PHILTRE
BULLETIN
Issue 9 Apr - Jun 2016
WEDINOS Quarterly Newsletter
Collecting, Testing, Informing
wedinos.org

WEDINOS Headlines

The WEDINOS project has been designed for the collection and testing of substances and, most importantly, dissemination via www.wedinos.org of pragmatic evidence based harm reduction information for users. WEDINOS aims to go beyond identification of novel substances, to address the harms associated with use of New Psychoactive Substances (NPS), new combinations of established drugs and NPS and Steroids & Image Enhancing Drugs (SIEDs) .

TOTAL number of samples received by WEDINOS October 2013 to June 2016

- **5,300** Samples received
- **4,294** Samples analysed
- **162** Samples pending
- **333** Substances identified in either combination or isolation

This quarter (April 2016 to June 2016)

- **237** Samples analysed
- **112** Samples pending
- **65** Samples rejected
- **80** Substances identified in either combination or isolation

Cathinones

Synthetic cathinones are drugs chemically related to cathinone, one of a number of alkaloids which can be extracted from the fresh leaves of Catha edulis (khat); the leaves of which are chewed for stimulant effect.

As is shown in the European Monitoring Council for Drugs and Drug Addiction (EMCDDA) European Drug Report 2016: Trends and Developments; over the past two years there has been an increase in the number of synthetic cathinones reported on a European level. In 2014 for the first time in four years the number of synthetic cathinones identified outnumbered the notifications for cannabinoids, which was repeated in 2015.

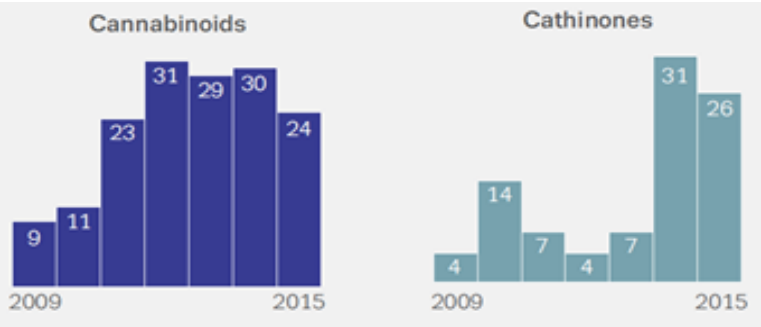
This is consistent with WEDINOS findings, which reports a resurgence in mephedrones prevalence.

Catha edulis

Cathinones cont...

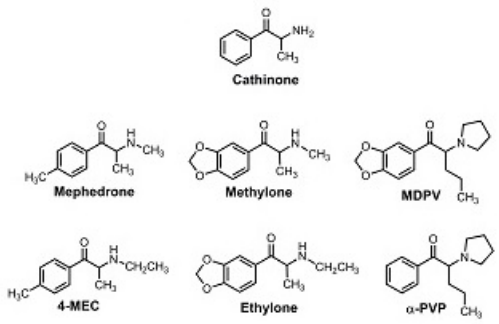
Despite these increases synthetic cathinones identified remain overall the second largest group of substances monitored by the EMCDDA, after cannabinoids, with 103 new synthetic cathinones identified since 2004; compared with 160 cannabinoids identified since 2008.

Synthetic cathinones initially found a place in the drugs market as then legal replacements for illicit drugs such as MDMA, cocaine and amphetamine, all of which were at the time being sold at relatively low purity levels or in the case of MDMA in low quality pills.



Number of cannabinoids and cathinones notified to the EU Early Warning System for the first time, 2009–15

In 2010 following an Advisory Council on the Misuse of Drugs report on cathinones, UK government implemented a generic cathinone structure ban amending the Misuse of Drugs Act 1971 to incorporate cathinones as Class B controlled substances. Despite this they remain prevalent within the UK drug market.



Since project launch WEDINOS has identified 16 synthetic cathinones. The most commonly identified being mephedrone (4-methylmethcathinone (4-MMC)).

Synthetic cathinones are water soluble. There are several routes of administration described for the consumption of synthetic cathinones including oral (bombing), insufflation (snorting/sniffing), rectal administration (plugging), intramuscular injection and intravenous injection.

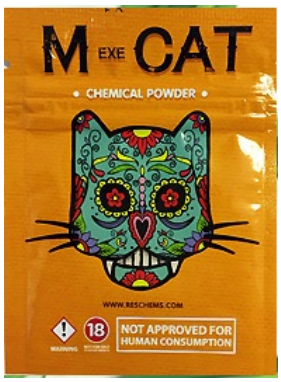
The injection of synthetic cathinones, although not widespread, continues to be reported within Wales and the wider UK. This is of concern, not only due to the inherent risks of injecting but also because of the highly caustic nature of these substances and the increase in frequency and high risk injecting practices. Mephedrone injectors often report strong urges or cravings to re-dose "binging".

Synthetic cathinone injecting has led to large clusters of new blood borne virus transmission in Wales and elsewhere in Europe. For further information please see: Drug-related infectious diseases in Europe, Update from the EMCDDA expert network, September 2015

Effects of synthetic cathinones reported to WEDINOS

Euphoria	Increased Energy
Increased Confidence	Agitation
Nausea	Nausea
Memory Loss	Auditory & Visual Hallucinations
Confusion	Enhanced Senses
Increased Libido	Empathy
Increased Stamina	Chest Pains
Irregular Heartbeat	Insomnia
Depression	Suicidal Ideation
Panic Attack	Nosebleeds
Vomiting	

Synthetic cathinones appear to be interchangeable in the market place. Where mephedrone has been in short supply the market has been supplemented with another synthetic cathinone, 4-Methylethcathinone (4-MEC). The concern is that 4-MEC is less euphoric and shorter lasting that mephedrone and may result in more frequent re-dosing by individuals who are used to the effects of mephedrone. Due to this individuals returning to mephedrone are at increased risk of overdose.



WEDINOS sample W004887 found to contain the cathinone mexedrone

WEDINOS sample 000041187 found to contain the cathinone mexedrone

In terms of prevelance of synthetic cathinones the data provides a mixed picture. From the Global Drug Survey 2014 of the 7,326 individuals from the UK who completed the survey 7.9 per cent stated that they had used mephedrone in the 12 months prior.

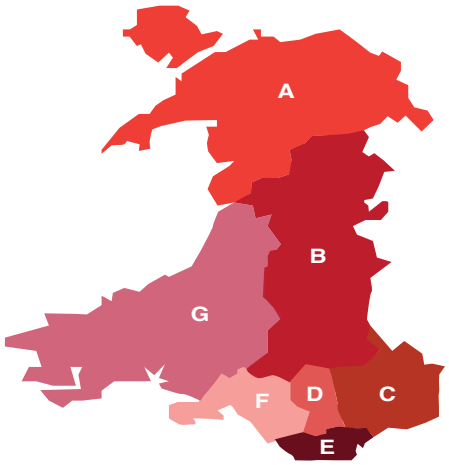
From the Crime Survey for England and Wales 2014/15, last year use of mephedrone among young people aged 16 to 24 was estimated at 1.9 %; this figure was the same as the previous survey, but down from 4.4 % in 2010/11, before cathinones become controlled under the Misuse of Drugs Act 1971.

In terms of harm reduction advice synthetic cathinones should be treated as any other stimulant substance., whilst addressing harms associated to the method of consumption. For substance information and harm reduction advice visit www.wedinos.org

FINDINGS...

WHERE...

Samples were submitted from six of the seven Welsh Health Boards. No samples were received form Powys Teaching Health Board.



Breakdown of sample submissions by Health Board areas

A - Betsi Cadwaladr University Health Board – 12 samples.
B - Powys Teaching Health Board – 0 samples.
C - Aneurin Bevan University Health Board – 56 samples.
D - Cwm Taf University Health Board – 8 samples.
E - Cardiff & Vale University Health Board – 20 samples.
F - Abertawe Bro Morgannwg University Health Board – 27 samples.
G - Hywel Dda University Health Board – 26 samples.

76 samples were received from England, seven from Scotland and one from Northern Ireland.

WEDINOS does not analyse samples received from outside of the United Kingdom.

In relation to Welsh Health Board areas, the highest proportion of samples came from Aneurin Bevan University Health Board, 56 samples were received and analysed, accounting for 24 per cent of all samples analysed.

Psychoactive Substances

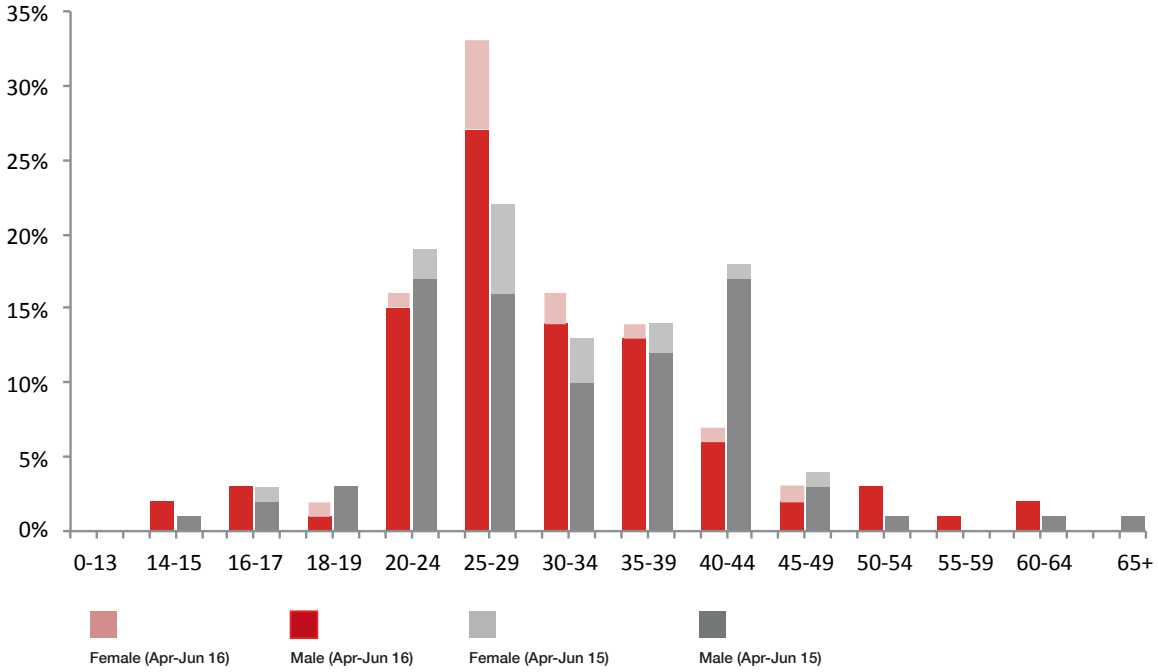
WHO...

Where a WEDINOS Effects Record was submitted and gender completed; 91.5 per cent (n=183) of submissions were from males. The remaining 8.5 per cent (n=17) were females.

The median age for all mind altering / psychoactive sample providers (Wales and wider UK) was 27 years (average age was 31 years old, no change from last quarter); with an age range of 14-63 years.

- Females - median age was 29 years and an average age of 30 years (range: 18-46 years compared to 16 to 36 years las quarter)
- Males - median age was 31 years, with an average age of 31 years (range 14-63 years)

Gender / Age profile of samples providers – Psychoactive Samples (This quarter compared to the same quarter last year)



Reason for purchase

All samples

228 Mind Altering / Psychoactive samples were submitted for analysis during this quarter. 7 were submitted via Public Health Wales agreed sentinel providers of Steroids and Image Enhancing Drug (SIED) samples as SIEDs.

Samples Submitted from Wales

89 per cent of Welsh samples were submitted via 31 services / organisations; with the remaining 11 per cent being submitted anonymously.

WHAT...

Of the 228 Mind Altering/Psychoactive samples:

- 37 samples were purchased in the belief that they were Class A substances
- 23 Class B
- 20 Class C
- 62 were believed to be controlled by the Psychoactive Substances Act 2016 (PSA 2016)
- 2 were believed not to be controlled
- A further 84 were submitted without any information relating to purchase intent, or perceived legal status

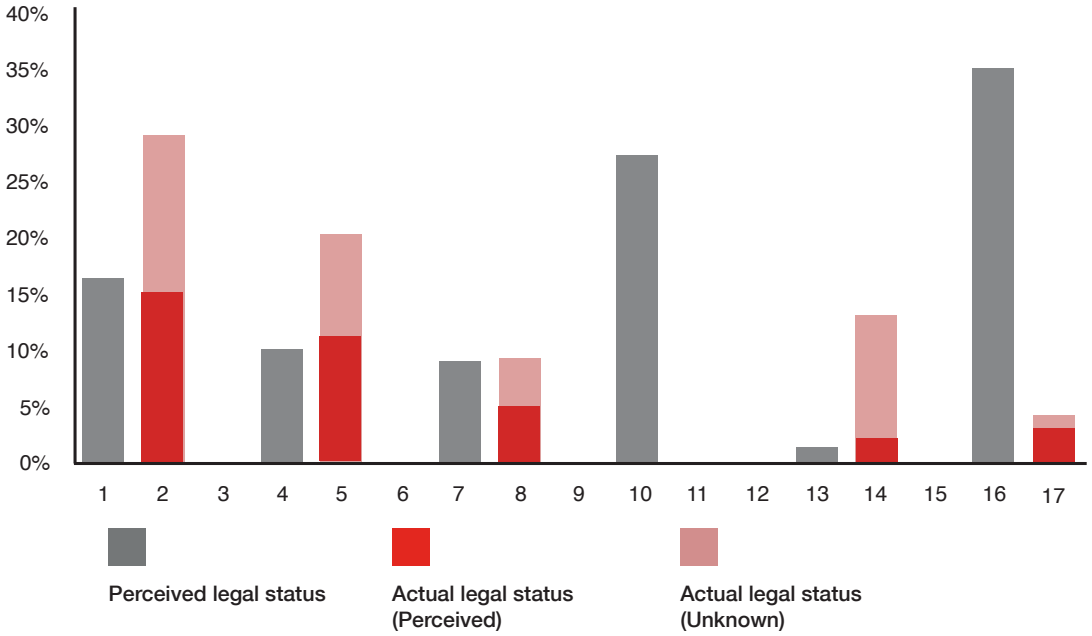
Post analysis we see that Class A increased from 37 samples to 66. Class B increased from 23 to 45, Class C decreased from 20 to 19. The number of substances controlled by the PSA 2016 fell from 62 to 58.Substances that are not controlled increased from 2 to 31. Nine samples remained unidentified. It must be noted that although all groups increased with the post analysis categorisation of the "unknown" substances, several samples moved between classifications.

Examples of this include

Believed to be	Found to contain on analysis
Diclezapam	Phenazepam
mephedrone	Ketamine
Diazepam	Diclazepam
MDAI	MDMA
Etizolam	AH-7921
Ketamine	Methoxetamine
MDMA	Ethylone
Heroine	Ocfentanil
Mexedrone	4-CEC
MDAI	Methamphetamine
MDMA	alpha-PVP
Cannabis	5f-ADB and 5f-AMB
Alprozolam	AH-7291
Diazepam	Deschloroetizolam
Mephedrone	MDPV
Diazepam	Etizolam
MDMA	4-Chloromethcathinone
Mexedrone	4-CEC and 4-Chloromethcathinone
Ketamine	Methoxphenidine
3-FPM	Mephedrone
Amphetamine	Caffeine

Reminder as of Monday 4th April 2016: WEDINOS stopped analysing individual samples that, on the effects sheet only provide details of purchase intent stated as 'legal high' or 'research chemicals'. It is an important element of WEDINOS that we are able to provide information both on what individuals intended to purchase and the actual content of the sample substance. When submitting a sample, please ensure that you include as much information as possible around what you intended to buy on the sample and effects record as well as effects experienced if the sample was consumed. If the sample was not consumed include your reason for submission.
Many thanks.

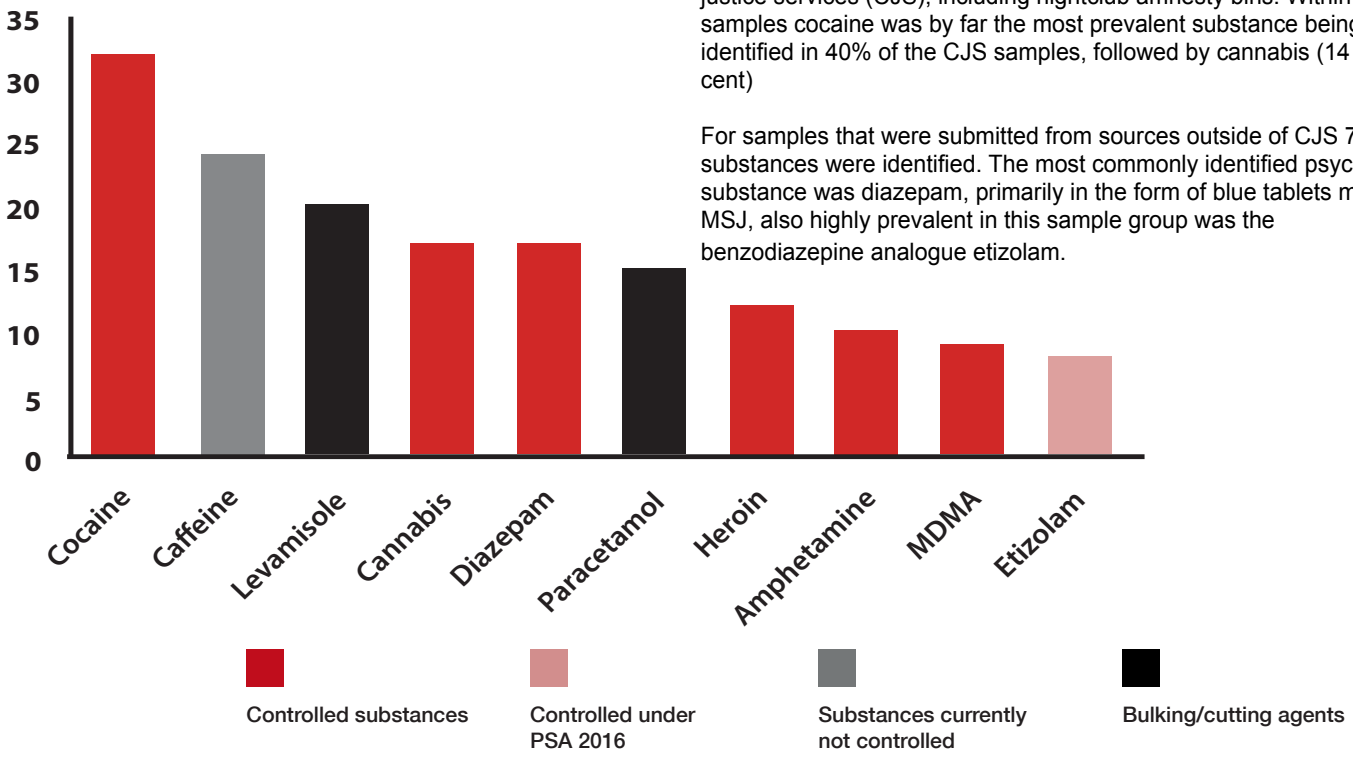
Proportion of controlled and not controlled / legal – Perceived and Actual (Psychoactive Substances)



NB. Following analysis samples were categorised based on the highest classified substance present. Order of classification / control – Class A, B, C, Temporary Class Drugs Order, Controlled under the PSA 2016, Not controlled.

Most commonly identified substances

Most commonly identified substances in Mind Altering / Psychoactive Substance samples.



The most commonly identified substances chart can be influenced by WEDINOS' ability to test non-evidential samples submitted by criminal justice services (CJS), including nightclub amnesty bins. Within these samples cocaine was by far the most prevalent substance being identified in 40% of the CJS samples, followed by cannabis (14 per cent)

For samples that were submitted from sources outside of CJS 72 substances were identified. The most commonly identified psychoactive substance was diazepam, primarily in the form of blue tablets marked MSJ, also highly prevalent in this sample group was the benzodiazepine analogue etizolam.

The most commonly identified psychoactive substance was Cocaine. The most commonly identified psychoactive substance that is not currently controlled was the benzodiazepine Etizolam.

Caffeine was the most commonly identified bulking / cutting agent; however, this substance was also found in isolation and may have been sold for its stimulant effects.

Top Ten New Psychoactive Substances

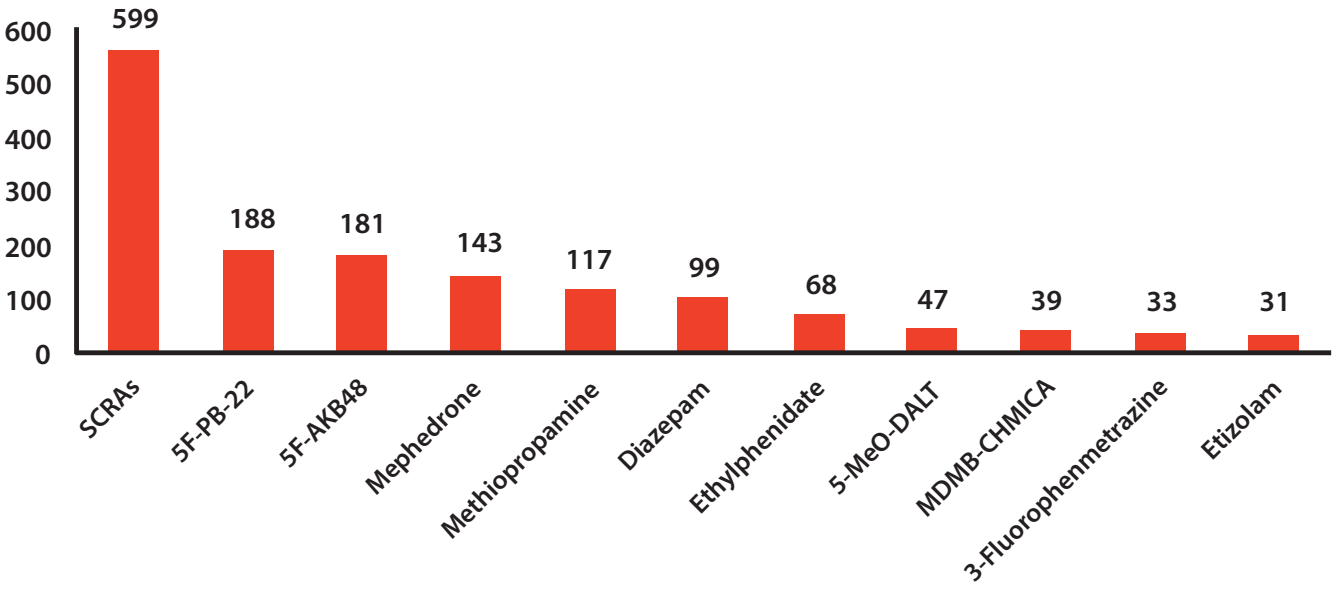
TOP 10	Apr to Jun 2016	Jan to Mar 2016
Number 1 - Up 9	Etizolam	5F-PB-22
Number 2 – Re-entry	Ketamine	5F-AKB48
Number 3 – New entry	Pyrazolam	5F-ADB
Number 4 – New entry	Diclazepam	Alprazolam
Number 5 – New entry	Modafinil	MDMB-CHMICA
Number 6 – Non-mover	3-Fluorophenmetrazine	3-Fluorophenmetrazine
Number 7 – New entry	4-Chloromethcathinone	Mephedrone
Number 8 – Down 5	5F-ADB	Mexedrone
Number 9 – Non-mover	AH-7921	AH-7921
Number 10 – Down 2	Mexedrone	Etizolam

Since the launch of WEDINOS in October 2013 Synthetic Cannabinoid Receptor Agonists (SCRAs) have been the most prevalent NPS' submitted to and identified by the project. However, in this quarter where we see them fall from the Top Three and having multiple representation in our Top Ten to having only a single SCRA, 5F-ADB; at number 8 appear within the chart. This despite seven different SCRAs being identified.

In this quarter the most prevalent NPS' submitted to and identified by the project were designer benzodiazepines, with nine being identified. Three of which appear in our Top Ten: Etizolam (1), Pyrozolam (3) and Diclazepam (4).

As with the previous quarter cathinones remain prevalent with eight different substances identified. Two of which make the Top Ten: 4-chloromethcathinone and Mexedrone. This increase in prevelance and variance of cathinones mirrors the EMCDDA data that showed 57 new cathinones notified to the EU early warning in 2014 and 2015, a figure higher even than notifications for cannabinoids.

Ten most commonly identified New Psychoactive Substances (Oct 2013 – Dec 2015)



SCRAs total 559 shows all SCRAs as a group. 5F-AKB48, 5F-PB-22 and MDMB-CHMICA are synthetic cannabinoid receptor agonists. Methiopropamine, Ethylphenidate, Mephedrone and 3-Fluorophenmetrazine are stimulants. 5-MeO-DALT is a psychedelic tryptamine. Diazepam is a Benzodiazepine. Etizolam is a benzodiazepine analogue.

HOW...

Form of Sample & Method of Consumption

Mind Altering/Psychoactive
Powder remains the most prevalent sample form

Samples provided that would have a Mind Altering/Psychoactive effect came in a variety of forms, consistent with previous quarters and reports the most prevalent sample form was powder.

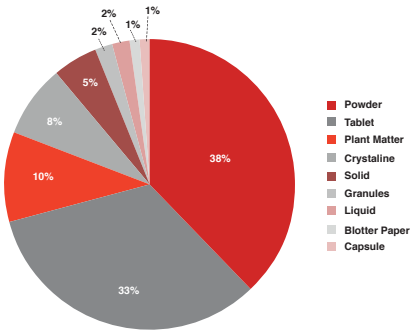
Where samples were purchased as Mind Altering/Psychoactive & a method of consumption was recorded (44 per cent, n=100), and assuming that all plant matter and plant matter Synthetic Cannabinoid Receptor Agonists are smoked, samples were used consumed through a variety of methods, the most common method oral consumption (50 per cent), up from 38 per cent last quarter; followed by smoking (27 per cent). Snorting / sniffing as a route of administration made up 17 per cent of responses, with 4 per cent stating they used their substance via intravenous injection and two per cent said the would inject their substances subcutaneously. However, this chart may alter dramatically, if the route of administration was captured for all samples; for example 89 powder samples were submitted without any method of consumption data.

All samples where intravenous injection was selected as the method of consumption were purchased in the belief that they were heroin. The presence of heroin was analytically confirmed in all samples.

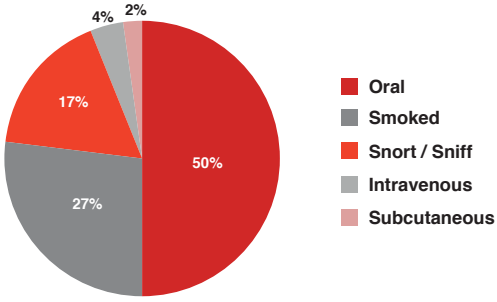
Changes to methods of consumption for powders?

The preferred method of consumption for powders and crystalline materials remains snorting / sniffing. However, although snort/sniff follows the trend of previous quarters, by remaining the most common method of consumption for these materials; its prevalence has fallen from the previous quarter.
Intravenous use was higher for this quarter compared to the previous, although it is slightly lower than our last annual (Oct 14 – Sept 15) average. However, in the past intravenous use has been limited to heroin, mephedrone and ethylphenidate sample providers. This quarter intravenous use was listed by providers of samples purchased as heroin, mexedrone, 3-fluorophenmetrazine, MDAI and methamnetamine.

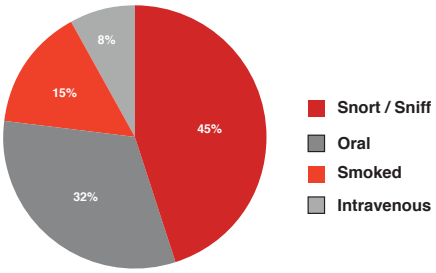
Mind Altering/Psychoactive - Form of Sample



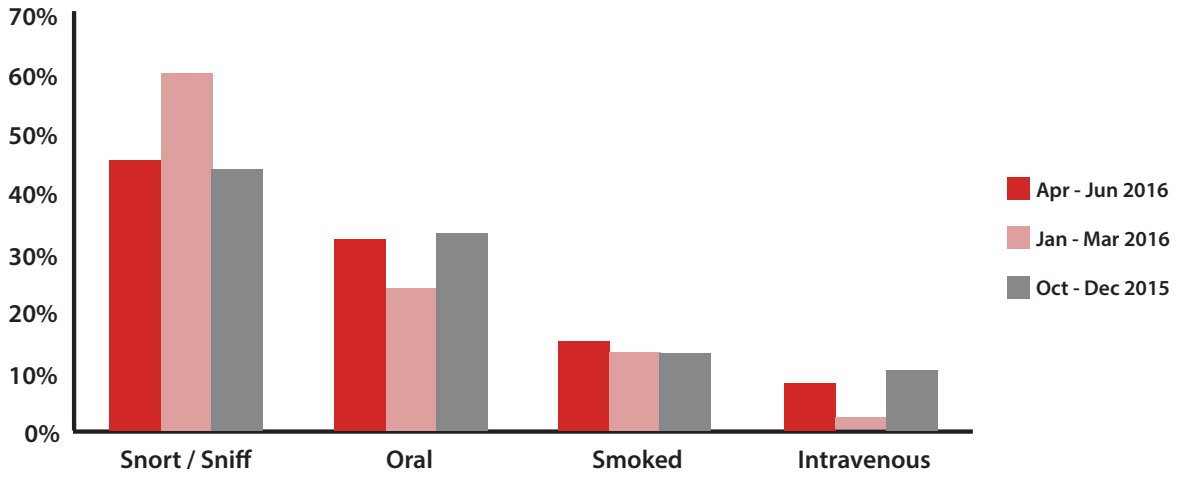
Mind Altering/Psychoactive - Method of Consumption



Method of Use for Powders and Crystaline materials



Comparison of method of use for powders and crystalline materials
Reported Methods of Consumption



GEOGRAPHIC PROFILES / LOCAL TRENDS

Abertawe Bro Morgannwg University Health Board (ABMU)

- Cumulative total: 259 samples
- 27 samples were received from ABMU this quarter
  - During analysis 17 substances were identified in isolation or combination. One sample contained no active compound and one remained unknown as there was an insufficient amount of the sample available for testing.
  - The problematic SCRA, MDMB-CHMICA (previously featured in Philtre), was identified in a plant matter product that was smoked. On this occasion the unexpected effect caused was confusion
  - A sample of interest was a pink tablet purchased as mephedrone that upon analysis was found to contain a different cathinone, MDPV. Unexpected effects experienced by the sample provider included: auditory and visual hallucinations, breathlessness, paranoia, confusion, panic attack and agitation.

Aneurin Bevan University Health Board (ABU)

- Cumulative total: 764 samples
- 56 samples were received ABU this quarter.
- During analysis of those samples, 21 substances were identified either in combination or in isolation, with five samples having no active compound identified
- Cocaine was the most commonly identified substance within the in ABU; a statistic that is influenced heavily by the analysis of night club amnesty bins from within Newport city centre. Several other stimulant substances were identified including: amphetamine, 3-methylmetcathinone and BZP. Samples containing MDMA were also submitted. The synthetic cannabinoid receptor agonist 5F-ADB was also identified.
  - Samples of interest include:
    - A sample submitted as Diazepam was found to contain Zopiclone following analysis.
    - A white crystalline sample submitted as mephedrone that was found to contain Ketamine. Unexpected effects experienced by the sample provider included: auditory hallucinations, memory loss and confusion.

Betsi Cadwaladr University Health Board (BCU)

- Cumulative total: 186 samples
- 12 samples were received from BCU this quarter
- During analysis of those samples, 11 substances were identified either in combination or in isolation. One sample had an insufficient amount of material to complete analysis and remains unknown.
- Benzodizepines were again the most commonly identified substances within BCU, with diazepam and phenazepam identified

Cardiff & Vale University Health Board (CVU)

- Cumulative total: 581 samples
- 20 samples were received from CVU this quarter
- During analysis 16 substances were identified either in combination or in isolation. One sample did not contain a sufficient amount of sample material for analysis to be completed.
- Four SCRAs were identified; 5F-ADB, NM-2201, 5F-AMB and AMB-FUBINACA.
- A sample submitted as ketamine, was found to contain methoxetamine. Methoxetamine, an analogue of ketamine, is more potent and has longer lasting effects.

Cwm Taf University Health Board (CTU)

- Cumulative total: 82 samples
- 8 samples were received from CTU this quarter
- During analysis 7 substances were identified in isolation
- Diazepam was the most commonly identified substance
- A sample white powder sample submitted as ketamine was found to contain the new psychoactive substance methoxphenidine. Methoxphenidine is a hallucinogenic dissociative, however, very little is known about this substance.

Hywel Dda University Health Board (HDU)

- Cumulative total: 103 samples
- 26 samples were received from HDU this quarter
- During analysis 14 substances were identified in combination or isolation. Seven samples did not contain a sufficient amount of sample material for analysis to be completed.
- Heroin was the most commonly identified substance. This was as a result of proactively collecting samples believed to be heroin following a series of incidents with adverse effects
- A sample white powder sample submitted as ketamine was found to contain the new psychoactive substance methoxphenidine. Methoxphenidine is a hallucinogenic dissociative, however, very little is known about this substance.

Powys Teaching Health Board (PT)

- Cumulative total: 27 samples
- 0 samples were received from PT this quarter
- We are aware that individual submitting samples in the Powys area have experienced time delays from the point of submitting samples to receipt at Cardiff toxicology laboratories. WEDINOS is working with all our relevant stakeholders to improve this situation.

Help us to build a better picture of substance prevalence or any trends in substance use within Wales and the wider UK. WEDINOS would happily accept an increase in samples of psychoactive substances submitted. If you require further information on submitting a sample please visit **www.wedinos.org** or email **admin@wedinos.org**

News from the Home Office and abroad

- April - 2016 EU Drug Markets Report: In-depth Analysis - EMCDDA, Europol, Lisbon, April 2016 http://www.emcdda.europa.eu/publications/eu-drug-markets/2016/in-depth-analysis
- April - Drugnet Europe 94, EMCDDA, Lisbon, April 2016 http://www.emcdda.europa.eu/publications/drugnet/94
- 29th April – Home Office – Extension to TCDO for methylphenidate-based novel psychoactive substances (NPS) https://www.gov.uk/government/publications/methylphenidate-based-nps-letter-from-karen-bradley-to-the-acmd
- 26th May – GOV.UK – Implementation of the psychoactive substances act 2016 https://www.gov.uk/government/news/trade-in-so-called-legal-highs-now-illegal https://www.gov.uk/government/publications/circular-0042016-psychoactive-substances-act-2016
- 26th May = Home Office - The most commonly encountered drugs currently controlled under the misuse of drugs legislation https://www.gov.uk/government/publications/controlled-drugs-list--2
- May - Recent changes in Europe's MDMA/ecstasy market EMCDDA, Lisbon http://www.emcdda.europa.eu/publications/rapid-communications/2016/mdma
- May - Synthetic cannabinoids in Europe (Perspectives on drugs) EMCDDA, Lisbon http://www.emcdda.europa.eu/publications/pods/synthetic-cannabinoids
- May - European Drug Report 2016: Trends and Developments EMCDDA, Lisbon http://www.emcdda.europa.eu/publications/edr/trends-developments/2016
- June - EMCDDA–Europol Joint Report on acetylfentanyl EMCDDA–Europol http://www.emcdda.europa.eu/publications/joint-reports/acetylfentany
- July - EMCDDA–Europol Joint Report on MDMB-CHMICA, EMCDDA–Europol http://www.emcdda.europa.eu/publications/joint-reports/mdmb-chmica

The WEDINOS project does not test food samples, biological samples, samples submitted within paraphernalia of use, samples that are submitted with an incomplete effects form. On Friday 25th July 2014 WEDINOS stopped accepting samples of Steroids and Image Enhancing Drugs other than those submitted by sentinel contributors.