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Current trends in purity, quantity and prices of the most popular drugs in Poland

Summary

The article discusses the results of qualitative and quantitative research of samples of selected drugs confiscated in Poland in the years 2018–2019 in relation to individual voivodeships. In addition to research on the active substance, organic dilutants were also identified. On the basis of the results obtained, certain trends were observed concerning the purity of selected, most popular in Poland, the so-called classic drugs such as amphetamine, cocaine, MDMA or herbal cannabis over the last years. In addition, current data on the most popular drugs' street samples and prices for both single street portion and per 1 gram of the drug, without taking into account its purity, are presented. Drug composition and price data were compared with European trends.

Key words: drug purity, street drugs, drug prices

Introduction

Drug testing is one of the most prevalent analyses performed in the chemistry departments of police forensic laboratories. The customers most often require an answer to the question whether the substance submitted for testing is a narcotic drug, a psychotropic substance or a new psychoactive substance within the meaning of the Act on Counteracting Drug Addiction.

The Act on Counteracting Drug Addiction of 29 July 2005 (Journal of Laws of 2019, item 852, as amended), hereinafter referred to as the Act on Counteracting Drug Addiction, is the basic legal act regulating the issue of legal liability related to drugs. It should be borne in mind that the term "drug" is a not legally defined term and it is used as a simplification to refer to a certain type of substance. In fact, the Act on Counteracting Drug Addiction defines four groups of substances that are subject to control: narcotic drugs, psychotropic substances, new psychoactive substances and substitutes. Qualification of a chemical compound in one of the above groups requires first of all its identification, i.e. the performance of specific chemical analysis which make it possible to determine chemical structure of the compound. The Act does not generally address the quantitative issue of the active substance – only in two cases it is necessary to carry out quantitative tests. The first concerns the determination of the morphine content of poppy and the second concerns the determination of the total content

of delta-9-tetrahydrocannabinol (delta-9-THC) and tetrahydrocannabinolic acid (delta-9-THC-2-carboxylic acid; THCA) in hemp. The latter test is necessary for the proper legal qualification as fibrous hemp or herbal cannabis.

In addition to the legal qualification of a substance, it is often important to determine the number of street portions that can be obtained from a given quantity of the drug in the context of pressing charges against a person who owns, sells, manufactures or acquires a prohibited substance. Street drug prices are also important in ongoing proceedings. So far, there has been no current, nationwide data on the qualitative and quantitative composition of street drugs confiscated by the Police in Poland. Also the issue of street samples and prices of selected drugs, last described in 2016 in *Issues in Forensic Science*, needs to be updated due to new substances appearing on the illegal drug market and the variable content of active substances in the so-called classic drugs such as amphetamine, cocaine, herbal cannabis, heroin, hashish or MDMA.

Data on police drug seizures indicate that cannabis-based products (including so-called marijuana, excluding hashish) have the largest share in the Polish illicit drug market, followed by amphetamine, MDMA and cocaine. Among the classic drugs in Poland, heroin and cannabis resin (hashish) are the least popular – the number of tests commissioned to police laboratories is very small in this case, as is the number and bulk

weight of seizures made. In recent years, the market share of the so-called “designer drugs” has also been significant, but with the amendment to the Act on Counteracting Drug Addiction ratified on August 2018, the overwhelming number of them lost the status of legal substances and, consequently, the number of seizures of this type of chemical compounds has decreased.

Research on qualitative and quantitative composition of drugs popular in Poland

In the years 2018–2019, the Central Forensic Laboratory of the Police (CLKP) conducted research to identify the qualitative and quantitative composition of substances considered to be classic drugs, confiscated by the Police throughout the country. The tests were conducted mainly on samples of drugs seized in the so-called street form. The criterion for qualifying samples for the tests was the quantity of the drug contained in a single package. In the case of amphetamine, herbal cannabis, cocaine and hashish, the maximum quantity was 5 g. For MDMA tablets, due to the form of the drug and the fact that the tablets are not diluted along the “wholesaler – dealer – retailer” distribution channel, hence their composition does not change regardless of whether they are seized from the wholesaler, dealer or end user, no quantitative qualification of the samples for

testing was applied. A total of 280 samples confiscated at different times and places were tested, containing the most popular classic drugs, including: 94 amphetamine samples, 85 herbal cannabis samples, 7 cannabis resin samples, 36 cocaine samples and 58 MDMA tablets.

The purpose of the tests was to identify the active substance in the test sample, to analyse its concentration and to determine the other ingredients, i.e. additives, dilutants or fillers. In the identification tests, the methods of gas chromatography coupled to mass spectrometry and infrared spectroscopy were used, while quantitative tests were carried out with the use of gas chromatography with a flame ionization detector. Due to the specificity of the selected methods, the main emphasis was placed on the identification of organic components. The results of the research conducted are presented below by individual voivodeships. Although only single samples were obtained from certain regions, the authors decided to include also these data for general comparison, being aware of certain limitations.

Amphetamine

Being a liquid, amphetamine as such does not constitute a trade street form of the drug. It is most commonly distributed in the form of a salt – amphetamine sulfate. Amphetamine samples from “street” seizures

Tab. 1. Active substance content in samples containing amphetamine sulfate by voivodeship.

Voivodeship	Substance form	Number of samples tested	Average content of amphetamine sulfate [%]	Average amphetamine content per base [%]
Lower Silesian	white or creamy powder	3	12	9
Kuyavian-Pomeranian	white powder	6	13	10
Lublin	creamy powder	2	9	7
Lubusz	creamy powder	1	12	9
Łódź	white or bright orange powder	17	8	6
Lesser Poland	white or creamy powder	4	17	12
Mazovian	white or creamy powder	11	18	13
Opole	white or creamy powder	6	9	7
Podlaskie	white, creamy or yellow powder	7	6	5
Subcarpathian	white powder	2	28	21
Pomeranian	beige, yellow or bright creamy powder	3	16	12
Silesian	white or yellow powder	8	12	9
Świętokrzyskie	white or beige powder	3	18	13
Warmian-Masurian	white powder	3	5	4
Greater Poland	white, creamy or yellow powder	6	17	12
West Pomeranian	white, bright beige or creamy powder	12	11	9

tested in the CLKP were in the form of white, creamy, beige or yellow powders, relatively homogeneous in the macroscopic image. They contained from a few to a maximum of 28% of the active substance, although samples with a “purity” below 1% were also observed. Detailed data on the content of the active compound in the tested amphetamine sulfate samples and after conversion into the alkaline form are presented in Table 1. The most commonly used dilutants were caffeine, followed by starch, creatine and 1-phenylethylamine. Over the years, a clear trend of decreasing amphetamine content has been observed in street samples which, at the same time, contain more and more caffeine that, having a stimulating effect similar to amphetamine, is nevertheless both legal and cheaper. Very often, at the final stage of production, alkaline amphetamine is mixed with caffeine and then precipitated in the form of a sulfate.

The average amphetamine content in street samples in Poland does not differ significantly from European values. The report of the European Monitoring Centre for Drugs and Drug Addiction [EMCDDA] and Europol (2019, p. 153), shows that in 2017 the average content of amphetamine in samples confiscated within the countries of the European Union was between 17–29%.

Figure 1 shows the content of amphetamine sulfate in individual voivodeships and the average value for the whole country.

Herbal cannabis

According to the CLKP data, in 2006 herbal cannabis obtained from so-called genetically modified cannabis plants appeared for the first time on the Polish illicit drug market. A characteristic feature of this herbal cannabis was its composition, namely the content of the substance determining the biological activity of cannabis, i.e. tetrahydrocannabinol delta-9 (delta-9-THC), was below 0.20%, while the main cannabinoid present in

the plants was tetrahydrocannabinolic acid (THCA). In some samples, the acid content was even several dozen times higher than the content of delta-9-THC. Pursuant to the drug abuse prevention law in force at the time, such herbal cannabis should be classified as fibrous hemp, since the division of hemp plants into fibrous and non-fibrous was based on the delta-9-THC content alone. However, given its effects on the human body, this substance should have been considered “highly narcotic” since, during smoking, THCA was thermally broken down to the delta-9-THC, and thus the factual amount of the active substance that entered the consumer’s body was many times higher. In response to this situation, an amendment to the Act on Counteracting Drug Addiction came into force in December 2006. According to the new definition, the division into fibrous and non-fibrous hemp plants is henceforth made on the basis of the sum of delta-9-tetrahydrocannabinol and tetrahydrocannabinolic acid contents. Since the 2006 amendment, a systematic increase in the content of components responsible for biological activity has been observed in herbal cannabis samples seized by the Police. The samples of herbal cannabis currently being seized are predominantly inflorescences of hemp plants with a delta-9-THC and THCA content varying between a few and several percent. No admixtures or additives were found in the street samples of herbal cannabis that were tested by the CLKP in the years 2018–2019. Table 2 contains data for 13 voivodeships from which the tested herbal cannabis samples were originating.

The average content of delta-9-THC and THCA for samples from the whole country was 8.45%, which was slightly lower than the values obtained for European countries, ranging between 9–12%. The average content of the active substance recorded in the European Union countries doubled from 5% to 10% over the years 2007–2017 (data source: EMCDDA, 2019, p. 85 and 99)

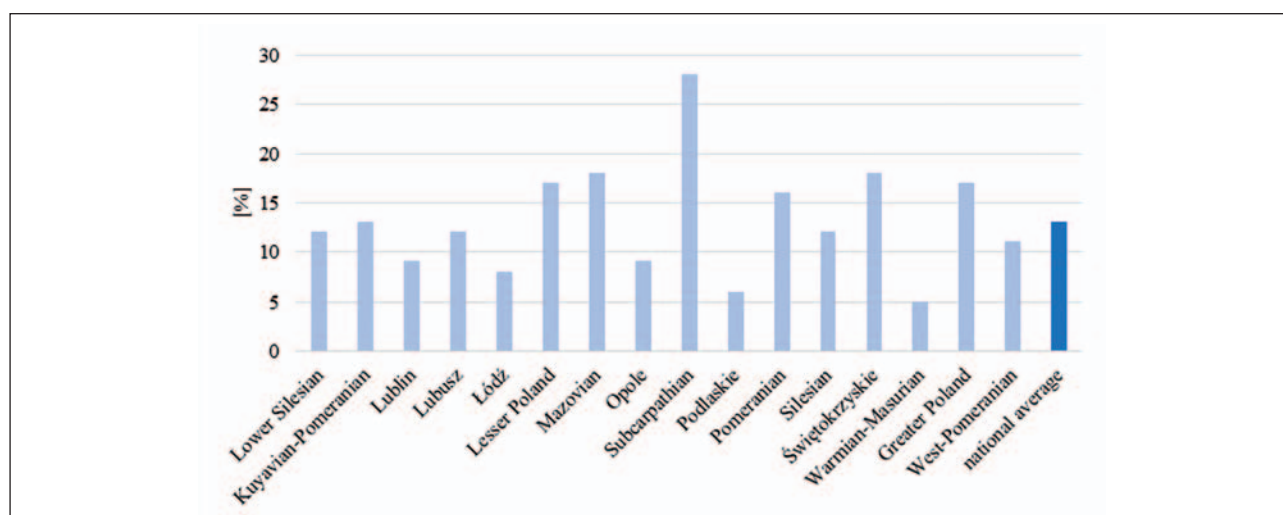


Fig. 1. Amphetamine sulfate content in street samples by voivodeship.

Tab. 2. Active ingredient content in herbal cannabis samples by voivodeship.

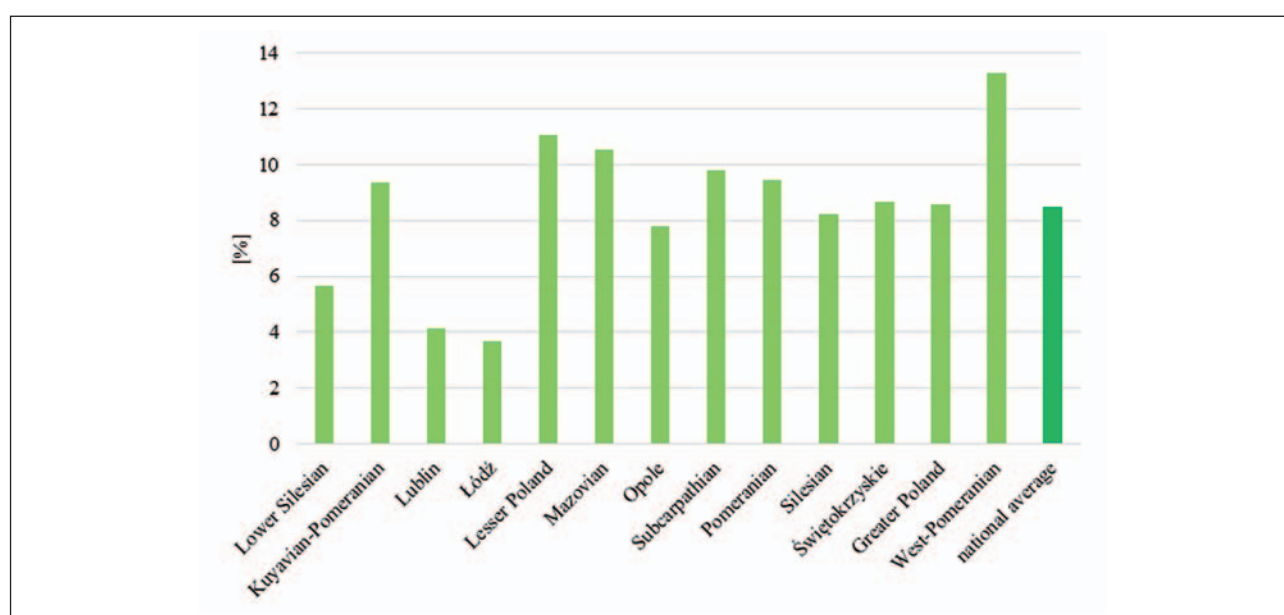
Voivodeship	Substance form	Number of samples	Delta-9-THC and THCA content [%]
Lower Silesian	cannabis (herb) – green-brown	4	5.62
Kuyavian-Pomeranian	cannabis (herb) – green-brown	5	9.32
Lublin	cannabis (herb) – brown	4	4.12
Łódź	cannabis (herb) – green-brown	5	3.69
Lesser Poland	cannabis (herb) – green-brown	4	11.05
Mazovian	cannabis (herb) – green-brown	24	10.49
Opole	cannabis (herb) – green-brown	5	7.75
Podlaskie	cannabis (herb) – green-brown	7	9.75
Pomeranian	cannabis (herb) – green-brown	3	9.43
Silesian	cannabis (herb) – green-brown	3	8.20
Świętokrzyskie	cannabis (herb) – green-brown	4	8.65
Greater Poland	cannabis (herb) – green-brown	7	8.56
West Pomeranian	cannabis (herb) – green-brown	10	13.23

and the same trend is observed in Poland. Figure 2 shows the total contents of delta-9-THC and THCA in herbal cannabis samples from individual voivodeships, together with the national average.

MDMA

MDMA is found on the illicit drug market most often in the form of tablets, popularly known as ecstasy tablets. Several years ago, they almost completely disappeared from the Polish drug market, but, what is interesting, they reappeared with the booming of the designer drug market. Unlike earlier tablets, the content of the active substance –

3,4-methylenedioxymethamphetamine (MDMA) – increased significantly. The content of the active compound in currently confiscated tablets is most frequently in the range 30–50%, which was also confirmed by the tests conducted by the CLKP, where MDMA content was shown to have ranged between 27–40%. It is worth noting that, regardless of the voivodeship, the MDMA contents in tablets were at a relatively comparable level (data shown in Table 3). On the European market, the MDMA content in tablets is given in mg/tablet and ranges between 84–160 mg/tablet, which corresponds to approx. 21–40%, assuming an average tablet weight of 400 mg. The

**Fig. 2.** Delta-9-THC and THCA content in herbal cannabis samples by voivodeship.

quality of the tablets has also been significantly improved in terms of their appearance and durability. Currently, the tablets confiscated by the Police have a variety of shapes, colours and logos, and resemble pharmaceuticals in the appearance (Fig. 3), which is most likely a response to market needs and the effect of the use of increasingly professional tablet machines and production ingredients, including tablet mass similar to pharmaceutical formulas. In terms of weight, the main additives in MDMA tablets are inorganic ingredients included in the so-called tablet mass; only in one case the presence of an active compound – caffeine – was observed.

Cocaine

Unlike amphetamine, cocaine, which is most commonly found on the illicit drug market in the form of a white powder containing hydrochloride, is generally very pure, even in street samples, which results in the high price of this drug. The overwhelming majority of samples originating from seven voivodeships, tested by the CLKP, contained cocaine hydrochloride; only in one case, the white powder was found to be alkaline cocaine. Cocaine hydrochloride content ranged between 62–99% (data shown in Table 4), and the most commonly used organic additives included levamisole, caffeine, benzocaine, lidocaine and procaine. Some of these substances are designed to at least partially offset the negative effects of the most common cocaine use, which is powder inhalation through the nostrils.



Fig. 3. Exemplary currently confiscated tablets containing MDMA.

Tab. 3. Active substance content in MDMA tablets by voivodeship.

Voivodeship	Substance form	Number of samples	MDMA hydrochloride content [%]	MDMA content per base [%]
Lower Silesian	tablet	6	36	30
Kuyavian-Pomeranian	tablet	5	28	23
Lublin	tablet	3	27	23
Lubusz	tablet	2	35	29
Łódź	tablet	3	38	32
Lesser Poland	tablet	2	40	33
Mazovian	tablet	5	40	34
Opole	tablet	2	27	23
Podlaskie	tablet	5	38	32
Subcarpathian	tablet	2	39	33
Pomeranian	tablet	3	34	29
Silesian	tablet	2	38	32
Świętokrzyskie	tablet	8	33	28
Warmian-Masurian	tablet	2	36	30
Greater Poland	tablet	3	34	29
West Pomeranian	tablet	5	35	29

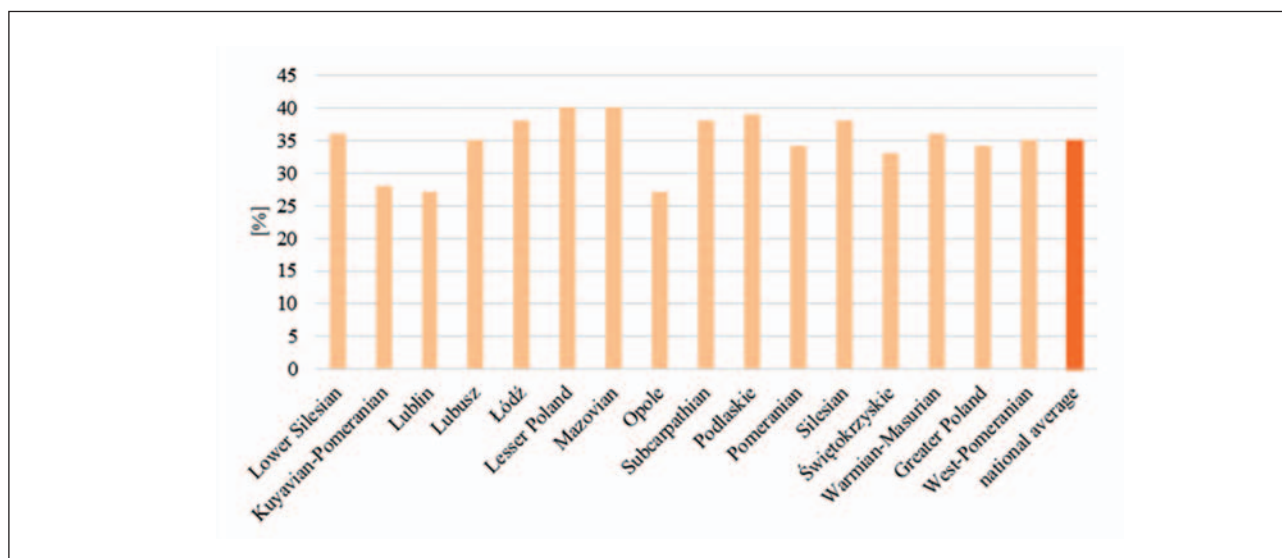


Fig. 4. MDMA hydrochloride content in samples by voivodeship.

Only in one case the police confiscated coca leaves with a cocaine content per base of 0.4%, however, this sample was not considered street cocaine, due to its unusual form.

Hashish

Hashish, more specifically – cannabis resin (hashish is not defined in the Act on Counteracting Drug Addiction), is not a popular drug in Poland, as confirmed by the EMCDDA data, which show that Poland is not a destination country for smuggling hashish, but plays the role of a transit country, unlike herbal cannabis, which is smuggled into Poland. Therefore, cannabis resin is not often seized, which is reflected in the results obtained in this study. A total of seven samples with the appearance characteristic of cannabis resin were tested, for which the delta-9-THC and THCA ranged between 2.1–21.88%, with an average value of 9.02%. The European average value in 2017, according to the EMCDDA report (2019, p. 85), was 15–22%.

Heroin

Heroin, like hashish, is not a popular drug in Poland and in the period 2018–2019 no sample was obtained for the purpose of testing in this study. The EMCDDA data (2019, p. 107) show that the average heroin content in samples seized in Europe is in the range of 15–31%.

Data on street samples sizes and prices of selected drugs in Poland

Due to the still current topic of street samples sizes and prices of drugs on the illicit drug market, such data were also collected in the course of this study. It should be borne in mind that the term “street samples” refers to the street portion of the drug sold to consumers, but importantly, the purity of such a drug is not specified. Thus, the specific content of the active substance in the street dose may vary greatly, as confirmed by the studies presented in the first section of this article.

Information on street portions and prices was obtained from the Departments on Combating Drug-related Crimes, Criminal Departments, Investigation

Tab. 4. Active substance content in samples of cocaine-containing powders by voivodeship.

Voivodeship	Substance form	Number of samples	Cocaine hydrochloride content [%]	Cocaine content per base [%]
Lower Silesian	white powder	1	99	88
Kuyavian-Pomeranian	white powder	2	81	72
Łódź	white powder	13	91	81
Lesser Poland	white powder	2	84	75
Mazovian	white or creamy powder	12	90	80
Podlaskie	white powder	2	64	57
Pomeranian	white powder (alkaline)	1	93	83

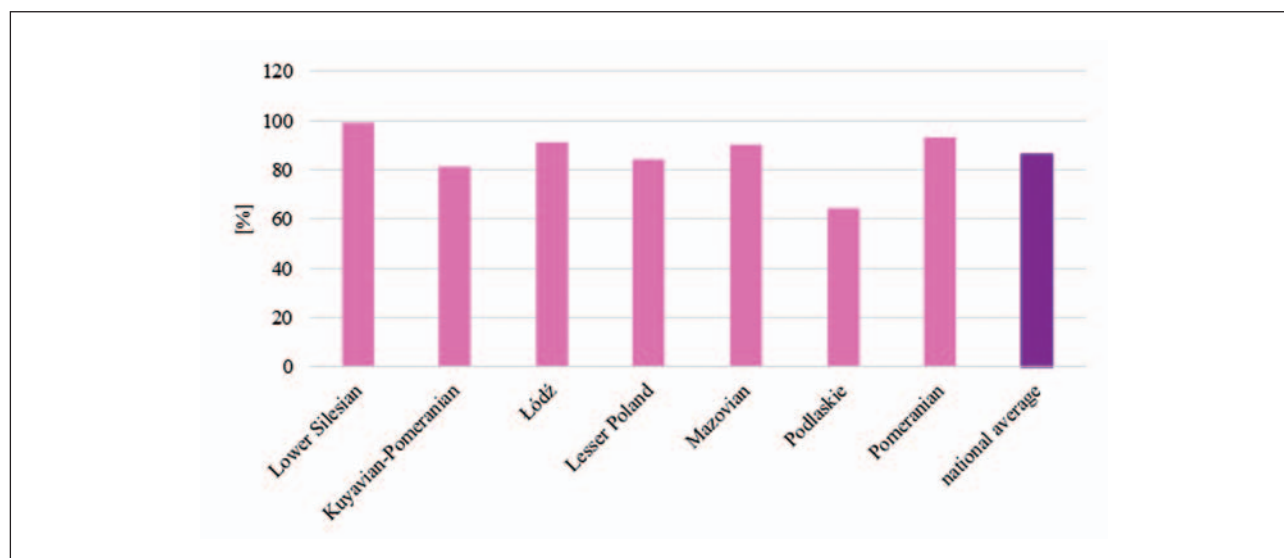


Fig. 5. Cocaine hydrochloride content in samples by voivodeship.

Departments and forensic laboratories of the of Voivodeship Police Headquarters throughout Poland. Data were collected for the years 2018–2019 and are presented in Tables 5 and 6 below. The division into voivodeships has been preserved as with the usually comparable weight of a prohibited substance its price varies depending on the region. The capital city of Warsaw was separated from the Mazovian Voivodeship

due to its specificity, in particular, a larger group of potential consumers, resulting from the large number of the city's inhabitants and different financial capabilities of buyers, probably related to higher salaries. For some voivodeships, no information on street samples and prices for heroin and hashish was obtained. This may indicate that these substances are much less popular in these regions than other drugs that are

Tab. 5. Street samples of selected drugs in 2019 by voivodeship.

Region	Amphetamine	Cocaine	MDMA	Heroin	Herbal cannabis	Hashish	Mephedrone
Lower Silesian	1 g	1 g	1 tablet	0.25 g	1 g	1 g	1 g
Kuyavian-Pomeranian	1 g	1 g	1 tablet	1 g	1 g	1 g	1 g
Lublin	1 g	1 g	1 tablet	1 g	1 g	1 g	1 g
Lubusz	1 g	1 g	1 tablet	0.4 g	1 g	1 g	1 g
Łódź	1 g	1 g	1 tablet	0.1 g	1 g	1 g	1 g
Lesser Poland	1 g	1 g	1 tablet	1 g	1 g	1 g	1 g
Mazovian	1 g	1 g	1 tablet	1 g	1 g	1 g	1 g
Opole	1 g	1 g	1 tablet	nda	1 g	1 g	1 g
Subcarpathian	0.8–1 g	1 g	1 tablet	nda	0.8–1 g	1 g	1 g
Podlaskie	1 g	1 g	1 tablet	0.25 g	1 g	1 g	1 g
Pomeranian	0.4–1.0 g	0.1–1.0 g	1 tablet	0.25–1.0 g	0.5–1.0 g	0.5–1.0 g	0.5–1.0 g
Silesian	1 g	1 g	1 tablet	1 g	1 g	1 g	1 g
Świętokrzyskie	1 g	1 g	1 tablet	nda	1 g	1 g	0.5–0.7 g
Warmian-Masurian	1 g	1 g	1 tablet	1 g	1 g	1 g	1 g
Greater Poland	1 g	0.6 g	1 tablet	nda	1 g	nda	1 g
West Pomeranian	1 g	1 g	1 tablet	nda	1 g	1 g	1 g
Warsaw	1 g	1 g	1 tablet	1 g	1 g	1 g	1 g

nda – no data available

commonly present throughout the country. For Lower Silesian Voivodeship, data on methamphetamine have additionally been obtained, as it is a very popular drug in this region. The most popular street sample of methamphetamine weighs 0.1 g and its price ranges between 18–20 PLN.

Table 5 presents the sizes of street drug portions in 2019. Only in some cases the weights were indicated in ranges, corresponding to how drugs are sold in a given voivodeship, whereas generally the drug portion is defined by a single value. In comparison with 2018, the presented figures have not changed significantly.

Street samples' prices of selected drugs vary from one voivodeship to another, sometimes even quite significantly (e.g. MDMA), with comparable portion weight. As prices also vary within individual voivodeships (e.g. between a county and a city), Table 6 presents values in ranges, without averaging, according to information collected from individual voivodeships. Whenever a drug is not popular in a given voivodeship, it translates into a lack of information on its price, an example of which is heroin. In turn, the increase in the popularity of mephedrone in recent years has resulted in its spread throughout the country, thus both the street samples weight and the price of the drug were known in all voivodeships, but not until 2019.

Data on prices and street portions were collected for the period 2018–2019. While street drug samples have changed only insignificantly, as already highlighted, prices have not remained stable. To compare data over

the last two years, prices have been recalculated for one gram of drug or one tablet (for MDMA), without specifying the purity of the drug, based on the weight and price of the street sample, and are shown in Tables 7 and 8. In 2018, data on mephedrone were not fully available, therefore this drug is only included in 2019.

In order to better visualise changes in drug prices, the data presented in Figures 6 and 7 include, in addition to price comparisons in 2018 and 2019, also national averages. It is noticeable that, in general, prices in individual voivodeships are comparable to the national average, yet in some regions they differ significantly. For example, the price of amphetamine in the Lesser Poland Voivodeship is significantly higher than in other regions of the country and despite a decrease in 2018 it still remains high compared to the national average. The situation is similar for herbal cannabis in the Mazovian Voivodeship. The prices per gram of herbal cannabis, amphetamine or 1 MDMA tablet have not changed significantly in two years in most voivodeships, with the exception of the Subcarpathian and Podlaskie Voivodeships, where amphetamine and MDMA prices increased significantly in 2019 compared to 2018. However, when the trends for the whole country are taken into account, the price changes are more pronounced: of the six drugs analysed, only the price per 1 gram of MDMA increased by nearly one third of the 2018 value, while the price of heroin in 2019 decreased significantly by almost one quarter of the 2018 value.

Tab. 6. Prices in PLN per street dose of drugs in 2019.

Region	Amphetamine	Cocaine	MDMA	Heroin	Herbal cannabis	Hashish	Mephedrone
Lower Silesian	25	250–400	10–15	40	40	40	40
Kuyavian-Pomeranian	20–30	280–320	12–15	200–240	50	70–80	70–80
Lublin	50	250–300	5–10	120–150	45–50	20–30	50–70
Lubusz	40	300	15–25	100	50	50	50
Łódź	20–25	250–500	30–35	50	35–50	35–50	30
Lesser Poland	50–80	200–400	15–35	200–400	15–40	35–45	100–150
Mazovian	40	400	20	200	60	50	50
Opole	30	250	10	<i>nda</i>	35	50	30
Subcarpathian	45–50	200	45–48	<i>nda</i>	30–40	<i>nda</i>	45–50
Podlaskie	50	300–600	20	100	40–50	40–80	40–60
Pomeranian	16–40	30–300	15	50–200	25–50	25–50	25–50
Silesian	30–40	200–300	8–10	150–200	25–30	35	80–100
Świętokrzyskie	30–50	400	10–35	<i>nda</i>	50	50	50–100
Warmian-Masurian	40	300	10	<i>nda</i>	40–50	40	60–80
Greater Poland	20–30	200–250	20–30	<i>nda</i>	40–50	<i>nda</i>	50
West Pomeranian	25–30	250–300	20–25	<i>nda</i>	50	40	80–100
<i>Warsaw</i>	50	300–350	15–17	300–400	30–60	50	50
<i>nda</i> – no data available							

Tab. 7. Average prices in PLN per 1 g of drug or 1 tablet (for MDMA) in 2018.

Voivodeship	Amphetamine	Cocaine	MDMA	Heroin	Herbal cannabis	Hashish
Lower Silesian	25	250	14	1000	40	25
Kuyavian-Pomeranian	37	350	16	500	50	nda
Lublin	40	275	25	nda	40	nda
Lubusz	35	250	20	300	35	nda
Łódź	20	225	9	400	35	35
Lesser Poland	80	400	25	nda	30	nda
Mazovian	40	400	20	200	60	50
Opole	25	300	10	nda	40	50
Subcarpathian	30	325	8	450	35	35
Podlaskie	20	300	10	400	45	35
Pomeranian	40	200	15	200	50	50
Silesian	30	200	30	nda	30	30
Świętokrzyskie	40	390	20	135	50	60
Warmian-Masurian	40	200	9	nda	35	40
Greater Poland	40	325	18	nda	46	50
West Pomeranian	45	240	18	nda	40	40
Warsaw	60	440	30	420	50	60
Lowest price	20	200	8	135	30	25
Highest price	80	440	30	1000	60	60
nda – no data available						

Tab. 8. Average prices in PLN per 1 g of drug or 1 tablet (for MDMA) in 2019.

Voivodeship	Amphetamine	Cocaine	MDMA	Heroin	Herbal cannabis	Hashish	Mephedrone
Lower Silesian	25	325	12.5	160	40	40	40
Kuyavian-Pomeranian	25	300	13.5	220	50	75	75
Lublin	50	275	7.5	135	47.5	25	60
Lubusz	40	300	20	250	50	50	50
Łódź	22.5	375	32.5	500	42.5	42.5	30
Lesser Poland	65	300	25	300	27.5	40	125
Mazovian	40	400	20	200	60	50	50
Opole	30	250	10	nda	35	50	30
Subcarpathian	50	200	46.5	nda	35	nda	47.5
Podlaskie	50	450	20	400	45	60	50
Pomeranian	40	300	15	200	50	50	50
Silesian	35	250	9	175	27.5	35	90
Świętokrzyskie	40	400	22.5	nda	50	50	125
Warmian-Masurian	40	300	10	nda	45	40	70
Greater Poland	25	375	25	nda	45	nda	50
West Pomeranian	27.5	275	22.5	nda	50	40	90
Warsaw	50	325	16	350	45	50	50
Lowest price	22.5	200	7.5	135	27.5	25	30
Highest price	65	450	46.5	500	60	75	125
nda – no data available							

For comparison of Polish and European prices, Table 9 below presents data on prices of the most popular drugs in the European Union countries, taken from the EMCDDA report.

Price and street portions analysis shows that drugs such as amphetamine, cocaine, MDMA tablets and herbal cannabis are still popular and present in all voivodeships in Poland. Hashish and heroin remain less popular, but mephedrone has definitely gained in popularity. According to data from police units, this drug is sold throughout the country as an alternative to amphetamine, even though it has been a controlled substance under the Act on Counteracting Drug Addiction since 2010.

The analysis of data in Tables 5–9 leads to the conclusion that the usual street samples of most drugs has a weight of one gram, while for MDMA it is one tablet. Heroin is sold in the most varied portion sizes, ranging between 0.1–1 g. Street samples' prices obviously vary according to the type of drug, with heroin and cocaine being the most expensive, while average street samples' prices for herbal cannabis, hashish and amphetamine remain at similar levels in many voivodeships. Nevertheless, the price variation across drug groups is surprisingly large – for most drugs (e.g. amphetamine, MDMA, mephedrone), the highest price per gram is three times the lowest price, while, at the same time, there is no clear indication that drugs are cheapest in one region of Poland and most expensive in another. It is more common for a given drug to be cheap in one voivodeship and relatively expensive in another, compared to the national average. The cheapest drug is an ecstasy tablet, which on average costs less

than PLN 20. Polish prices do not differ from those in other European countries, the biggest differences are observed for MDMA, which is cheaper in Poland than in the rest of Europe, while heroin is much more expensive.

Summary

Analysis of the data collected shows that the content of the active substance in the so-called classic drugs varies considerably from one voivodeship to another when it comes to amphetamine or herbal cannabis, but the difference is not significant for MDMA tablets or cocaine. This can be easily explained for MDMA tablets, namely, it is impossible to “dilute” the tablets at individual stages of the distribution process. For the most part, this drug comes to Poland from western European countries and is sold in individual voivodeships as originally produced. In the case of cocaine, the addition of other ingredients at different stages of the distribution would be possible, but it appears that consumers expect a pure product with high potency, hence the high purity of street samples is somehow a response to market demand. It is interesting that the purity of drugs, understood as the content of active substance, does not correlate directly with their price. When a comparable street sample weight is taken into account, the price of a single street portion of amphetamine with a low content of the active ingredient of 5% is not much lower than of a portion containing 28%. Differences seem to be more due to the popularity of the drug in a given region of the country.

Comparing the results collected and presented in this study with the data of the European Monitoring Centre for Drugs and Drug Addiction, it can be concluded that the situation on the illegal drug market in Poland does

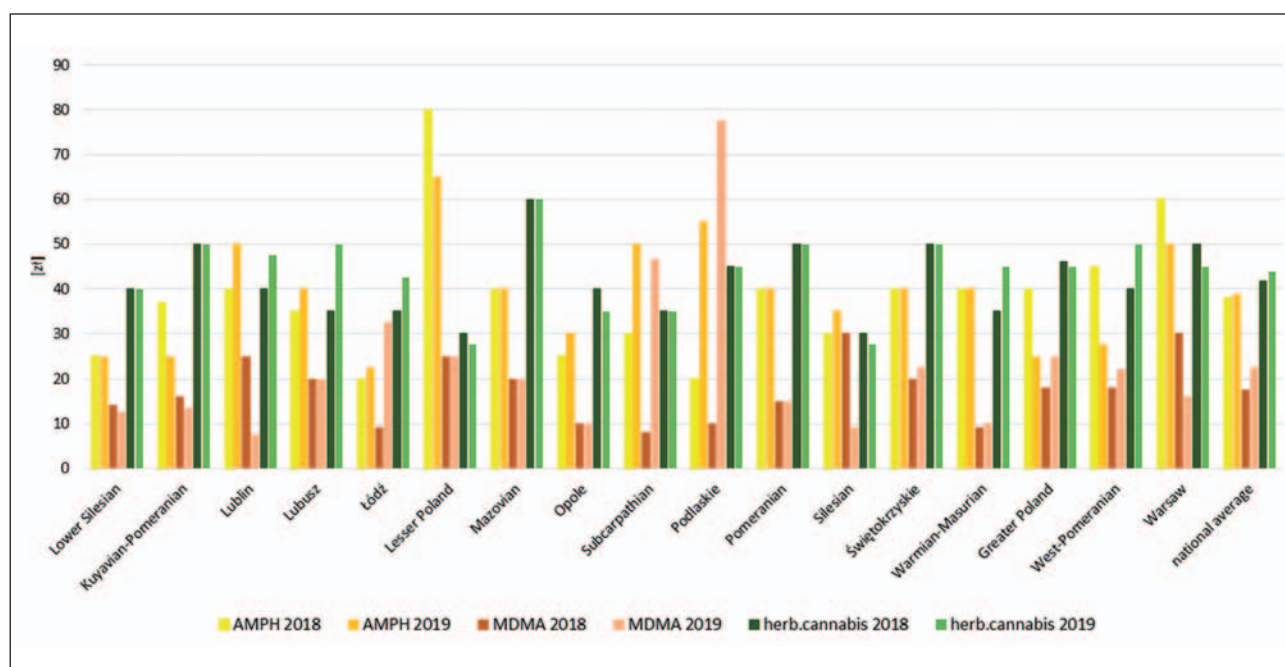


Fig. 6. Prices per 1 g of amphetamine, 1 g of herbal cannabis and 1 MDMA tablet in the years 2018–2019 by individual voivodeships in Poland.

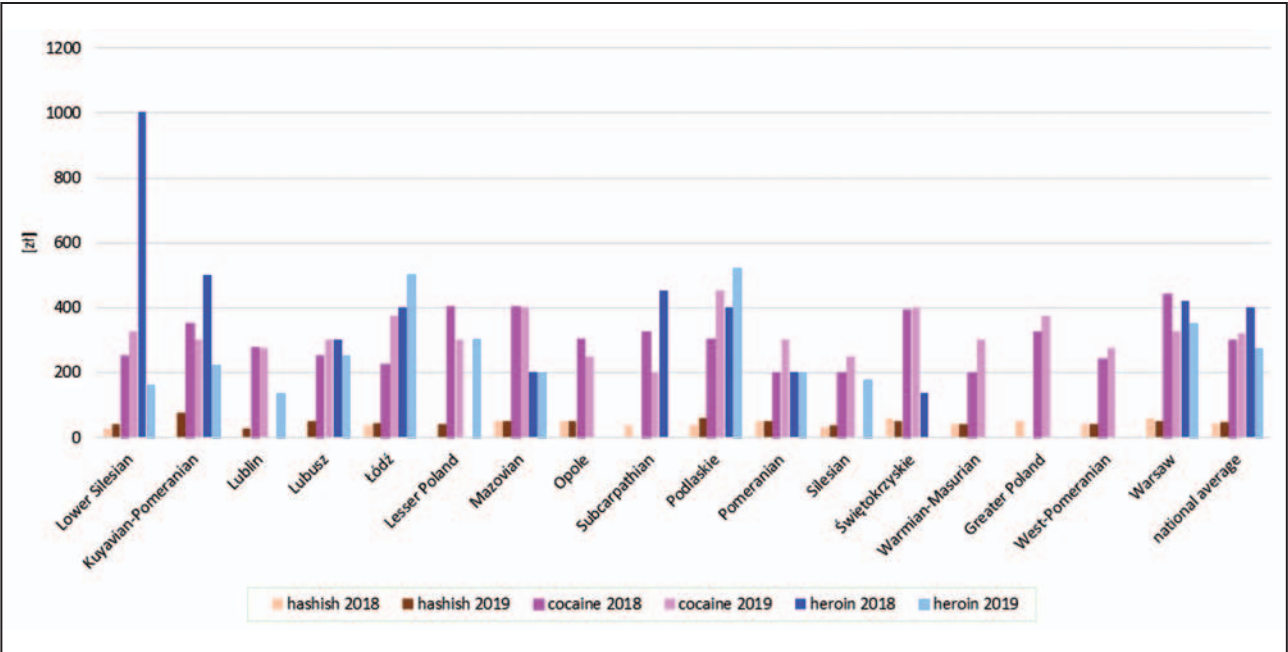


Fig. 7. Prices per 1 g of hashish, 1 g of cocaine and 1 g of heroin in the years 2018–2019 by individual voivodeships in Poland.

Tab. 9. Prices in Europe in euro per 1 g of drug in 2019.

Amphetamine	Cocaine	MDMA	Heroin	Herbal cannabis	Hashish
7–13	55–82	6–10	28–58	7–13	9–13

not differ from that observed on the European markets. Due to the free movement of goods in Europe, which also applies to the illegal drug market, it is not surprising that there is a correlation in terms of purity and prices of the drugs confiscated in Poland, in relation to other European countries.

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Sources of Figures and Tables:

Figures 1–7: authors

Figure 3: CLKP ownmaterials

Tables 1–8: authors

Table 9: EMCDDA, 2019, p. 85, 107, 129 and 153

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