug has been deeply entrenched in Middle Eastern conflict economies and widely used by fighters and labour-intensive workers, it has remained largely absent from mainstream European markets, where synthetic drugs – including a diversity of amphetamines, MDMA, ketamine and synthetic cathinones – dominate.

After the disruption of Syrian networks in late 2024, it has been predicted that shifting supply dynamics could lead to evolving trafficking patterns and the emergence of alternative production hubs. The political upheaval that began with the fall of the Assad regime has disrupted long-established production facilities and trafficking networks. Rebel forces have uncovered numerous clandestine captagon laboratories, particularly in Damascus and Latakia, leading to a substantial reduction in production capacity.⁸⁵

The events in Syria may have led to a decline in the quality of captagon as production has become more fragmented and less standardized. Analysis of dark web marketplaces and forums suggests European retailers are experiencing increased difficulty in sourcing captagon. This has prompted them to claim their captagon is 'pharma-grade' sourced from Lebanon or 'pre-Assad fall batches from Syria', but these assertions are unverified.



A dark web seller discussing a captagon supply shortage, February 2025.

Although captagon's presence in Europe is limited compared with more established synthetic stimulants such as amphetamines or methamphetamines, emerging supply and distribution patterns suggest a niche market could be developing. Our field research in 12 cities found no evidence of captagon-branded pills on traditional drug markets, and the drug is sold almost exclusively on online platforms. Advertisements suggest an effort by producers and sellers to establish captagon – as it competes with amphetamines in terms of effects and costs – as a viable stimulant alternative.

In response to supply chain disruptions, there is evidence of captagon production emerging in Europe. While confirmed cases are limited, early indicators suggest facilities producing the drug have been identified in the Netherlands and Germany.⁸⁶ Dutch authorities have reported annual discoveries of one or two large

production sites where tablets are produced from amphetamine powder. These operations are considered opportunistic ventures by local synthetic drug producers, capitalizing on specific demand rather than representing a mainstream activity.⁸⁷



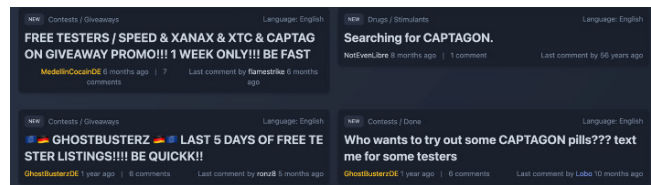
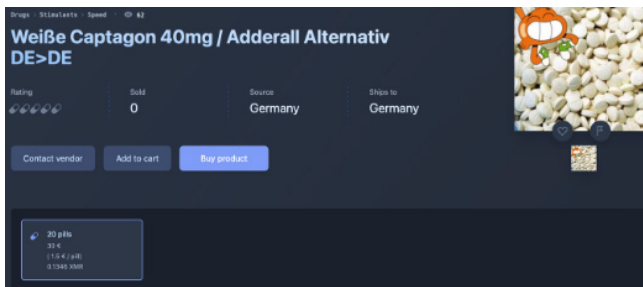
Captagon pills thought to have been photographed in the Netherlands on 31 January 2025. Photo: Telegram

The maritime component of captagon trafficking also remains a critical area to be monitored. Syria's port of Latakia has long served as a key node, with shipments concealed in legitimate cargo before being transported across the Mediterranean. From Latakia, routes extend through intermediary ports in Greece, Italy and Libya, where trans-shipment helps obscure the drug's origin before it reaches its final destinations, primarily in Gulf nations such as Saudi Arabia and the UAE.⁸⁸

The rise of captagon laboratories in European countries such as the Netherlands is consistent with the region's established role in amphetamine production and distribution. Given the already high demand for synthetic drugs across western and southern Europe, coupled with the strategic role European ports play in global drug logistics, there is a considerable risk that captagon could follow the trajectory of other synthetic stimulants, potentially becoming integrated into the continent's evolving narcotics market. This is especially likely due to its relatively low price.

In terms of transit zones and distribution, analysis of dark web shipping advertisements reveals that Germany is also emerging as a captagon hub for Europe-based suppliers. And while Ireland's role remains less clear, some dark web vendors have described it as a 'customs-green country', implying a lower risk of interception when shipping within the EU. Further research is needed to determine whether Ireland is functioning as a secondary redistribution hub or if its prominence in dark web listings is coincidental.

Like other synthetic drugs, captagon's entry into the European market appears to be primarily facilitated by postal shipments. Dark web advertisements for captagon targeting European consumers typically list delivery times of four to nine days, mainly through postal services. Vendors also rely on international courier services such as DHL and PostNL, often using vacuum-sealed and Mylar packaging to reduce detection risks. This distribution model mirrors that of amphetamines and other synthetic drugs, suggesting captagon is being trafficked through existing stimulant supply chains rather than independent distribution networks.



Above: Advertisement for 'free testers' on the dark web, February 2025.

Left: Advertisement for captagon on the dark web, February 2025.

As online markets continue to shape drug trafficking trends, captagon has the potential to carve out a stable niche within Europe's stimulant market. Vendors are likely to continue to push captagon into existing markets, and strategic shifts by organized crime groups will play a crucial role in this process.

Although captagon's presence in Europe remains limited compared to more established synthetic stimulants, emerging trends suggest its role in the continent's drug market may be changing. Analysis of dark web discussions indicates that some users view the drug as a regional curiosity rather than a preferred

stimulant. However, active marketing as a cheaper alternative to more expensive amphetamines, coupled with the rise of online distribution platforms and the potential fragmentation of Syrian production networks, means the drug could increasingly integrate into existing supply chains, especially within migrant communities from the Middle East. This pattern would mirror the trajectory of other substances, such as synthetic cathinones and ketamine, which initially occupied niche markets but eventually gained widespread use across the continent. If this trend continues, captagon may establish a foothold as an affordable stimulant alternative, expanding its presence in the European drug trade.

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