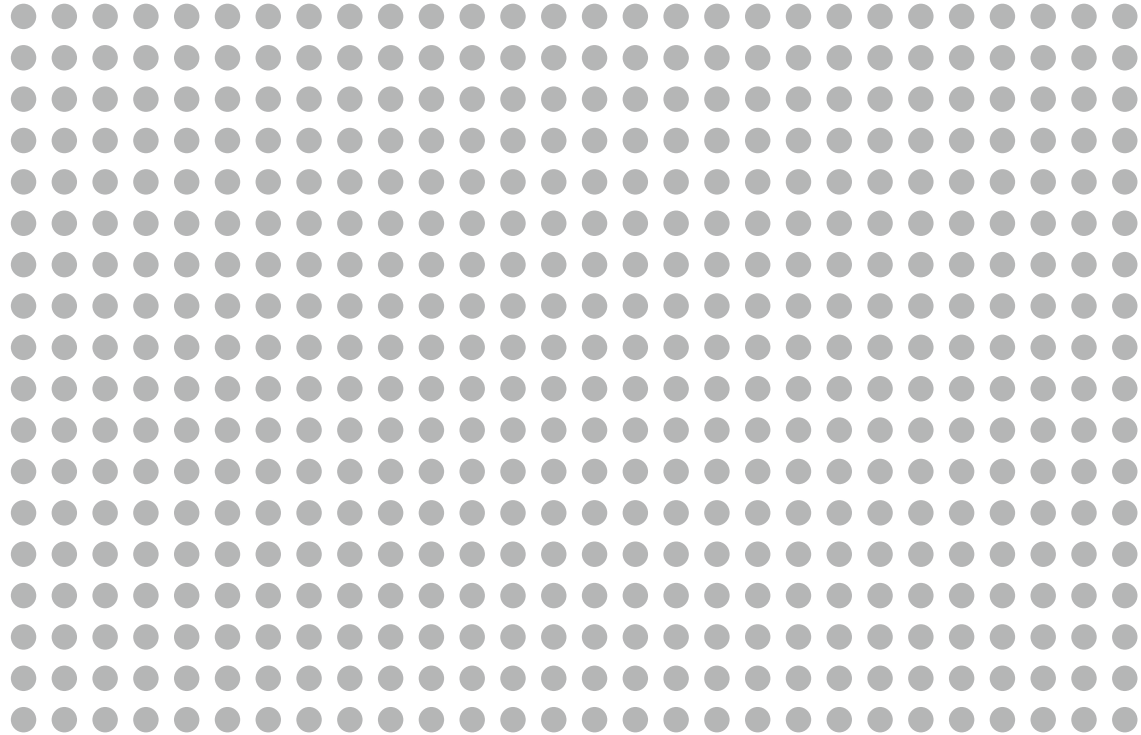


1ST TEDI TREND REPORT



About TEDI & the first trend report

The Trans European Drug Information project (TEDI) is a network of European fieldwork Drug Checking services that share their expertise and data within a European monitoring and information system. TEDI's chief aim is to improve public health and intervention programs. Toward this goal, TEDI has developed a database system that collects, monitors and analyses the evolution of various European drug trends in recreational settings. TEDI project is inside of the European NEWIP project.

All of the organisations currently involved in Drug Checking in recreational settings share their data on the TEDI database, which was originally established in conjunction with projects that worked directly with drug users (first-line projects). These projects are: Ai Laket!!, Check In, Checkit, DIMS, Energy Control, Jellinek, Modus Fiesta, Saferparty.ch and Techno plus.

TEDI project is committed to gathering and publishing the most relevant data from the TEDI database in its biannual trend reports. This report represents the launch of TEDI's trend report. The aim of the first trend report is to present the results of the data gathered, analysed and compared by four Harm Reduction groups during the period January–May 2012 in three countries. This trend report also compared the 2012 figures with those gathered by TEDI member organisations in 2011 to assess emerging trends.

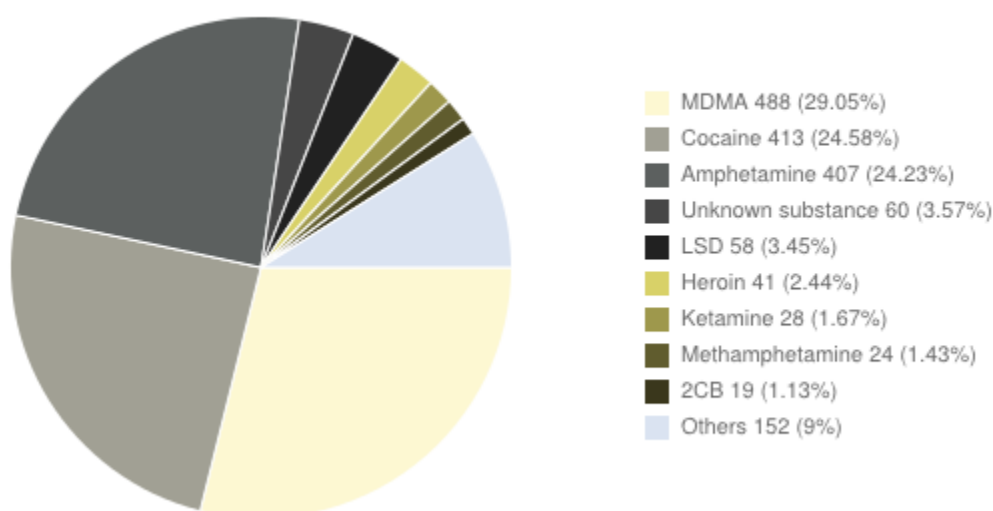
The TEDI trend report does not, however, provide any detailed information about the substances named in the report. But it does provide numerous links where more information related to specific substances can be found.

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Types of analysed drugs

This very first trend report includes **1,690 analyses from the period January–May 2012**. These analyses were developed by four Harm Reduction groups located in three countries: Spain's Ai Laket!! analysed 71 samples and Energy Control 808 samples, Austria's Checkit! analysed 444 samples, while Switzerland's Saferparty.ch analysed 367 samples. As is usual for these types of services, **the most analysed substances remain MDMA (29%), cocaine (25%) and amphetamine (24%), which combined represent over 78% of the total analysed samples**. This further mirrors current usage trends of substances in recreational settings. However, it must also be emphasised that the number of samples of LSD (58), heroin (41), ketamine (28), methamphetamine (24) and 2C-B (19) were also not insignificant.

Types of Analysed Drugs



Of the samples received, 4% of the substances were unknown to the users. In most cases, people who acquire a substance of unknown consistency in a recreational setting will bring it to a Drug Checking service before using it. The Drug Checking service on hand offers the users the capacity to identify the substance quickly and analyse the composition of the substance in question, which gives users the opportunity to make an informed decision about any dangers or unexpected additives associated with the involved substance.

Besides the readily identified substances noted above, **the chart above breaks** down the “others” category of which involved less-popular substances that were analysed a few times including: methylone (15), methoxetamine (14), DMT (11), mephedrone (6), MDA (6), 4-MEC (3) and MDPV (2).

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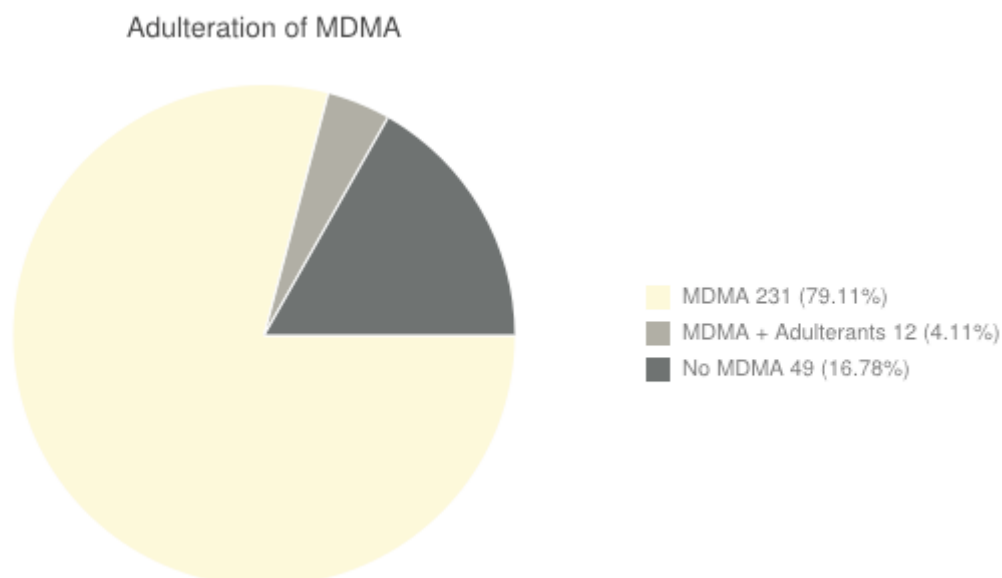
Ecstasy (MDMA)

The general observation over the past few years is that MDMA's composition tends to vary depending on how it is produced, as a pill or as crystal.

In the period January–May 2012, **488 samples of MDMA were analysed, 292 of which were sold as crystal and 196 sold in pill form.**

> MDMA in Powder or Crystal Form

The purity of the MDMA in the 292 analysed crystal samples was generally high, with over 54% of the analysed samples achieving a purity level of between 75 and 100%. The average level of purity of the samples analysed was 73% but this percentage varied per country. In Switzerland, the purity level was 92%, while in Spain it was 73% and in Austria, 63%. Compared to the 2011 data, which showed an average purity level of 69%, the crystal MDMA used in 2012 had a slightly higher percentage of purity, which reflects the current trend – the purity of crystal MDMA is increasing slightly.



Of the total 488 samples, 79% contained pure MDMA, with no adulterants, while 4% contained MDMA plus an adulterant. The remaining 17% did not contain any MDMA at all. These pills or crystals contained other substances, some of which were not even psychoactive. This mirrors

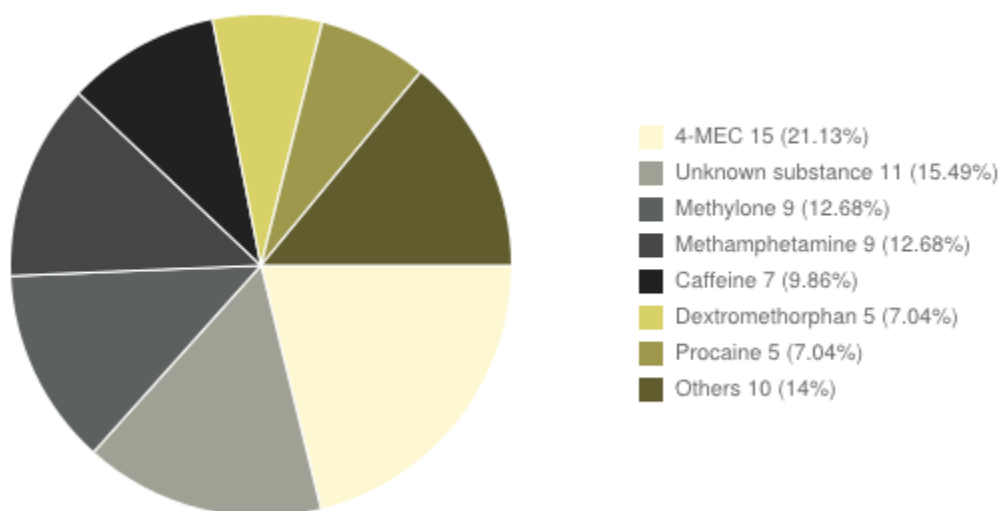
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the trend revealed in the 2011 data, where some 80% of the samples were pure MDMA and 12% contained no MDMA at all.

When we compare the data of the three countries, we observe that 87% of samples in Switzerland were pure MDMA, compared to 81% in Spain and 72% in Austria. The percentage of samples that contained no MDMA was 11% in Switzerland, 12% in Spain and 29% in Austria.

When we analyse the adulterants added to crystal MDMA, we discover that the most common adulterants were Research Chemicals such as 4-MEC and methylone, which represent 34% of the total adulterants used. It's also important to emphasise the use of methamphetamine (13%), caffeine (10%) (which is mostly used in combination with MDMA) as well as dextromethorphan (7%) and procaine (7%). Some unknown substances were detected but never properly identified (15% of the total adulterants found), while adulterants representing less than 3% of total substance were categorised as "Others".

Adulterants Found in Crystal MDMA

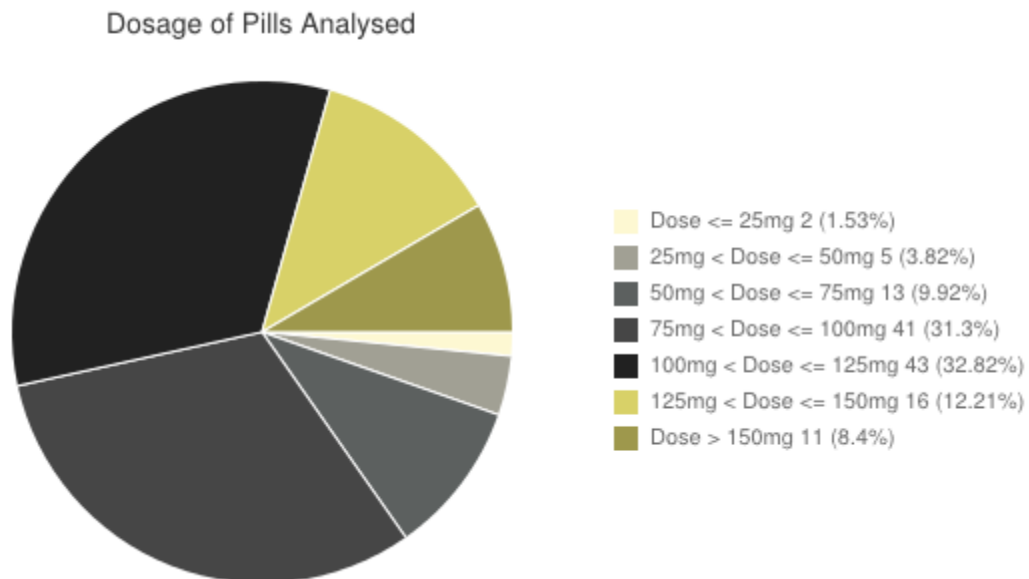


When we compare the adulterants used per country, we observe that methamphetamine was only detected in Spanish crystal MDMA, while 4-MEC was only detected in Austria. The use of methamphetamine as an MDMA adulterant first emerged as a trend in Spain in 2011.

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> MDMA IN PILLS

In the three countries involved in the study, we observe high dosages of MDMA in 196 of the pills analysed, **with an average dosage of 102 mg** of MDMA. More than 53% of the pills analysed contained 100 mg or more MDMA and 8% contained more than 150 mg of MDMA. Compared to the data from 2011, the average MDMA pill dosage of has increased significantly. According to TEDI's data, **in 2011, the average dosage of an MDMA pill was 82 mg**. A third of the pills analysed in 2011 contained at least 100 mg, with 3% containing 150 mg or more. This data confirms the ecstasy market trend, which has been very stable since 2010. In 2011, we witnessed the first increase in the average dosage of MDMA per pill since 2002 and, according to TEDI's 2012 data, this average continues to rise.

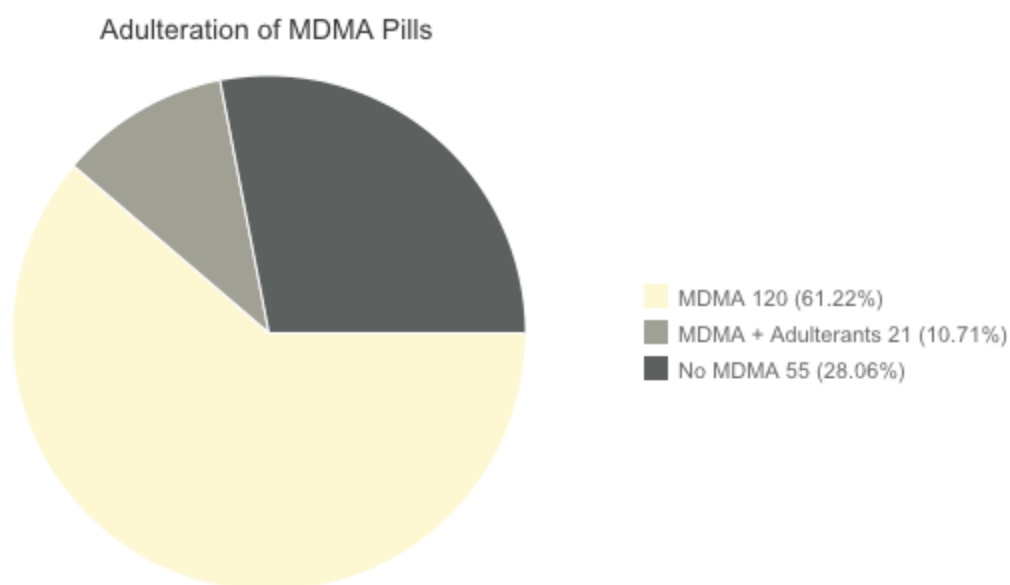


When we compare the data of the three countries, we observe that in Spain 63% of pills analysed contained 100 mg or more MDMA, with 11% of the analysed pills analysed containing more than 150 mg . In Switzerland the results showed 61% of the pills contained 100 mg of MDMA or more, while 6% of the pills contained over 150 mg of MDMA. In Austria, 31% of the

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pills analysed contained 100 mg or more while the percentage of pills with more than 150 mg represented 8% of the total.

The adulteration of the 196 samples of ecstasy sold in pill form was higher than that of the MDMA sold in crystal form. 61% of the analysed pill samples were pure MDMA, while 11% contained MDMA plus adulterants, (mostly caffeine), with a full 28% of the pills analysed containing no MDMA at all. In the pills that contained no MDMA, the chief substances detected included: m-CPP, PMA, methylone and mephedrone.

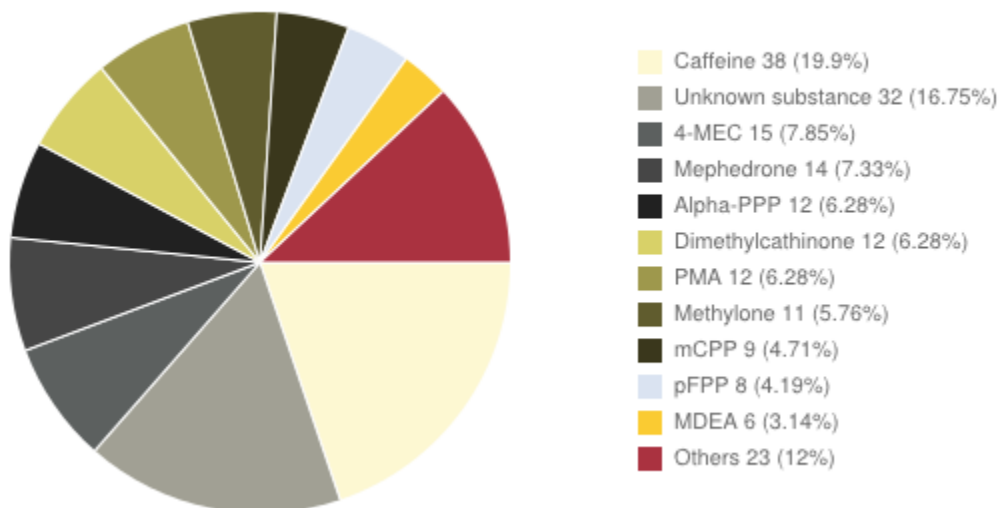


The most prevalent adulterants found in MDMA pills are caffeine (present in 20% of the total) and Research Chemicals such as 4-MEC, mephedrone, methylone, alpha-PPP and dimethylcathinone, with 34% of the analysed samples containing at least one of these chemicals. The amount of m-CPP continues to decrease in the three countries in this study compared to previous years, with only 5% of the analysed pills containing m-CPP in 2012, while 2011 data revealed a percentage of 12% of the pills analysed. However, PMA was detected in 12 samples sold as MDMA pills in Austria. These pills also contained the adulterants alpha-PPP and dimethylcathinone, which were only found in Austria. In Spain in June 2012, PMA was detected in a pill mixed with caffeine, p-FPP and dimethylcathinone. Meanwhile, the adulterant 4-MEC was detected only in Austria in both MDMA pills and crystal.

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Some unknown substances were detected but not identified (17% of total adulterants) and adulterants representing less than 3% of total pill content were classified as "Others".

Adulterants Found in MDMA Pills

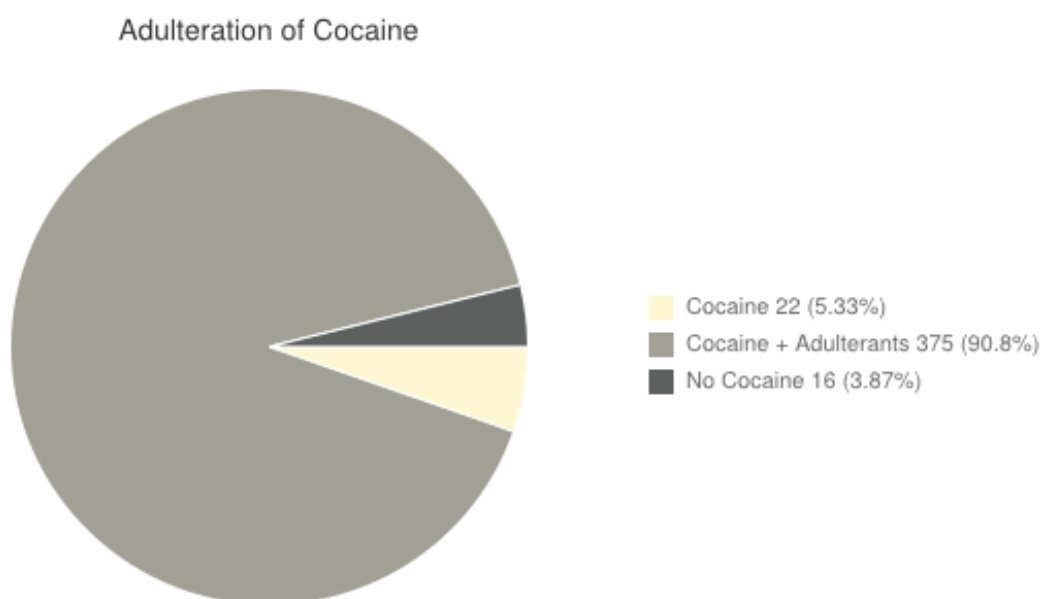


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Cocaine

In the period January–May 2012, 413 cocaine samples were analysed with most containing low dosages of actual cocaine. The average level of purity detected was 49%. Furthermore, 21% of the samples analysed contained less than 25% cocaine. These figures are almost the same as the 2011 figures when the average purity level was 48%.

The number of samples that were pure cocaine comprised only 5% of the total, while 91% contained a combination of cocaine plus adulterants. Of the total, 4% contained no cocaine at all. In some of these cases, a combination of caffeine with local anaesthetics was detected. Compared to the data from 2011, levels of adulteration have increased. In 2011, 10% of the cocaine samples were pure cocaine, while 82% consisted of a combination of cocaine and adulterants.

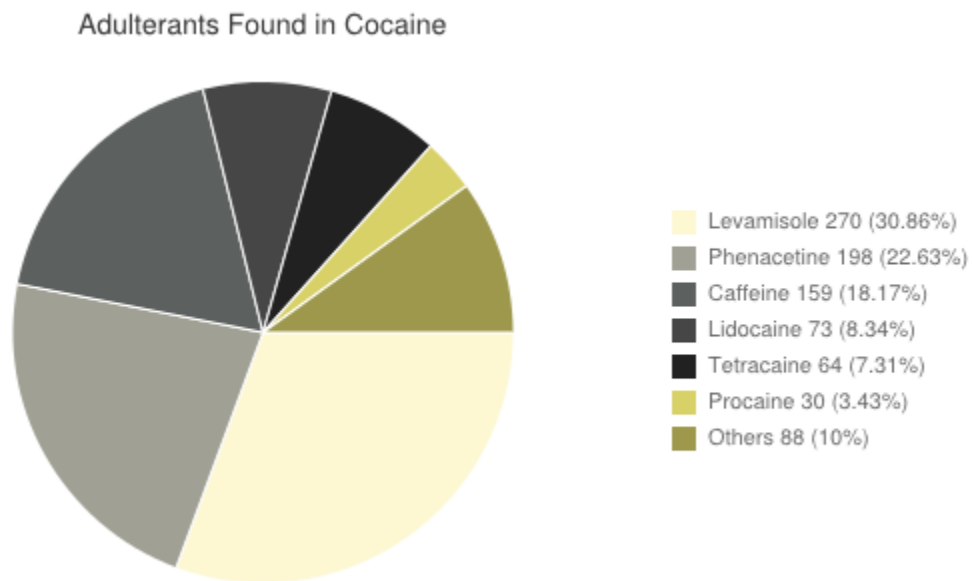


When comparing the data from the three participating countries, we observe that 10% of the analysed samples in Switzerland contained pure Cocaine, while 13% contained less than 25% cocaine. In Spain, 9% of the samples were pure cocaine, while 46% of the samples contained less than 25% cocaine. In Austria, only 2% of the analysed samples were pure cocaine, while 35% contained less than 25% cocaine.

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Cocaine, on average, contained more adulterants than other substances, with 167 cocaine samples (40% of the total) containing three or more adulterants. These figures are very similar to those from 2011, when 44% of the analysed sampled contained three or more adulterants.

The most common adulterant remains levamisole, which is present in 29% of the total number of samples, followed by phenacetine(21%) and caffeine (17%). Other common adulterants include local anaesthetics (18%, which includes lidocaine (8%), tetracaine(7%) and procaine (3%)).



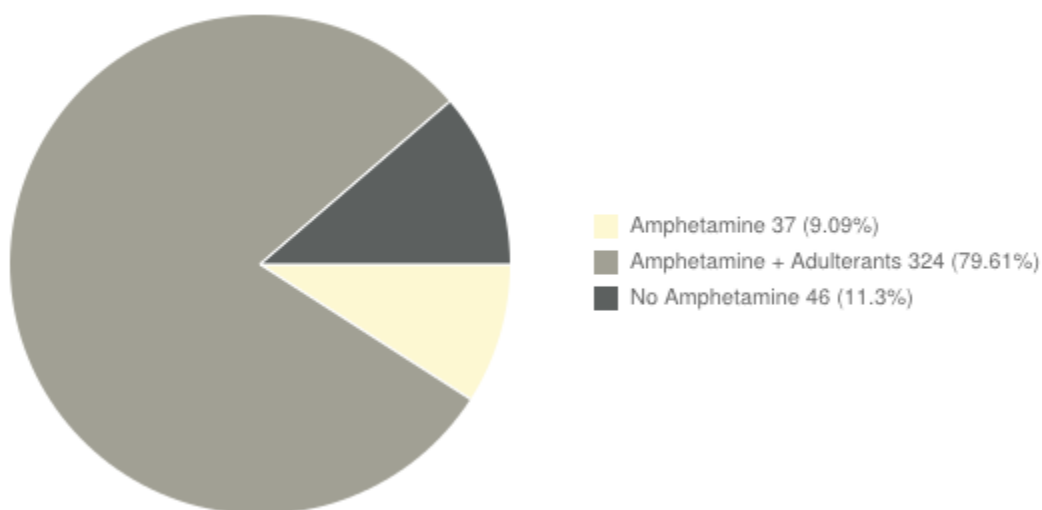
Cocaine adulterants detected during the research were very homogeneous for the three participating countries. Comparing 2012's figures with those of 2011 reveals that the types of adulterants detected remain the same, establishing a trend regarding the general composition of cocaine. However, the incidence of levamisole decreased compared to 2011, when Levamisole was still found in over half of the cocaine samples analysed.

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Amphetamine (speed)

The average dosage of amphetamine in the 407 samples analysed during the period January–May 2012, was very low (14%), with 86% of the samples analysed containing less than 25% amphetamine. The purity decreased compared to figures for 2011 when the average purity level was still 20%. When we compare the data of the three countries, we see that in Spain, 16% of the analysed samples contained pure amphetamine, while 67% of the analysed samples contained less than 25%. In Switzerland, 5% contained pure amphetamine and 79% of the samples analysed contained less than 25% of purity. Meanwhile, in Austria, only 3% of the total were pure amphetamine, with 96% of the analysed samples containing less than 25% amphetamine.

Adulteration of Amphetamine

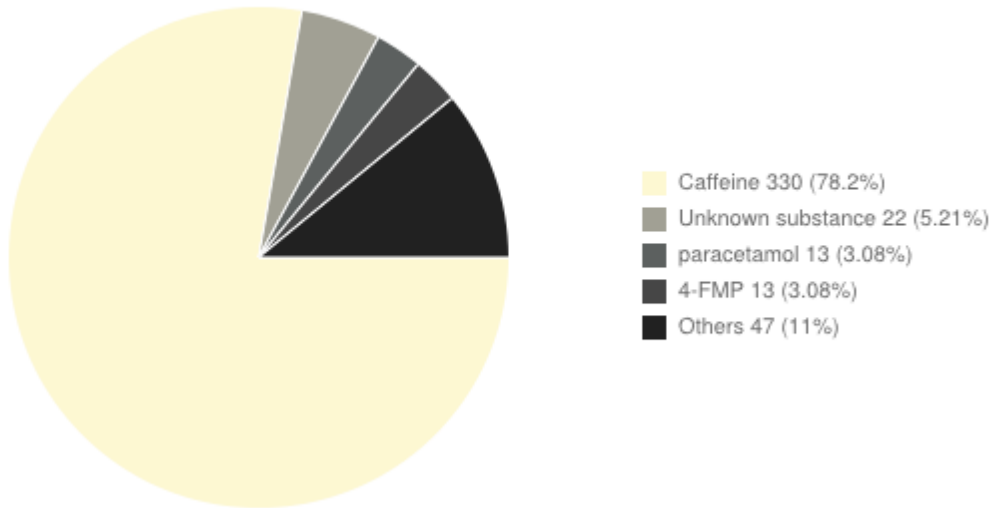


Amphetamine, like cocaine, was also commonly adulterated with other substances, with **only 9% of the samples being pure amphetamine**. Of these samples, 80% contained a combination of amphetamine plus adulterants. In most of these cases, the amphetamine was mixed with caffeine. This mixture represents a classic trend that has been detected by all of the Drug Checking services for several years now. The remaining 11% of the samples contained amphetamine at all; instead we found substances such as 4-FMP and caffeine replacing any

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trace of amphetamine. Amphetamine adulteration has thus far increased in 2012, compared to figures from 2011, when 16% of the analysed samples were still pure amphetamine and 74% were comprised of amphetamine plus other substances.

Adulterants Found in Amphetamine



In all three countries, the main adulterant remains caffeine, which was found in a total of 68% of the analysed samples. We also detected 4-FMP in 3% of the samples and unknown substances in 5% of the samples. In the category of “Others,” **it is important to emphasise that we detected 4-methylamphetamine in six samples in Austria, in three samples in Switzerland and one in Spain.**

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Newly Detected Substances

During the period January–May 2012, 33 new substances were detected by the participating Drug Checking services. Some of them include research chemicals such as: ethylmethcathinone, 4-methylmethcathinone, 4-flourphenylpiperazine, flephedrone and RCS-4. Three of these substances were not yet detected by EMCDDA the [European Monitoring Centre for Drugs and Drug Addiction \(EMCDDA\)](#): 2-methylmethcathinone, 3-methylquinoline, and N-methyl-2-phenyl-1-propylamine. Several other substances known to be used as medical drugs were found in psychoactive substances as adulterants recently: [phenazone](#), [griseofulvin](#), [alprazolam](#) and [pheniramine](#).

Warnings

RED ALERTS

During the research period January–May 2012, PMA and PMMA were detected in all 3 countries. PMA was detected in pill format in Austria and in a powder form in Spain in March 2012. [Read here for more information](#). In June 2012, PMA was detected in a Spanish pill. [Click here](#) for further information in Spanish.

Photos of pills containing PMA analysed in Austria:



Photo of the pill containing PMA detected in Spain:



In May 2012, PMMA mixed with MDMA was detected in a single pill in Switzerland.

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Photo of the Swiss pill containing PMMA:



Another substance called 4-methylamphetamine (4-MA) was detected during the research period in some samples sold as speed. There is very little available information on 4-MA. But last year, there were some unexplained deaths in the Netherlands, Belgium and the United Kingdom that were reportedly linked to 4-MA use. Thus it remains difficult to accurately assess its toxicity and in what dosage it begins to represent a serious health risk.

For more information on 4-MA (in German) and access to the Checkit warning [click here](#).

ALERTS

In addition to warnings about substances which are more toxic and therefore have a higher risk to lead to overdose and life-threatening situations, it's also important to note the high dosage of MDMA currently being found in many ecstasy pills. This trend was first detected in 2011 and has remained stable during the 2012 research period in the three involved countries.

It's also crucial that we note the presence of psychoactive drugs that have adulterated some of the cocaine samples. Levamisole remains one of the most common cocaine adulterants in and continues to raise concern because the regular consumption of levamisole may cause a significant decrease in the number of white blood cells in the body of a user, which makes him or her more vulnerable to infections. Further information on the side effects of levamisole is available at the [EMCDDA website](#).

Phenacetine, currently the second most frequently used adulterant found in cocaine, is another adulterant that has raised concern about its health risks. A regular or high dose of phenacetine has been linked to serious kidney problems. When used in combination with alcohol, it may cause significant damage to the liver.

Local anaesthetics such as lidocaine or procaine have also been used as adulterants, but on a much smaller scale. These substances are, however, potentially very dangerous if injected together with cocaine.

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Conclusions

The main substances used in recreational settings continue to be MDMA, amphetamines and cocaine. Each of these substances varies greatly with regard to their levels of purity and the number and percentage of adulterants. For users, this means not only dealing with the risks of the substance one thinks one has in hand but also increased risks associated with substances of unknown purity adulterated with other substances (adulterants). The only way to be ensured of the composition of a recreational substance is to have it tested in a Drug Checking Service and, toward this goal, TEDI's trend report has published the results of four Drug Checking systems: [AI LAKET!!](#), [Checkit!](#), [Energy Control](#) and [Saferparty.ch](#).

“Ecstasy (MDMA), in both pill or crystal form, remains the least adulterated substance”

Ecstasy (MDMA), in both pill or crystal form, remains the least adulterated substance. Despite its lower levels of adulteration, however, there are some cases where other substances such as research chemicals were sold as Ecstasy. The risks are currently related to the broad range of adulterants found in MDMA, but also the increased dosage of MDMA per ecstasy tablet.

“ The adulteration level of cocaine is currently higher than in previous years”

During the analysed period, 40% of all cocaine samples contained at least three other adulterants, such as caffeine, phenacetine, local anaesthetics and levamisole. Although all of these adulterants come with their own risks, levamisole and phenacetine are currently the subject of increased concern because of the potential toxic effects that it can produce in cocaine users.

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Amphetamine is another substance that is often adulterated. Amphetamine is usually combined with other substances in 80% of the examined cases. The main adulterant detected remains caffeine. The amphetamine and caffeine mix was quite common in the samples sold as speed and users are generally accustomed to the effects this combination causes. The risk assessment is thus more focused on the broad variety of concentrations of amphetamine that Speed samples usually as well as such lethal substances as 4-MA.

A Drug Checking service is an effective method for detecting which new substances are making the rounds in various recreational settings. During the research period 33 new substances were detected. Three of these substances were not yet detected by the EMCDDA.

“ During the research period 33 new substances were detected. Three of these substances were not yet detected by the EMCDDA”

Three substances which are more toxic and therefore have a higher risk to lead to overdose and life-threatening situations – PMMA, PMA and 4-MA – were detected by the Drug Checking services involved in our research. It’s also important to note the increasing dosage of MDMA in Ecstasy pills and the presence of some toxic adulterants inside Cocaine. Fortunately, however, the detection of lethal toxic substances remains fairly rare. Most of the information that the services provide the user involves advice regarding using caution when using high dosages or adulterants with as-yet unknown effects and side effects.

An efficient Drug Checking service that supplies an on-site, rapid detection service is an absolute necessity that can help create some level of insurance regarding the substances currently being consumed in recreational settings, and forms the basis of an effective risk-reduction strategy in Europe.

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