



Trans European  
Drug Information

# European trends in relation to Drug Checking results

Mireia Ventura PhD

# Index

1- TEDI network

2- Data presented

3- Trends on MDMA

4- Trends on cocaine

5- Trends on amphetamine and metamphetamine

6- Trends on ketamine

7- Trends on NPS

8- Conclusions

# TEDI

Trans European  
Drug Information



- 1 WEDINOS  
United Kingdom
- 2 The Loop  
United Kingdom
- 3 Jellinek  
Netherlands
- 4 Drugs Information and  
Monitoring System (DIMS)  
Netherlands
- 5 Modus Vivendi  
Belgium
- 6 Analyse ton Prod.  
France
- 7 Checkin  
Portugal
- 8 Aitaket  
Spain
- 9 Kosmicare  
Portugal
- 10 Energy Control  
Spain
- 11 NTV Neutravel proj.  
Italy
- 12 Borgorote  
Italy
- 13 Safeparty Streetwork  
Switzerland
- 14 Drogari®  
Slovenia
- 15 Drogenarbeit Z6  
Austria
- 16 Checkit!  
Austria
- 17 PIPAPO  
Luxembourg
- 18 Legal High InHALts Stoffe  
Germany
- 19 Drug Checking Berlin  
Germany
- 20 A-Clinic Foundation  
Finland
- 21 Safer Dance Basel  
Switzerland
- 22 Bus 31/32 - DrugLab  
France
- 23 infodrog  
Switzerland
- 24 CONTACT  
Switzerland



 Alex Karden Member Checkin - Austria	 Alma Heckenroth Member Drug Lab Bus 31/32 - France	 Anton Luf Technical lead Medical University of Vienna - Austria	 Andrea Albino Member Safeparty - Italy	 Bérénice Libois Member Modus Vivendi - Belgium
 Carlos Paolos Member PIFAPO - Luxembourg	 Cristina Gá Member Energy Control - Spain	 Daniel Martins Member Kosmicare - Portugal	 Dean Aceman Member WEDINOS - UK	 Dominique Schari Member Safeparty Streetwork - Switzerland
 Elisa Formoso Member NTV Neutravel Project - Italy	 Fiore Measham Member The Loop - UK	 Guy Jones Data manager The Loop - UK	 Helena Valente Member Kosmicare - Portugal	 Iván Fornis Member Energy Control - Spain
 Jáchym Fíbr Member Drogenarbeit Z6 - Austria	 Janne Nahkuri Member A-Clinic Foundation - Finland	 Jill Zengin Member Safer Dance Basel - Switzerland	 Kerstin Tügel-Lins Member Legal High InHALtsstoffe - Germany	 Laura Smith-Rigter Member Drugs Information and Monitoring System (DIMS) - Netherlands
 Manuel M. Member Drogenarbeit Z6 - Austria	 Mar Cunha Member Kosmicare - Portugal	 Marine Daubert Member Analyse ton Prod. - France	 Magdaléna Svatošková Member Drugs Info alla - Czech Republic	 Marko Verdenik Member Drug Art - Slovenia
 Martin Kuchar Member Drugs Info alla - Czech Republic	 Mirvia Ventura TEDI manager Energy Control - Spain	 Nejc Birsa Member Drug Art - Slovenia	 Nicolas Van der Linden Member Modus Vivendi - Belgium	 R Koning Klein Member Jellinek - Netherlands
 Tibor Herrach Member Drug Checking Berlin - Germany	 Sacha Harfang Member Analyse ton Prod. - France			



# Data presented

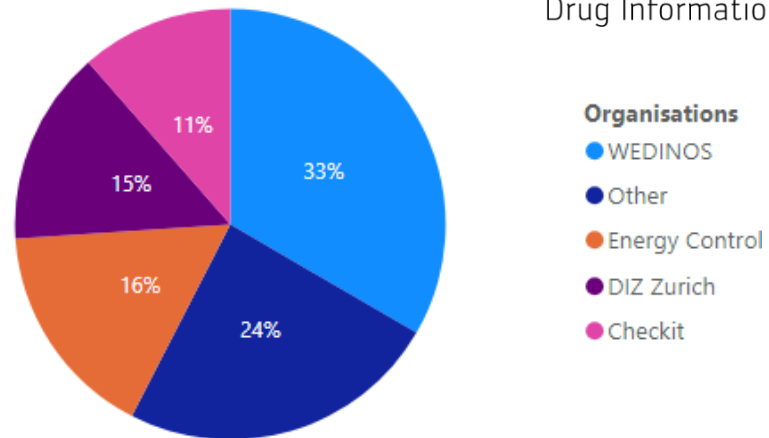
## Top Sample Contributors in the Last Year

Period of the study: 1/1/2018 - 1/6/2023

Number of samples: 56,000

### Different distribution implications:

It is common for 2-3 of the largest contributors to make up over 50% of the samples tested, but we generally see trends quite homogenously across organisations.



# MDMA

Tablet

Date: 01/01/2018 - 01/06/2023

Samples Quantified

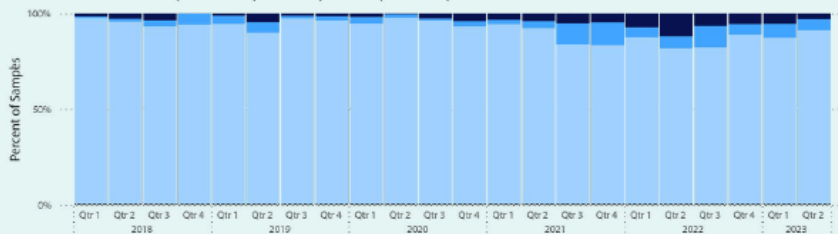
**6367**

Median number of samples per quarter

**273**

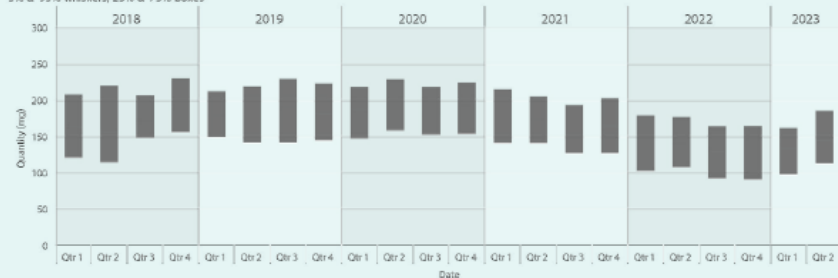
## Adulteration Likelihood- Change Over Time

Adulteration level ● Substance plus other compound ● Only other compound ● Only intended



## Purity - Box & Whisker

5% & 95% whiskers, 25% & 75% boxes



# MDMA

Date: 01/01/2018 - 01/06/2023

Samples Quantified

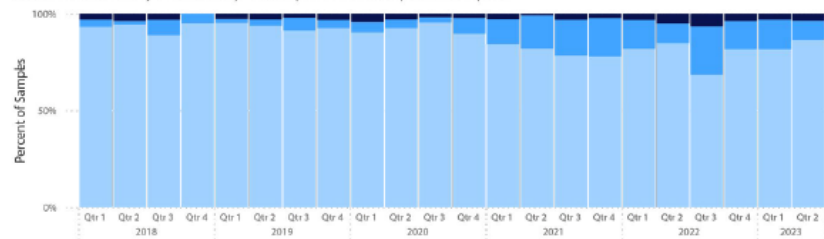
**5432**

Median number of samples per quarter

**217**

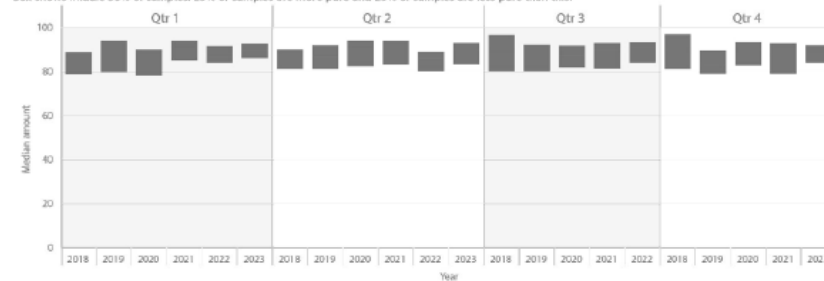
## Adulteration Likelihood- Change Over Time

Adulteration level ● Only intended ● Only other compound ● Substance plus other compound



## Purity Over Time - Box Chart

Box shows middle 50% of samples. 25% of samples are more pure and 25% of samples are less pure than this.



# COCAINE

Date: 01/01/2018 - 01/06/2023

Samples Quantified

**11.92K**

Median number of samples per quarter

**518**



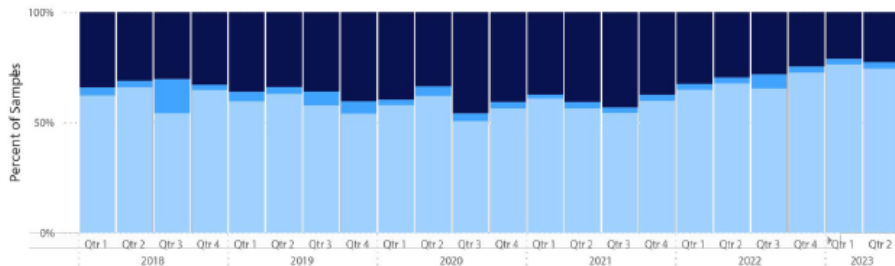
Trans European  
Drug Information

## Highlights

Adulteration decreases and purity increases  
Type of adulterants remain stable

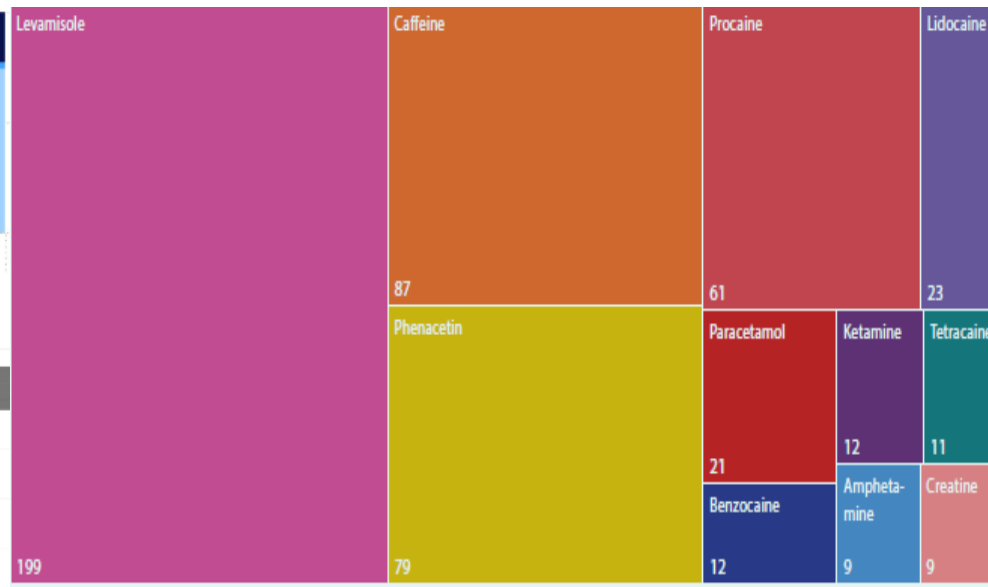
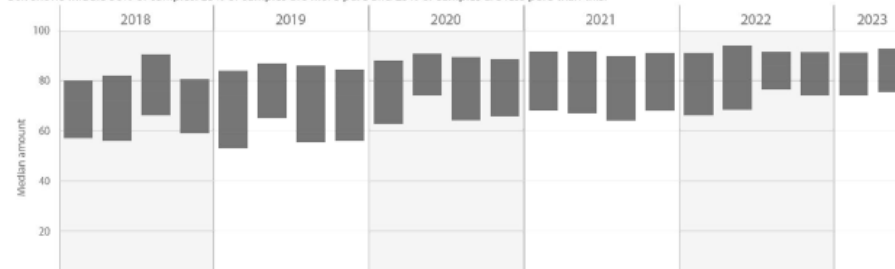
Adulteration Likelihood- Change Over Time

Adulteration level: Only Intended (light blue), Only other compound (medium blue), Substance plus other compound (dark blue)



Purity Over Time - Box Chart

Box shows middle 50% of samples. 25% of samples are more pure and 25% of samples are less pure than this.



# AMPHETAMINE

Date: 01/01/2018 - 01/06/2023

Samples Quantified

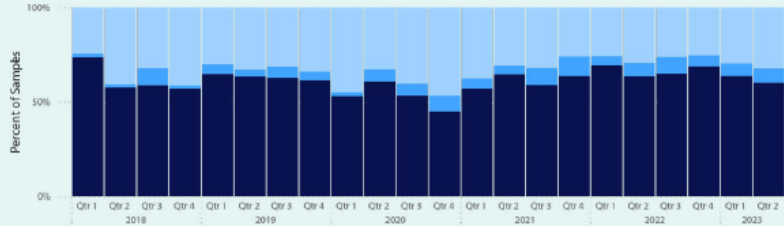
**6193**

## Highlights

Adulteration and type of adulterants remains stable

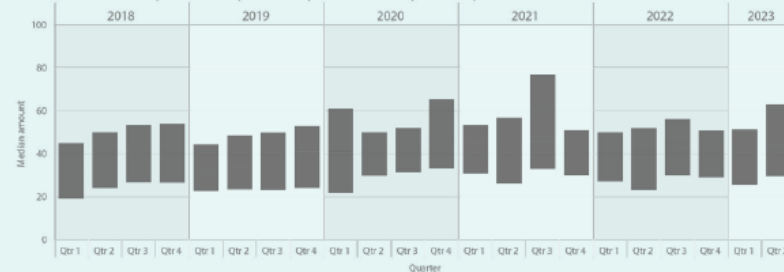
Adulteration Likelihood- Change Over Time

Adulteration level ● Substance plus other compound ● Only other compound ● Only intended



Purity Over Time - Box Chart

Box shows middle 50% of samples. 25% of samples are more pure and 25% of samples are less pure than this.



Caffeine

Phenethylamine

40

Cocaine

Creatine

13

13

Unknown

MDMA

Katamine

11

10

8

Ethylamine

Methamphetamine

Phenacetin

6

6

5

# METHAMPHETAMINE

Date: 01/01/2018 - 01/06/2023

Samples Quantified

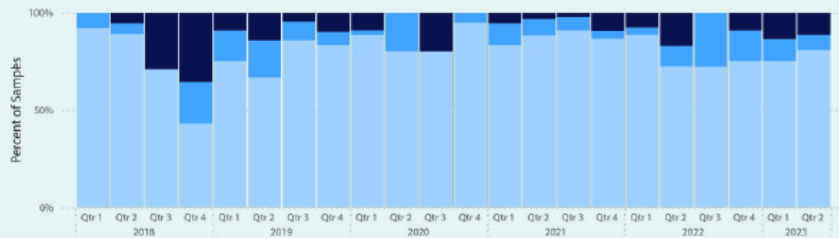
**637**

Median number of samples per quarter

**26**

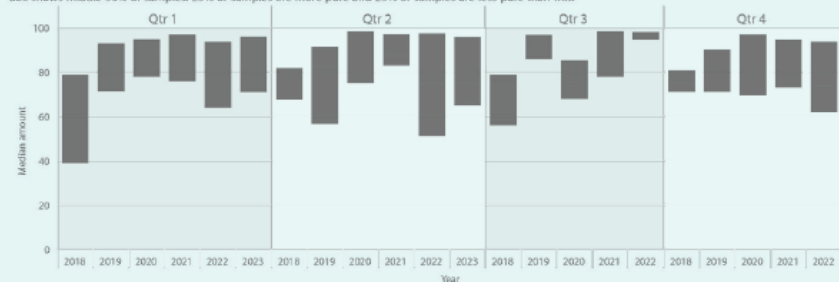
Adulteration Likelihood- Change Over Time

Adulteration level ■ Only intended ■ Only other compound ■ Substance plus other compound



Purity Over Time - Box Chart

Box shows middle 50% of samples, 25% of samples are more pure and 25% of samples are less pure than this.



Trans European  
Drug Information

## Highlights

Low adulteration but substitution plays a role.  
Less samples analysed and more instability





# HEROIN

Date: 01/01/2018 - 01/06/2023

Samples Quantified

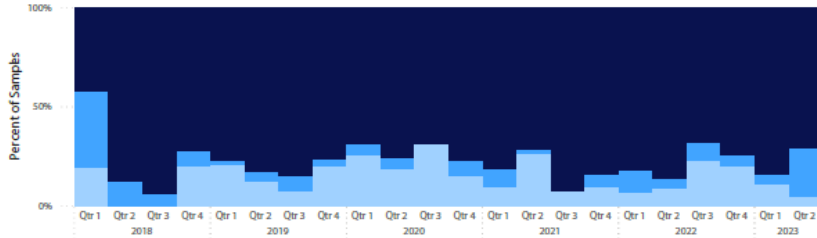
**1194**

Median number of samples per quarter

**54**

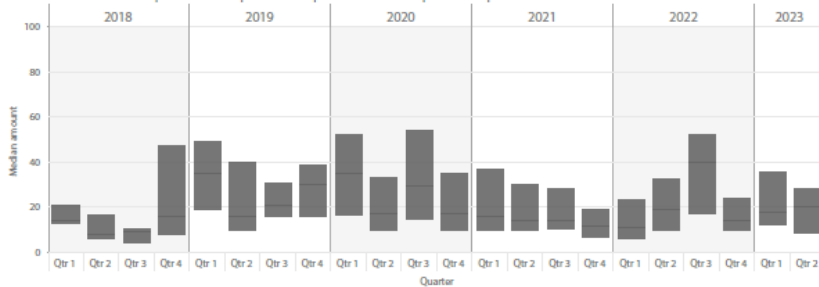
## Adulteration Likelihood- Change Over Time

Adulteration level: Only Intended (light blue), Only other compound (medium blue), Substance plus other compound (dark blue)



## Purity Over Time - Box Chart

Box shows middle 50% of samples. 25% of samples are more pure and 25% of samples are less pure than this.

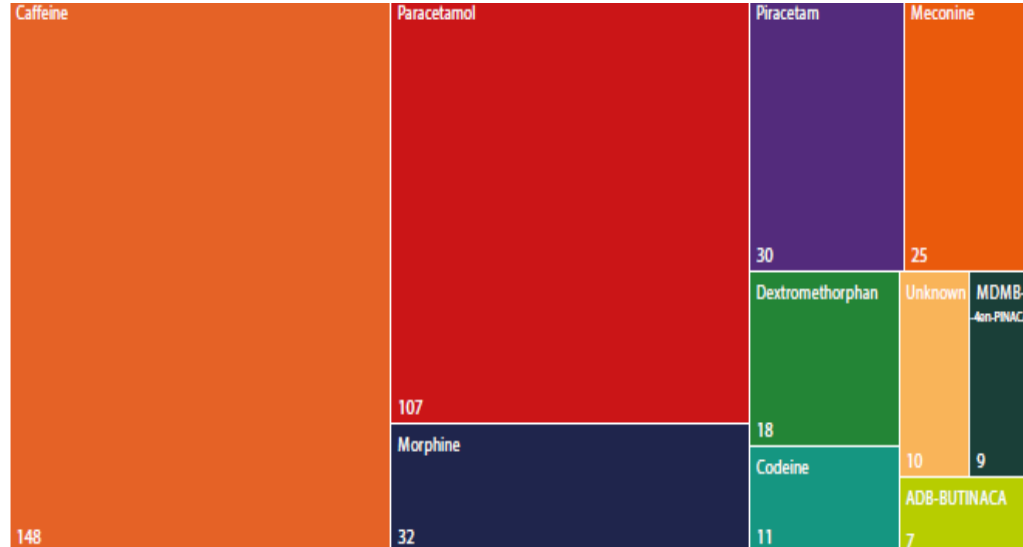


# Highlights

High adulteration but similar through the years  
Detection of NPS in some samples but not synthetic opioids



Trans European  
Drug Information



# KETAMINE

Total samples submitted

**443**

Median concentration 84 %

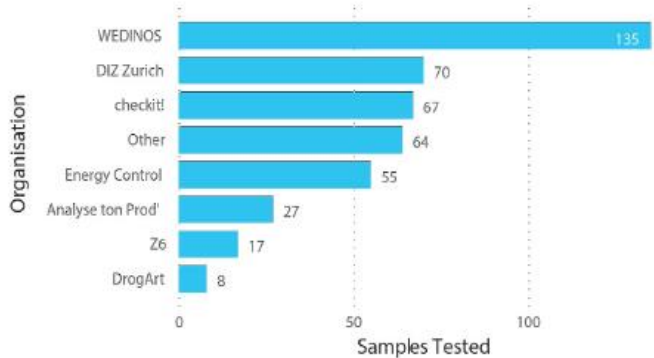
Half of samples will have less than this, half will have more.  
Samples containing none of the drug are excluded from this calculation.

### Adulterants detected in samples sold as Ketamine

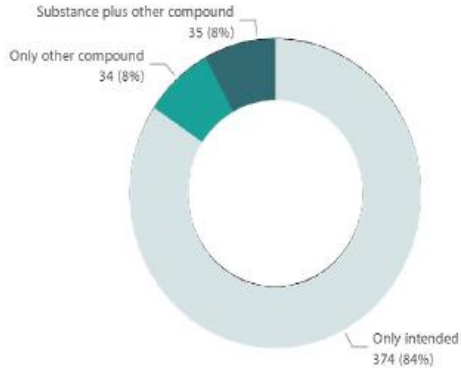


### Number of samples by organisation

Sold-As Ketamine

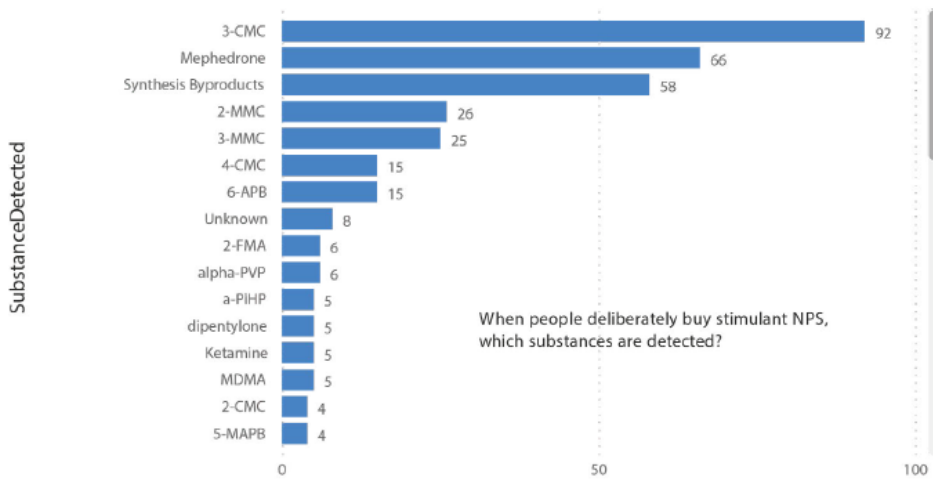


### Sample Adulteration Likelihood



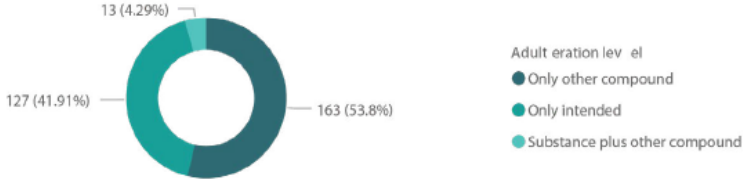
# STIMULANT NPS

Most commonly detected chemicals in samples intentionally bought as stimulant NPS



When people deliberately buy stimulant NPS, which substances are detected?

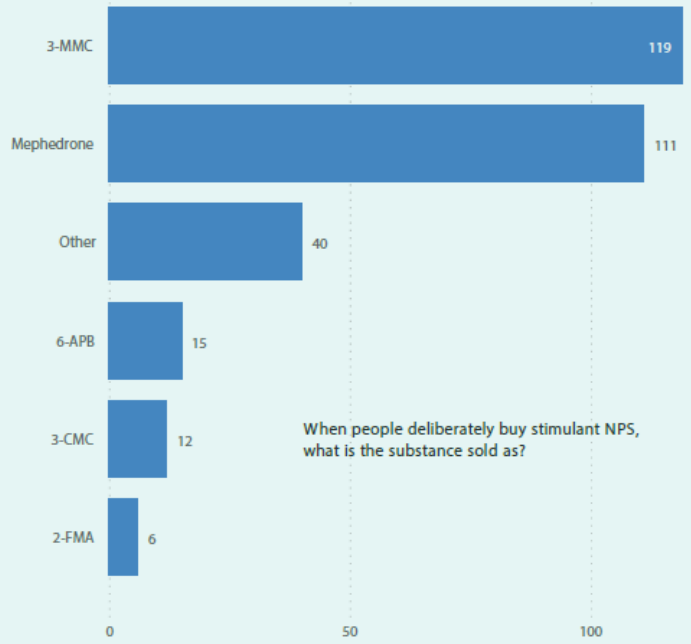
Adulteration Level



Adulteration level  
 ● Only other compound  
 ● Only intended  
 ● Substance plus other compound

# SAMPLES SOLD AS :

Most common intentionally bought drugs in the stimulant NPS category

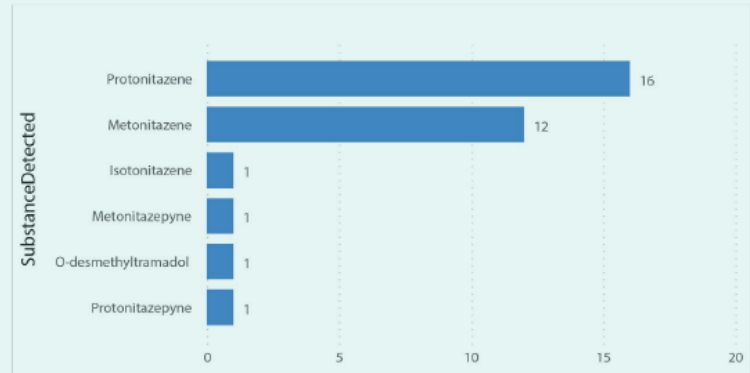


When people deliberately buy stimulant NPS, what is the substance sold as?

# DETECTIONS OF :

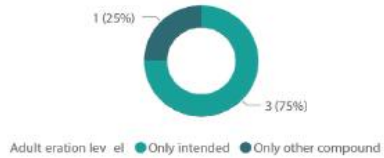
# OPIOID NPS

Most commonly detected Opioid NPS

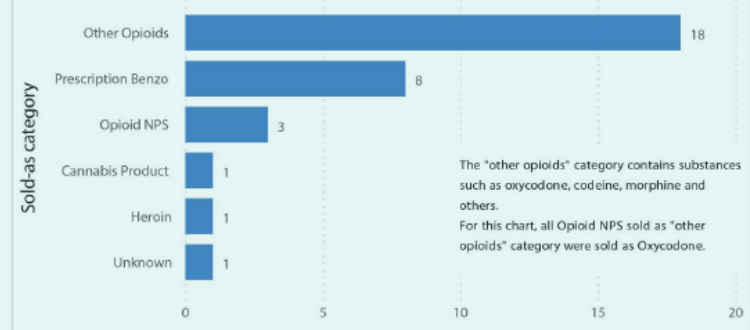


When substances are presented to the testing service as opioid NPS, do they match the presented substance identity?

Adulteration Level



What are Opioid NPS sold as?



## 28 of 32

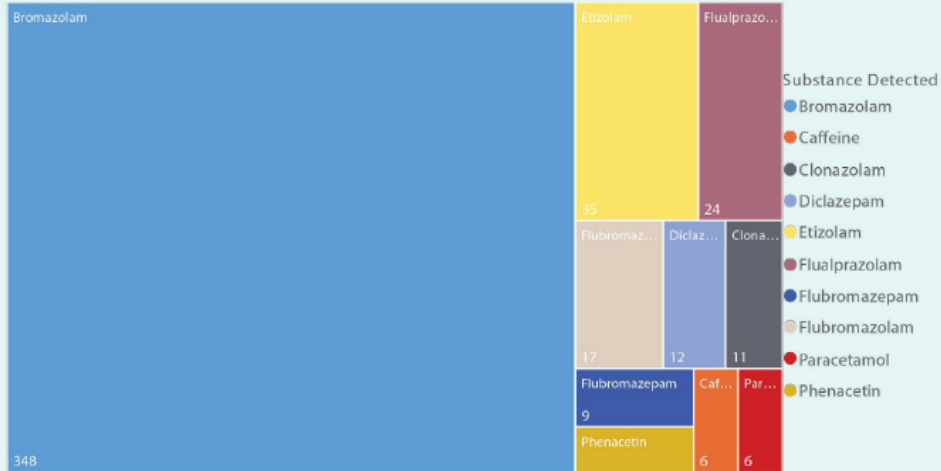
Detections of opioid NPS in substances where they were not expected by the service user.

# PRESCRIPTION BENZO

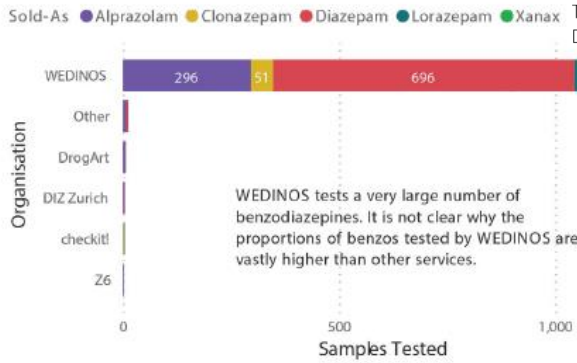
Total samples submitted

**1087**

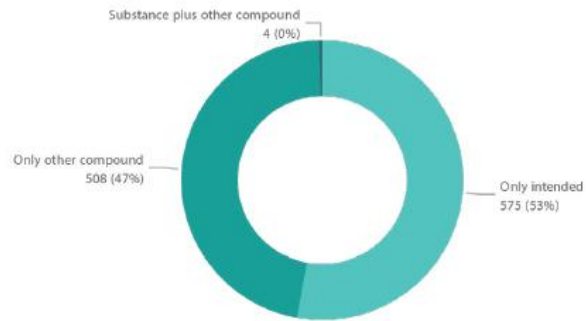
Unexpected substances detected in samples sold as any prescription benzo



## Number of samples by organisation



## Sample Adulteration Likelihood





# Conclusions

1

Drug checking services provide a unique insight into drug markets by obtaining data in contexts that are hard to reach and allowing us to analyze the discrepancy between what persons think they use and what they are actually using.

2

Purity of cocaine and MDMA is increasing, as the proportion of impurities from synthesis is reducing. Amphetamine does not show a distinct trend and heroin is highly variable. The market for each drug functions independently.

3

The number of NPS is increasing. With NPS we mainly find substitution between them but they are not normally mixed. We see the emergence of new opioids substituting for other substances such as drugs sold on the black market.

4

TEDI members are able to detect new “nitazene” opioids, but so far they have only been found in a small number of sedative drugs.



Trans European  
Drug Information

Thank you!