

RAPPORTS

CHEMICAL DRUG PRECURSORS: ISSUES AND CHALLENGES IN REGULATING A GROWING MARKET

TABLE OF CONTENTS

OVERVIEW	3
INTRODUCTION	4
WHAT ARE CHEMICAL PRECURSORS?	6
General definition	6
Legal definition	8
A RISE FUELLED BY A VARIETY OF FACTORS	10
THE CHALLENGES OF REGULATING PRECURSORS	11
LEGISLATIVE TIMELINES VERSUS THE RESPONSIVENESS OF TRAFFICKERS	12
CONCLUSION	14

> This text is a translation of part of the original French text from: Obradovic I., Voisin A. (2025) Les précurseurs chimiques de drogues : enjeux et défis de régulation d'un marché en essor. Paris, OFDT, coll. Rapports, 58 p.

OVERVIEW

— Drug production often requires the use of chemicals known as “precursors”, which include a wide variety of molecules (solvents, acids, etc.), both illegal and legal. For example, potassium permanganate, commonly used in industry as a bleaching, disinfecting, antibacterial or antifungal agent, is also used to manufacture cocaine. Used in the production of plant-based drugs (cocaine, heroin), chemical precursors can also be used as raw materials in the manufacture of synthetic drugs (amphetamine, methamphetamine, MDMA/ecstasy) or new psychoactive substances (NPS) such as cathinones, cannabinoids and opioids (synthetic or semi-synthetic). More than 950 NPS have been identified in Europe since 2000, including more than 450 in France, reflecting the growth and diversification of synthetic drug supply. These synthetic drugs raise complex issues in terms of international drug control and public health, as they often have a more powerful effect than “conventional” drugs, are simpler to produce and easier to conceal.

— With the rise of synthetic and semi-synthetic opioids and psychostimulants on the drugs market, the challenge of regulating precursors, which are often produced in large quantities for legal industrial use, is becoming increasingly crucial. This is particularly true given that the circulation of chemical drug precursors is expanding within the European Union (EU), with average seizures of precursors tripling over the past decade to reach 178 tonnes in 2023. Almost 40 years after the introduction of an international control system for chemical drug precursors (the 1988 United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances) (United Nations Office, 1988), which preceded the development of national legislation and control mechanisms, measures to report and prevent the diversion of precursors at international, European and national level have been stepped up. Regulation involves classifying sensitive chemicals, the trade in which is monitored and regulated, and cooperating with industrial players. By September 2025, 51 precursors had been classified at international level and around ten more at European level.

— Within the EU, control of the manufacture, trade and possession of chemical precursors that could be diverted falls within the EU’s sphere of competence. Nevertheless, the EU 27 Member States are free to determine the types of controls and the procedure for issuing administrative authorisations governing trade in substances classified as precursors. Consequently, governments have developed a range of instruments to structure the monitoring and control of precursors. These include national authorities responsible for regulating precursors and enforcing compliance with international and European control measures, tools for monitoring and gathering information on chemical substances used in licit trade, and a system of pre-export notifications. In France, regulation of the chemical precursor market, which affects between 500 and 600 companies, falls under the supervision of the French National Mission for the Control of Chemical Precursors (MNCPC) which, within the Ministry of Economy and Finances, steers and coordinates policies to combat the diversion of chemical precursors.

— With the criminals involved in narcotic trafficking becoming increasingly well-organised and specialised, the challenges of controlling the chemical precursors used in the manufacture and trafficking of synthetic drugs are mounting. Measures to control and monitor precursors are hampered by the increasing complexity of diversion routes and the flexibility of trafficking networks using unlisted substances. European producers of synthetic drugs manufactured from chemical precursors imported from China or India are resorting to increasingly sophisticated techniques to circumvent the regulations, such as synthesising precursors from “pre-precursors” or “masking” them as unclassified chemicals intended for further processing after importation. To counter the adaptability of criminal organisations, regulatory and control instruments have been strengthened at European level with the introduction of the “catch-all” clause, currently in use in France, which allows customs authorities to seize unclassified substances and impose penalties for this type of diversion. Similarly, the principle of generic classification (by groups of precursors) rather than specific classification is currently under discussion within the European Commission and the International Narcotics Control Board (INCB).

INTRODUCTION

Over the past twenty years, the global drug market has undergone profound changes. Firstly, global drug production has risen sharply, in particular the production of cocaine and synthetic drugs, especially in the form of new psychoactive substances (NPS) (UNODC, 2025b). Alongside this diversification of supply, drug production models are becoming increasingly globalised in terms of the supply and processing logistics chains, but also increasingly decentralised (closer to consumer markets), contributing to the wider accessibility of all psychoactive substances. This accessibility has been amplified by the widespread use of the internet and the emergence of drug supply via digital platforms – across the “surface” web (social media platforms, for example), the deep web¹ (encrypted messaging) and the dark web (or darknet)² (UNODC, 2023). In particular, the 2010s saw a rapid expansion in the supply of NPS, which comprise a diverse range of substances that have in common the fact that they are produced in laboratories and mimic the effects of substances classified as narcotics (cannabis, heroin, cocaine, amphetamines, etc.) while evading the international control regulations that apply to narcotics. Over the last two decades, the supply of NPS has expanded at an increasingly rapid pace. In 2025, the United Nations Office on Drugs and Crime (UNODC) identified 1 386 NPS worldwide from 152 different countries, compared with 540 a decade earlier from fewer than 100 countries (UNODC, 2015, 2025a). The European Union Drugs Agency reported that more than 800 were in circulation in Europe, all of them with increasingly powerful effects and potentially harmful to health (EUDA, 2025). The range of NPS in circulation worldwide therefore far exceeds that of illicit drugs classified as narcotics (around 230 substances).

Both globally and within the EU, the sharpest increases in the quantities of drugs seized over the ten-year period (2013–2023) all involved substances classified as narcotics manufactured using chemicals (solvents, acids, bases) used at various stages of their manufacture, commonly referred to as “chemical precursors”. These include cocaine (+581% in the EU), methamphetamine (+248%), MDMA/ecstasy (+226%) and amphetamine (+122%) (EUDA, 2025). This continued growth in the markets for cocaine and synthetic drugs, both globally and in Europe, can be partly explained by their low production costs (especially relative to financial gains), but also by the reduced risk of detection by law enforcement agencies thanks to the use of chemical precursors that are difficult as such for investigative services to identify and trace (UNODC, 2025b), highlighting the challenges faced by public authorities in terms of control and regulation.

Chemical precursors include a wide variety of molecules commonly used in industry (perfumery, chemicals, food processing, etc.) or in pharmaceuticals. When diverted from their legal use, these molecules (solvents, pesticides, perfumes, flavourings, petroleum products, etc.) can be used as raw materials to manufacture psychoactive substances. Most illicit drugs require the use of raw materials and chemicals (reagents, solvents, acids) to extract or synthesise them. The same applies to NPS, regardless of whether they are classified as narcotics. Chemical precursors are often used as raw materials for the 450 or so new psychoactive substances listed in France – mainly cathinones³, cannabinoids and synthetic opioids.

Because they are commonly used within a legal framework, chemical precursors raise unique regulatory difficulties. The control challenges they pose for health and public safety authorities are compounded by the need to avoid hindering legitimate industrial activity that uses these products in

1. Content not indexed by standard web search engines; this content can be located and accessed by a direct URL or IP address, but may require a password or other security credentials to bypass the pages of a public website; includes many very common uses such as email, online banking, private or restricted-access content and profiles (UNODC, 2023).

2. The darknet is an overlay network within the internet that can only be accessed with specific software, configurations or authorisations, and often uses a unique, customised communication protocol. The two most common types of darknet are social networks (generally used for file hosting with a peer-to-peer connection) and anonymity proxy networks (such as Tor) via a series of anonymous connections (UNODC, 2023).

3. Cathinones are a family of synthetic substances derived from natural cathinone (one of the active ingredients in khat). They mimic, to varying degrees, the effects of cocaine, MDMA/ecstasy and amphetamines. The best known are 3-CMC, 3-MMC, mephedrone, 4-MEC, MDPV and alpha-PVP.

full compliance with the law, while ensuring that they are effectively controlled. It is therefore a matter of implementing regulation in the form of flexible governance (soft power) over a dynamic market, without stifling its growth (Vauchez, 2024). The issues surrounding the control of chemical precursors are complicated by the fact that they are part of the legal import-export process and rarely appear on the list of (prohibited) narcotic substances. The key to effective regulation lies not only in monitoring the chemical precursors used in legal trade through close supervision of businesses⁴, but also in preventing their diversion and in tracking the movement of precursors outside legal trade (through customs checks on all potential circulation channels, particularly express and postal freight, and cybercrime). Regulatory challenges are further compounded by the emergence of pre-precursors, which are used not to produce drugs, but to produce chemical drug precursors⁵.

Against an international backdrop in which the drivers and channels of trafficking in narcotics and psychoactive synthetic substances are changing rapidly, this report has a threefold objective: to outline the current scope and challenges of the phenomenon of chemical drug precursors (classified as narcotics and NPS); to set out the regulations in force in a detailed and educational manner; and to explain the challenges involved in regulating these substances, which, while authorised, are subject to control.

4. For example, to identify shell companies or attempts to infiltrate well-known companies (similar to the surveillance carried out in France by the MNCPC in conjunction with the National Intelligence and Customs Directorate).

5. As recently as December 2024, two sets of substances comprising designer precursors of amphetamine-type stimulants (a total of 16 substances with no known legitimate use or regular trade) were included in Table I of the 1988 United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances.

WHAT ARE CHEMICAL PRECURSORS?

General definition

A chemical precursor is a substance used as a raw material or active ingredient in the process of manufacturing substances through a chemical reaction (synthesis, extraction, purification). When applied to drugs, the term “chemical precursor” refers to any raw material, reagent, solvent or separating (or dispersing) agent that can be used in the chemical synthesis of substances, the use of which is usually licit. It may be used in industry – in perfumery, chemistry, pharmaceuticals or the food industry – but, once diverted from its legal use to manufacture narcotics or psychotropic substances (in particular NPS), it may be considered and classified as a chemical precursor for drugs⁶.

All industrial processes involving the manufacture of goods routinely use chemicals, which involves the use of substances or compounds with multiple uses. Some of these chemicals are diverted from their licit use to make drugs. For example, potassium permanganate, commonly used for water purification, can be diverted as an oxidising agent for the manufacture of cocaine. Similarly, acetone, which is used as a solvent in the chemical and pharmaceutical industries and by the general public, can also be diverted for illicit use in the manufacture of cocaine, heroin, LSD and other substances. Many chemical precursors are commonly used in the pharmaceutical industry. One example is ephedrine, a drug used to relieve nasal congestion, which can be diverted to produce methamphetamine. Some of these chemicals are produced in large quantities when used for industrial purposes, including ephedrine and pseudoephedrine (for pharmaceutical use) or piperonal (for perfumery). Most of these chemicals are now classified as chemical drug precursors.

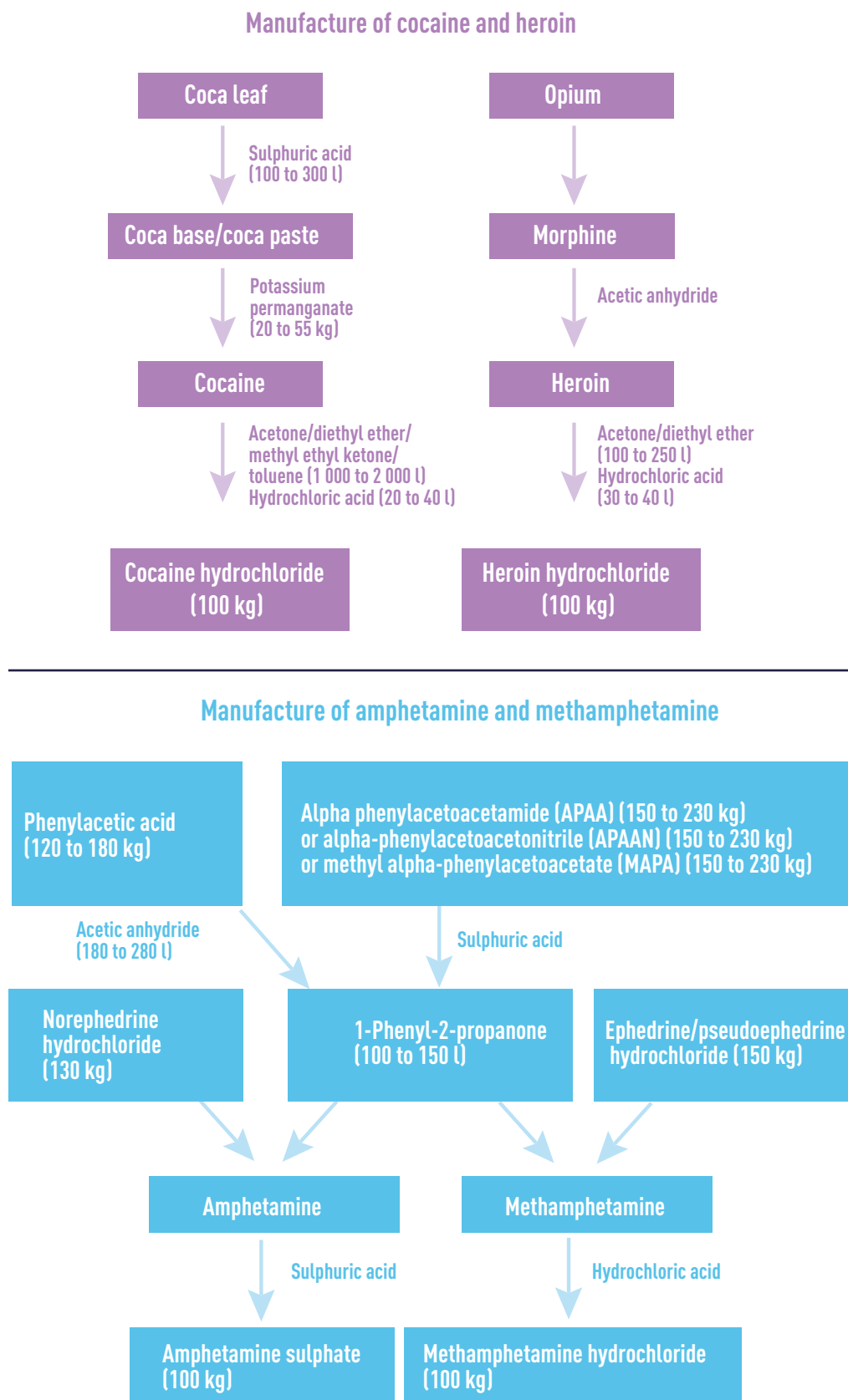
Many illicit drugs require the use of raw materials and chemicals – such as reagents, solvents and acids – to extract or synthesise them (see Infographic 1). For example, heroin (chemical name: diacetylmorphine) is manufactured from raw opium (dried latex from the opium poppy plant). The opium is converted into morphine, which is then converted into heroin through a chemical reaction with acetic acids (acetic anhydride) or acetyl chloride (a chemical known to be able to replace acetic anhydride as an acetylating agent in the process of converting morphine into heroin).

Infographic 1. Examples of chemical precursors used in the most commonly used drugs in Europe.

MDMA and related substances	Cocaine	Heroin
MAMDPA Isosafrole Helional Formamide Piperonal N-t-BOC-MDMA Safrole Platinum oxide Nitro-PMK Isopropylidene (IMDPAM) PMK (3,4-MDP-2P) Sassafras oil Glycidic derivatives of PMK	Acetone Butanone Sulphuric acid Ethyl acetate Hydrochloric acid Potassium permanganate Calcium chloride Toluene	Acetone Hydrochloric acid Diethyl ether Sulphuric acid Butanone (methyl ethyl ketone) Acetyl chloride Acetic anhydride

6. For the sake of clarity, we use the term “drugs” in this briefing, although precursors relate solely to the design of illicit drugs (and not alcohol or tobacco).

Figure 1. Substance used in the illicit manufacture of cocaine, heroin, amphetamine and methamphetamine



Note: approximate quantities required for the illicit manufacture of 100 kg of cocaine hydrochloride, heroin, amphetamine sulphate or methamphetamine hydrochloride

Source: INCB, 2021

The quantity of chemical precursors required to manufacture drugs can vary (Figure 1). For example, to produce 100 kg of cocaine in powder form (i.e. hydrochloride salt) from coca leaves, a chemical process is required involving at least:

- 100 to 300 litres of sulphuric acid (legally used in the manufacture of fertilisers, industrial dyes, cleaning products, etc.), to produce an aqueous solution of cocaine sulphate (once the cocaine has been extracted from the coca leaves – previously moistened with limewater or other alkalis – using kerosene, it is then extracted from the kerosene with sulphuric acid);
- 20 to 55 kg of potassium permanganate, used to purify cocaine (removing cinnamoylcocaine⁷ and other impurities);
- 1 000 to 2 000 litres of acetone, diethyl ether, methyl ethyl ketone or toluene, to dilute the filtered solution from the previous stage;
- 20 to 40 litres of hydrochloric acid (legally used as a catalyst and as a solvent in metal cleaning, in manufacturing industrial glues or in the textile industry), to transform the cocaine hydrochloride deposit into a solid residue (which will then be ground into a powder).

Legal definition

The definition of chemical drug precursors is a legal construct. A chemical substance is not intrinsically considered to be a precursor simply because of its composition, unless it has been classified by the public authorities as a controlled chemical substance following its proven illicit use in manufacturing drugs. In other words, designating a substance as a precursor is based on a distinction between its licit use and its diverted use for illicit purposes.

From the organic chemistry perspective, there are two categories of precursors.

- Main drug precursors: during the chemical process of manufacturing a drug, these precursors are incorporated, either in whole or in part, into the final substance – in this case, a drug. They are therefore that drug's active ingredients and are wholly or partially responsible for its psychotropic effects. One example is ephedrine, a substance used in the manufacture of cold, flu, cough and allergy medicines, as a powerful nasal decongestant, and also found in food supplements. This substance is one of the main precursors of methamphetamine and can even be used as a performance and image enhancement drug. A list of the main drug precursors is provided in Appendix 1 (21 substances).
- Auxiliary drug precursors: during chemical synthesis, these are used as reagents, solvents or separation or dispersion agents, but they are not incorporated into the final substance. For example, acetone, frequently used as a solvent in the manufacture of cocaine, heroin, LSD, methcathinone and amphetamine and methamphetamine derivatives, has many legitimate uses: it is used as a solvent in the chemical and pharmaceutical industries, and in the manufacture of lubricating oils, paints, varnishes (removers), cosmetics and adhesives. The list of auxiliary drug precursors is provided in Appendix 2 (13 substances).

This conceptual categorisation reflects a chemical distinction: it does not correspond to the international classification system (which distinguishes between two schedules) or to the European and French classification systems (which use four categories) (see Appendices 4 and 5).

7. Cinnamoylcocaine, or methylecgonine cinnamate, is an alkaloid naturally present in the coca plant.

Although drug precursors are primarily intended for licit use, a number of precursors with no known legal use appeared in the 2010s. These are referred to as “designer precursors” and “pre-precursors” (which may be used to produce the precursor itself or to replace it)⁸. As close chemical relatives of controlled precursors, they have been specially designed to circumvent regulations on precursors.

In recent years, Europe has become a hub for converting pre-precursors into precursors. This is the case, for example, with alpha-phenylacetoacetonitrile (APAAN), which can be converted into 1-phenyl-2-propanone (P-2-P), better known as BMK or BMC (benzyl-methylketone), itself a precursor of amphetamine. These precursors are, by definition, relatively unknown, as they have no licit use, apart from some that are used in small quantities for research purposes or in the chemical or pharmaceutical industries.

There would obviously be no point in attempting to compile a comprehensive list of all designer precursors and pre-precursors, as not all of them are identified by the control bodies (by definition). Some of these are included on international and European watch lists, but access to these lists is restricted to the authorities responsible for this policy and to “trusted economic operators”. The list of all officially classified designer drug precursors and pre-precursors is provided in Appendix 3 (17 substances).

8. While the concepts of “designer precursors” and “pre-precursors” may appear similar, they are defined differently. Whereas pre-precursors are defined by their position in the drug production chain, tailor-made precursors are defined primarily by traffickers’ ability to adapt, substituting designer precursors for classified precursors in order to evade controls.

A RISE FUELLED BY A VARIETY OF FACTORS

The variety of controlled substances and chemical precursors frequently used in the production of illicit drugs is a global problem. A number of indicators point to a rise in the use of chemical precursors across the world, in Europe and in France. Firstly, there are several indirect indicators relating to law enforcement activity, including the rise in seizures of cocaine, synthetic drugs and their chemical precursors, as evidenced by law enforcement statistics at global and European level, and the increase over the last decade in the number of laboratories manufacturing these substances that have been dismantled, both internationally and in Europe.

The use of chemical drug precursors can be attributed to several factors. The main factor is the low production costs of certain synthetic drugs, which require only small quantities of chemical precursors to produce large quantities of the drug. The yield from some chemical precursors is particularly high. For example, less than a litre of hydrochloric acid is needed to produce a kilo of cocaine or heroin (see Appendix 2). This ensures that this trafficking is highly profitable, while the risk of detection remains low. In addition, traffickers' strategies adapt to changes in legislation to further reduce the risk of detection. Some drug precursors may therefore appear and then disappear, or on the contrary persist, whether in the illicit drug production processes observed or in seizures of precursors.

The proliferation of new psychoactive substances and their precursors reflects the significant diversification in supply, often involving imitations or combinations with other drugs or medicines (such as benzodiazepines), mirroring the diversification in consumption patterns (for example, using e-liquids containing synthetic cannabinoids) and changes in demand. As illicit drugs are increasingly marketed in tablet and pill form, there is a growing need for cutting agents and excipients, as well as punches, dies and tablet presses or capsule filling machines. Given that many of the chemicals, equipment and materials needed for illicit drug manufacturing also have legal uses, these items are commonly offered and sold throughout the world and are legally available online. The ease with which chemicals and equipment for the manufacture of synthetic drugs can be sourced online is therefore a key factor in their proliferation. Conspicuously, synthetic drugs, whose precursors come mainly from China and India, can be manufactured in any country, making it particularly difficult to detect and combat this trafficking.

Furthermore, the worldwide expansion in the use of chemical drug precursors is taking place against a backdrop of significant technological advances in the processes used to produce plant-based drugs. These developments have led to increased yields in the illicit manufacture of cocaine, both at the original production sites in South America and in clandestine laboratories in Western Europe. The clandestine laboratories that manufacture or produce these drugs are becoming increasingly sophisticated, operating on an industrial scale with access to chemicals and specialised equipment (pressurised reactors, bespoke glassware, etc.) and also using precursors to optimise their production processes, yields and, consequently, profits.

THE CHALLENGES OF REGULATING PRECURSORS

The challenges associated with regulating chemical drug precursors are manifold. The difficulties in regulating these substances stem from the fact that a ban on precursors is out of the question, given their many legal uses in medicine (pharmaceutical manufacturing), industry (the design of solvents, aromas, paints, perfumes, etc.) and scientific research. The real challenge lies in ensuring the availability of these substances for licit purposes, while preventing the risk of their being diverted for illicit drug production. The aim is therefore to limit the quantities in circulation on legitimate markets to strictly legal requirements, which requires a detailed assessment of these needs, along with effective monitoring and control.

Consequently, deciding on the legal status of precursors is also an economic decision. The aim is to strike a balance between effective control of precursors (to prevent their illicit uses) and a regulatory framework that is sufficiently flexible and streamlined (so as not to impose overly burdensome constraints on economic transactions, which would hinder the smooth operation of the licit market). Regulating precursors therefore requires cooperation between public authorities and economic operators. It is the economic operators who are best placed to assess legitimate needs and to flag transactions likely to involve diversion. In other words, with the trafficking of chemical precursors taking place on a global scale, any effective control must involve all the economic operators on the field, as they are the only ones capable of assessing the risks of chemical precursor diversion. Clearly, the wide variety of chemical precursors used in drug manufacturing and the technical nature of drug production operations using precursors make it difficult for customs authorities to identify and control them. This is especially true given that the targeting of chemical precursors by investigative services is dependent on the declaration procedure favoured in the control of these substances, which traffickers attempt to circumvent, with a high likelihood of success, by falsifying data to avoid checks (for example, by falsely declaring the type of goods⁹).

To maximise the effectiveness of controls on chemical precursors, it is essential to apply standards at different levels. This involves harmonising international, European and national standards. Given the constant changes in the illicit drugs market and in the chemical precursors used by traffickers, it is important to ensure that these three levels of standards are continually updated. Criminal networks are constantly innovating, using chemical alternatives to circumvent controls. Legal rules must therefore keep pace with these changes to ensure that the fight against precursor trafficking remains effective at the international level.

Combating this problem is a key priority, primarily for public health reasons, given the well-documented dangers of certain synthetic drugs, in particular synthetic cannabinoids and new opioids, which regularly trigger health alerts.

The waste produced from manufacturing synthetic drugs also poses an environmental challenge. According to Europol, producing 1 kg of MDMA generates between 6 and 10 kg of toxic waste, while producing 1 kg of amphetamine generates 20 to 30 kg of waste, which is usually discharged into the sewage system or dumped in the countryside (EMCDDA and Europol, 2019).

Lastly, this is a geopolitical and international diplomatic issue. Chemical drug precursors often pass through France, which is not necessarily their destination market. They are often processed in clandestine laboratories in northern and eastern Europe (Belgium, the Czech Republic, the Netherlands, etc.). The substances processed into synthetic drugs may then pass through France again, before being exported to the American continent in particular. Customs therefore play a key role in seizing precursors and synthetic drugs, controlling the flow of these substances and contributing to international security.

9. False declaration as to the nature of the goods.

LEGISLATIVE TIMELINES VERSUS THE RESPONSIVENESS OF TRAFFICKERS

The effectiveness of regulations on chemical precursors depends in particular on their ability to adapt to changes in the illicit drug market and, more specifically, to the types of precursors used by traffickers. At European level, since 2013, classifications can be amended by a Commission delegated regulation, which has reduced the legislative time needed to amend regulations. However, the classification process still takes between twelve and fifteen months, which leaves traffickers enough time to continue using substances that are in the process of being classified, while at the same time identifying alternative chemical substances that have not yet been classified.

In this respect, designer precursors pose a major challenge to the regulatory authorities. Every time a new substance is classified as a drug precursor, traffickers innovate, quickly identifying new substances or molecules to circumvent the regulations. Amphetamine is a perfect illustration of this phenomenon. Before 2010, the main precursor of this illicit drug was BMK. After this substance was classified, three designer precursors emerged (APAAN, APAA and MAPA), which helps to explain the continued increase in the quantities of amphetamine produced in the EU. The EUDA and Europol point out that the majority of methamphetamine produced today in the Netherlands, Belgium and Luxembourg is made from unclassified precursors. The INCB also points out that between 1 November 2023 and 1 November 2024, more than 500 incidents were recorded on the PICS system¹⁰, involving 147 substances, of which only 18 were subject to international control (fewer than 12%). This example illustrates how difficult it is for international bodies to keep pace with the agility of narcotic trafficking networks when classifying sensitive chemicals. The INCB is therefore encouraging governments to report, through the PICS system, any incidents involving uncontrolled substances that appear to have been used in illicit drug manufacturing, to identify new trends in the illicit precursor market as early as possible.

Ultimately, while regulations based on classification are deemed appropriate by international bodies, the European Commission and the INCB have raised questions about the practice of classifying substances on a case-by-case basis. The INCB therefore recommends, in line with the purpose of the Commission on Narcotic Drugs' resolution 65/3, a classification by groups of precursors, including various chemicals closely related to precursors that are themselves controlled and that can easily be converted into or replace these classified precursors. This is what the European Commission has done by including in its regulations provisions not only for classifying substances, but also their salts (for substances in the first three categories) and their stereoisomers (for substances in the first category). This trend towards generic classification (by families of molecules) explains why the total number of classified substances appears to be growing more slowly than the diversification of chemical drug precursors and NPS (one category now covering several types of substances).

At the same time, experts and law enforcement agencies argue that there is a need for a new approach to dealing with unclassified substances without necessarily having to classify the substances themselves, as the list of these substances seems endless and classifying them would be detrimental to the licit market. These are mainly acids, bases, catalysts, reagents, separating agents and solvents used in illicit drug manufacturing, most of which have widespread licit uses and are traded in large quantities, making it impossible to monitor them closely. The INCB therefore requests that States Parties share any information on shipments of common chemicals that are not under international control and that could be used to produce drugs, so that importing countries can take action before an unwanted or unauthorised shipment arrives in order to prevent diversion.

10. Incident reporting system for precursors, launched in March 2012. It is a platform for the real-time exchange of information on incidents involving classified precursors and equipment. Operators authorised to use this system are designated by the governments of the States Parties to the Convention. As of 1 November 2024, the system had nearly 700 active users in 130 countries and territories and had facilitated the reporting of 4 800 incidents involving precursors and equipment.

The European catch-all clause (strengthened in France by allowing customs officers to use the investigative powers provided for in the French Customs Code authorising them to seize supposedly “legal” substances where there is a body of evidence suggesting illicit use) is an alternative approach that is regularly promoted by the French authorities, particularly as part of the process of revising a number of European regulatory frameworks.

Furthermore, the INCB and the European Commission have raised the issue of online trading platforms, available on the surface web, where a growing proportion of chemical precursor transactions take place. These platforms fulfil various roles: some provide information to buyers and suppliers, while others act as trading platforms and are directly involved in sales. However, neither the 1988 Convention nor European regulations specifically require these platforms to be monitored, even though the European Digital Services Act (DSA), which has applied to all online operators in the European market since 17 February 2024, does to some extent allow such platforms to be monitored. In the absence of reliable information, the question of whether these platforms should be governed by special provisions is therefore particularly pressing. More broadly, the growth of online trade is helping to “drown” illicit shipments of precursors in the massive flows imported into Europe and France (particularly from China), compounding the difficulties of regulating chemical drug precursors.

CONCLUSION

The expansion in the supply of drugs observed in Europe since the 2010s can be attributed in particular to a significant increase in the global production of synthetic drugs (MDMA, methamphetamine, cathinones, synthetic cannabinoids, opioids, GHB/GBL, etc.) and semi-synthetic drugs (cocaine and heroin), which often involves chemical precursors (acids, solvents, etc.) diverted from their legal use in industry (particularly pharmaceuticals). The dual use of these chemical substances, both licit and illicit, calls for flexible regulation that avoids hindering industrial operations while maintaining robust oversight. Since 1988, chemical drug precursors have been the subject of regulatory efforts at international, European and national level. The trend towards classifying chemical precursors under international control has accelerated since the 2000s. There were 12 substances classified in 1988, 23 in 2000, 30 at the start of the 2020s, rising to 51 substances today (not counting around ten substances classified at European level). As substances are identified and classified as precursors, traffickers adapt by turning to other substances. Their remarkable ability to adapt is one of the challenges of precursor regulation, which is hampered by the time required to change legislation and the difficulties in predicting the new methods and substances traffickers may use.

Faced with ever-increasing numbers of classified chemical substances, criminal organisations are making greater use of unclassified precursors, and in particular designer precursors – molecules that fall outside the scope of classification and are not therefore subject to control measures (17 listed internationally). Bearing this in mind, regulatory and control instruments have been put in place at European level, with the introduction of the “catch-all” clause, which allows customs authorities to seize unclassified substances and impose penalties for such diversions. Bolstered in France by the Customs Act, passed on 18 July 2023, this mechanism allows customs officials to seize goods linked to suspicious shipments. In 2024, for example, this mechanism was used to dismantle a clandestine synthetic drug laboratory on French soil for the first time. The catch-all mechanism therefore appears to be a new tool in the fight against the diversion of chemical precursors and an alternative, or at least complementary, approach to classification.

While current regulations provide a clear framework, the distinctive feature of the flexible regulation of chemical drug precursors lies, on the one hand, in the essential cooperation between national authorities and economic operators to curb the diversion of precursors and pre-precursors and, on the other hand, in ongoing updates to the legal framework. Awareness-raising among economic operators and investigating officers has been stepped up, with a view to making it easier to identify suspicious transactions and strengthening controls on economic operators to ensure cooperation from businesses. Similarly, the advantages of classifying substances by family are currently under discussion at international level.

Appendices available in the original French document

- 1. List of main drug precursors
- 2. List of auxiliary drug precursors
- 3. List of designer precursors or pre-precursors
- 4. International classification of precursors
- 5. European classification of precursors
- 6. Administrative formalities imposed on operators in France depending on classification category
- 7. Comparison of international and EU classifications of chemical precursors
- 8. Legislation criminalising the diversion of chemical drug precursors for the illicit production of narcotic drugs or psychotropic substances

References

Links available on 16/09/2025

Aubert B., Masse M. (2018) Stupéfiants - Régime administratif. In: Répertoire de droit international. Paris, Dalloz.

Council of the European Union (2004a) Council regulation (EC) No 111/2005 of 22 December 2004 laying down rules for the monitoring of trade between the Community and third countries in drug precursors. Official journal of the European Union, L 22 of 26/01/2005, p. 1-10.

Council of the European Union (2004b) Regulation (EC) No 273/2004 of the European Parliament and of the Council of 11 February 2004 on drug precursors. Official journal of the European Union, L 47 of 18/02/2004, p. 1-10.

Council of the European Union (2013a) Regulation (EU) No 1258/2013 of the European Parliament and of the Council of 20 November 2013 amending Regulation (EC) No 273/2004 on drug precursors. Official journal of the European Union, L 330 of 10/12/2013, p. 21-29.

Council of the European Union (2013b) Regulation (EU) No 1259/2013 of the European Parliament and of the Council of 20 November 2013 amending Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors. Official journal of the European Union, L 330 of 10/12/2013, p. 30-38

Council of the European Union (2017) EU Action Plan on Drugs 2017-2020. Official journal of the European Union, C 215/21 of 05/07/2017, p. 21-58.

Council of the European Union (2021) EU Drugs Action Plan 2021-2025. Official journal of the European Union, C 272 of 08/07/2021, p. 2-28.

Direction générale des Entreprises (2025) Pour lutter contre la drogue : Surveiller vos produits chimiques, c'est déjà agir ! Paris, ministère de l'Économie, des Finances et de la Souveraineté industrielle et numérique, 8 p.

EMCDDA (2016) European Drug Report 2016: Trends and Developments. Luxembourg, Publications Office of the European Union, 84 p.

EMCDDA (2017) European Drug Report 2017: Trends and Developments. Luxembourg, Office des publications de l'Union européenne, 93 p.

EMCDDA (2018) European Drug Report 2018: Trends and Developments. Luxembourg, Publications Office of the European Union, 90 p.

EMCDDA (2019) European Drug Report 2019: Trends and Developments. Luxembourg, Publications Office of the European Union, 100 p.

EMCDDA, Europol (2019) EU Drug markets report 2019. Lisbon, EMCDDA, coll. Joint publications, 260 p.

EMCDDA (2020) European Drug Report 2020: Trends and Developments. Luxembourg, Publications Office of the European Union, 88 p.

EMCDDA (2021) European Drug Report 2021: Trends and Developments. Luxembourg, Publications Office of the European Union, 60 p.

EMCDDA (2022) European Drug Report 2022: Trends and Developments. Luxembourg, Publications Office of the European Union, 60 p.

EMCDDA (2023) Drug supply, production and precursors – the current situation in Europe. In: European Drug Report 2023: Trends and Developments. Lisbon, EMCDDA.

EMCDDA (2024) Drug supply, production and precursors – the current situation in Europe. In: European Drug Report 2024: Trends and Developments. Lisbon, EMCDDA.

EUDA (2025) Drug supply, production and precursors – the current situation in Europe. In: European Drug Report 2025: Trends and Developments. Lisbon, European Union Drugs Agency.

European Commission (2020) Report from the Commission to the European Parliament and the Council. Evaluation of the EU drug precursors regulations. 768 final, 18 p.

European Commission (2025) Drug Precursor Control - EU customs controls of chemicals used in the production of illicit drugs.

Légifrance (2025a) Code de procédure pénale.

Légifrance (2025b) Code des douanes.

Loi n° 2023-610 du 18 juillet 2023 visant à donner à la douane les moyens de faire face aux nouvelles menaces. JORF, n° 165 du 19 juillet 2023, texte n° 1.

Ministère de l'Économie, des Finances et de l'Emploi (2019) Décret n° 2019-917 du 30 août 2019 relatif au contrôle de la fabrication et du commerce des précurseurs de drogues. JORF, n° 0203 du 1^{er} septembre 2019, texte n° 21.

Ministère de l'Économie, des Finances et de l'Industrie (2003) Arrêté du 29 juillet 2003 portant application de l'article 414 du code des douanes et de l'article 282 du code des douanes applicable à Mayotte. JORF, n° 197 du 27 août 2003, texte n° 16.

Ministère de l'Économie, des Finances et de la Relance (2021) Avis aux opérateurs fabricant ou commercialisant des précurseurs de drogue contenus dans des mélanges destinés à la vente de gros ou à la vente de détail. JORF, n° 0089 du 15 avril 2021, texte n° 114.

Ministère de l'Économie, des Finances et de la Souveraineté industrielle et numérique (2024) Arrêté du 15 mai 2024 portant application du décret n° 2024-150 du 27 février 2024 portant conditions d'établissement de la déclaration d'usage prévue à l'article 19-1 de la loi n° 96-542 du 19 juin 1996 relative au contrôle de la fabrication et du commerce de certaines substances susceptibles d'être utilisées pour la fabrication illicite de stupéfiants ou de substances psychotropes. JORF, n° 0117 du 22 mai 2024, Texte n° 11.

Ministère de l'Économie et des Finances (2019) Arrêté du 14 octobre 2019 relatif au contrôle de la fabrication et du commerce des précurseurs de drogues. JORF, n° 0258 du 6 novembre 2019, texte n° 32.

Ministère de l'Industrie et du Commerce extérieur (1993) Arrêté du 11 mars 1993 portant création d'une mission nationale de contrôle des précurseurs chimiques. JORF, n° 60 du 12 mars 1993, p. 3848-3849.

Ministère de la Solidarité, de la Santé et de la Protection sociale (1990) Arrêté du 22 février 1990 fixant la liste des substances classées comme stupéfiants. JORF, n° 130 du 7 juin 1990, p. 6678-6680.

Ministère du Travail et des Affaires sociales, Ministère de l'Économie et des Finances, Ministère de l'Intérieur, Ministère de l'Industrie, de la Poste et des télécommunications (1996) Loi n° 96-542 du 19 juin 1996 relative au contrôle de la fabrication et du commerce de certaines substances susceptibles d'être utilisées pour la fabrication illicite de stupéfiants ou de substances psychotropes. JORF, n° 142 du 20 juin 1996, p. 9207-9209.

MNCPC (2018) Mission nationale de contrôle des précurseurs chimiques - Rapport d'activité 2017. Paris, Ministère de l'Économie et des Finances, 14 p.

MNCPC (2019) Rapport annuel 2018 et perspectives 2019 de la Mission nationale de contrôle des précurseurs chimiques (MNCPC). Paris, Ministère de l'Économie et des Finances, 12 p.

MNCPC (2020) Bilan d'activité 2019 de la Mission nationale de contrôle des précurseurs chimiques. Paris, Ministère de l'Économie et des Finances - Direction Générale des Entreprises (DGE), 7 p.

MNCPC (2021a) Bilan d'activité 2020 de la Mission nationale de contrôle des précurseurs chimiques. Paris, Ministère de l'Économie, des Finances et de la Relance, 7 p.

MNCPC (2021b) Code national de conduite. Partenariat public/privé visant à prévenir le détournement de précurseurs chimiques et d'équipements pouvant servir à la production illicite de drogues. Paris, Mission nationale de contrôle des précurseurs chimiques.

MNCPC (2022a) Bilan d'activité 2021 de la Mission nationale de contrôle des précurseurs chimiques. Paris, Ministère de l'Économie, des Finances et de la Relance, 8 p.

MNCPC (2022b) Précurseurs de drogues : Synthèse de la réglementation – Comment constituer vos dossiers. Paris, Mission nationale de contrôle des précurseurs chimiques, 36 p.

MNCPC (2023) Bilan d'activité 2022 de la Mission nationale de contrôle des précurseurs chimiques. Montreuil, Ministère de l'Économie, des Finances et de la Souveraineté industrielle et numérique, 8 p.

MNCPC (2024) Mission nationale de contrôle des précurseurs chimiques (MNCPC). Rapport d'activité 2023. Montreuil, Ministère de l'Économie, des Finances et de la Souveraineté industrielle et numérique, 8 p.

OFDT (2025) Drugs and addictions, 2025 key data. Paris, OFDT, 10 p.

INCB (2017) Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances. Report of the International Narcotics Control Board for 2016. New York, United Nations, 136 p.

INCB (2022) Annex VIII - Use of scheduled substances in the illicit manufacture of narcotic

drugs and psychotropic substances. In: Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances. Report of the International Narcotics Control Board for 2021. Vienna, International Narcotics Control Board, p. 69-72.

INCB (2024a) List of precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances under international control. Red list, 22nd edition. Vienna, International Narcotics Control Board, 25 p.

INCB (2024b) Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances. Report of the International Narcotics Control Board for 2023. New York, United Nations, 102 p.

INCB (2025a) Precursors. Vienna, International Narcotics Control Board.

INCB (2025b) Precursors, chemicals and equipment frequently used in the illicit manufacture of narcotic drugs and psychotropic substances. Report of the International Narcotics Control Board for 2024. New York, United Nations, 66 p.

United Nations Office (1988) United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 22 p.

UNODC (2015) Special segment: Legal responses to NPS: Multiple approaches to a multi-faceted problem. Vienna, United Nations Office on Drugs and Crime, coll. Global SMART Updates, Vol. 14, 12 p.

UNODC (2023) World drug report 2023. New York, United Nations.

UNODC (2025a) UNODC Early Warning Advisory on New Psychoactive Substances: Data Visualisations - Public.

UNODC (2025b) World drug report 2025. New York, United Nations.

Vaucher A. (Dir.) (2024) Le moment régulateur. Naissance d'une contre-culture de gouvernement. Paris, Presses de Sciences Po, coll. Académique, 416 p.

Acknowledgements

The entire MNCP team, especially Pauline Perrin and Davy Tribut for their review and insights.

Valérie Maniez, Florian Jeudi and Guillaume Labetoulle (French Customs Authority, DGDDI) for their review.

Sébastien Tiran, Jérôme Sentenac and their team for their insights (National Intelligence and Customs Directorate, DNRED).

Isabelle Charron-Cohen (French Interministerial Mission for Combating Drugs and Addictive Behaviours, MILDECA).

Sabrina Cherki, Cindy Feng and Yasmine Salhi (French Monitoring Centre for Drugs and Drug Addiction) for their careful review.



Observatoire français des drogues et des tendances addictives

69 rue de Varenne 75007 Paris - France

Tel : +33 (0)1 41 62 77 16

e-mail : ofdt@ofdt.fr

www.ofdt.fr

Photo copyright: © Dimasobko (Adobe Stock)