

# Emerging aspects of Australian fixed site drug checking - CanTEST results, challenges, innovative approaches and future perspectives

Chris Gough, Malcolm D. McLeod, Steph Tzanetis, Mitch Lamb, David Caldicott, Blake Curtis, Darcy Lynch, Gino Vumbaca, Anna Olsen, Bronwyn Hendry

# CanTEST

HEALTH AND DRUG CHECKING SERVICE

PILL  
TESTING  
AUSTRALIA

Directions  
Health Services

cahma  
Canberra Alliance for Harm Minimisation & Advocacy

## WHAT'S NALOXONE?

An easy to use nasal  
spray that can reverse  
the effects of an  
opioid overdose.



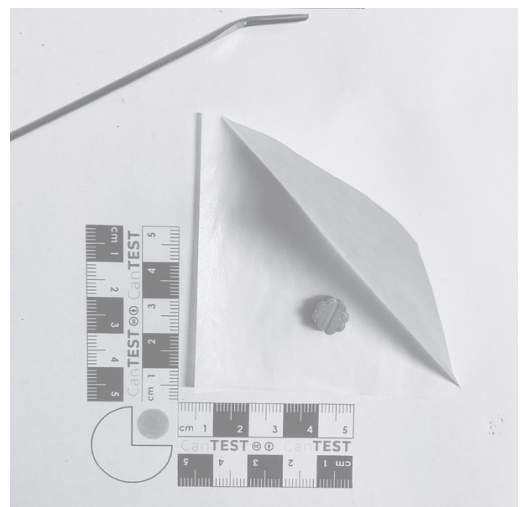
## AND ADDITIVES BORIC ACID



## slowly, and test your drugs.

Australian first fixed site drug checking service  
CanTEST

cahma Directions PILL TESTING



# ACKNOWLEDGEMENT OF COUNTRY

We acknowledge the traditional owners of the lands on which we are meeting – the Ngunnawal people - and pay our respect to their ancestors and elders both past and present. We acknowledge sovereignty was never ceded and are strongly committed to reconciliation and a positive future for all Aboriginal and Torres Strait Islander communities.

## **Valuing diversity**

We value the contribution of lived experience and diverse cultures, identities and lifestyles to the richness of our service and community.



## FRONT OF HOUSE DRUG CHECKING AND HEALTH SERVICE

- CanTEST - operating since 21st July 2022
- Focus on public health and harm reduction
- Tests drug samples provided by the public
- Returns the results of testing direct to service users
- Results confirmed and extra analysis completed by ANU laboratory
- Drug alerts produced: red alerts and yellow community notices
- Supports monitoring of unregulated drug markets - PRN
- Adapted to local conditions



# CANTEST – CLIENT JOURNEY

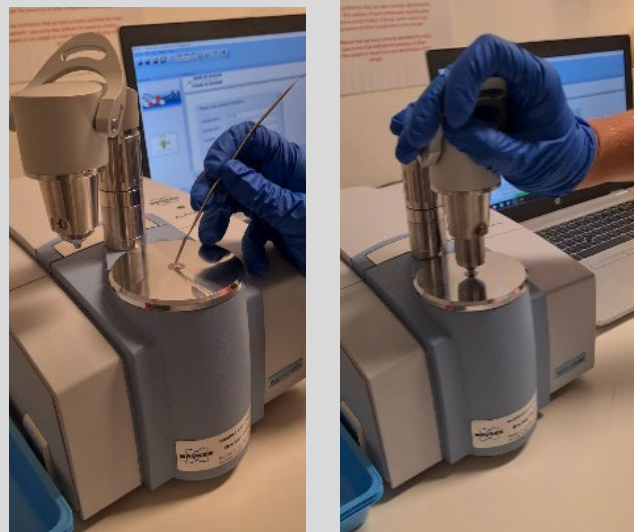
- Person greeted by peer worker or ATOD worker.
- Person states what drug they expect
- Person sits with analytical chemist and is given test results.
- Person discusses result and is given harm reduction information.





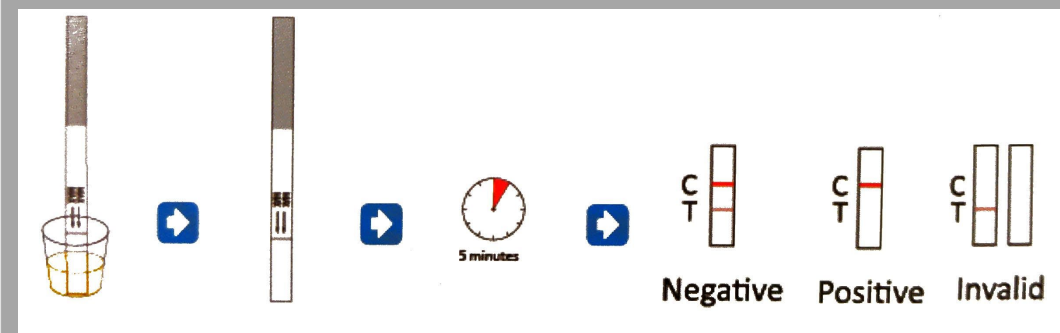
## FTIR

- Fourier Transform Infra-Red (FTIR) analysis - *like a fingerprint for chemicals*
- Matches sample spectrum to a large library
- Provides a match score that indicates quality of the match
- Able to distinguish closely related substances
- Can identify secondary components, not all components
- Qualitative, not quantitative analysis



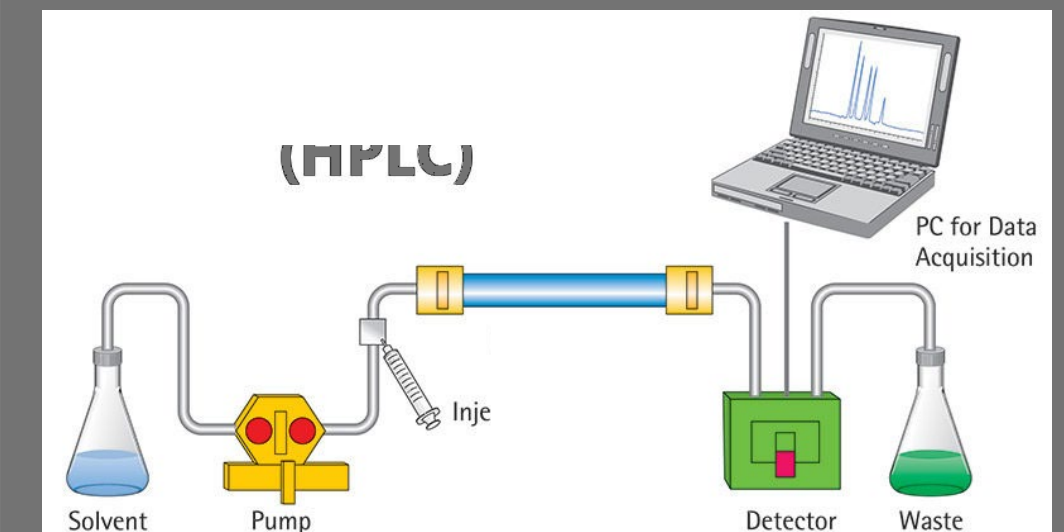
## FTS

- Fentanyl Test Strips (FTS) from BTNX Canada
- Lateral flow immunoassay for the detection of fentanyl and fentanyl derivatives – *like a RAT for fentanyl*
- Note a test band (T) *disappears* when drug is present, control band (C) must be present



## UPLC

- Ultra-Performance Liquid Chromatography-Photo-Diode Array (UPLC-PDA) analysis
- Separates compounds using liquid chromatography
- Detects compounds using UV-visible spectroscopy
- Identify and quantify (purity) 10 target drugs (incl. ket, MDMA)
- Detect but not identify non-targeted drugs
- Expanding library for identification



# LSD TESTING

## EHRlich'S REAGENT TEST

- Ehrlich's reagent provides an initial indicator as to whether a sample does or does not contain LSD
- If the test solution turns purple: highly likely that LSD is present
- If the test solution remains pale yellow: no LSD is present

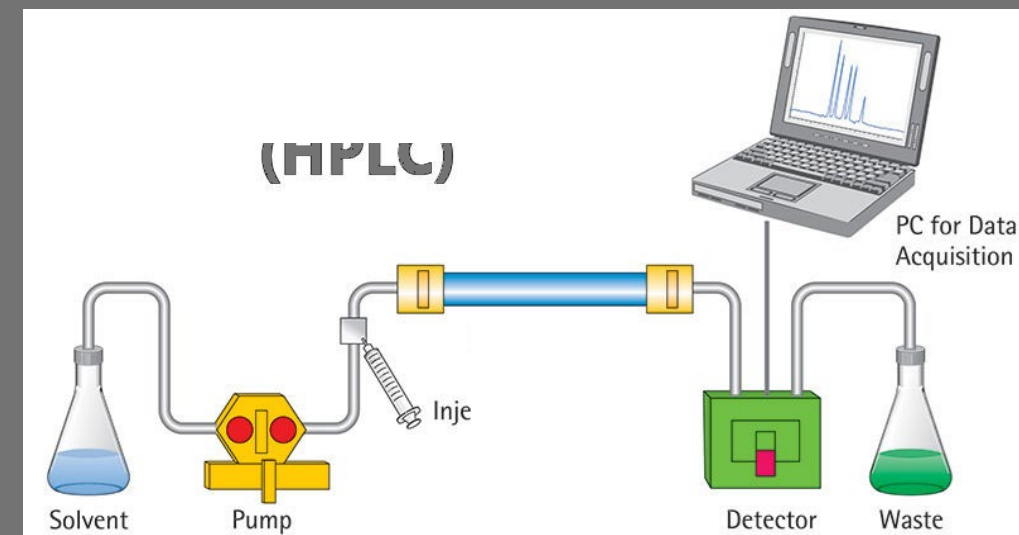


25B-NBOMe      DOC

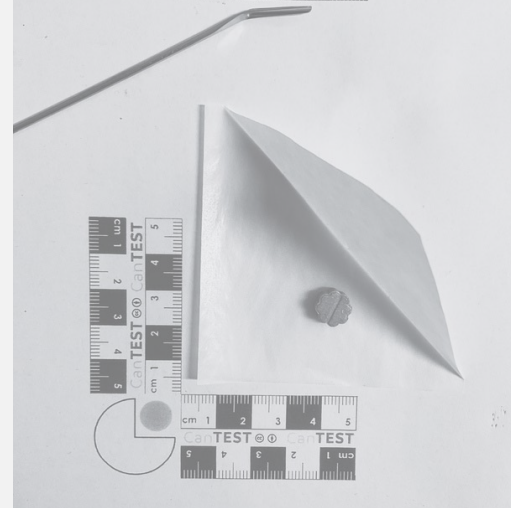
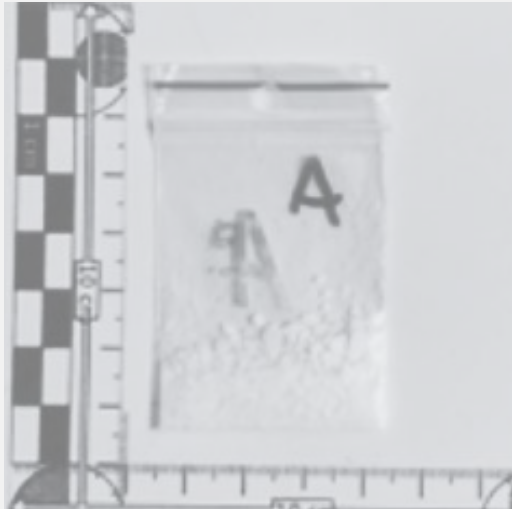
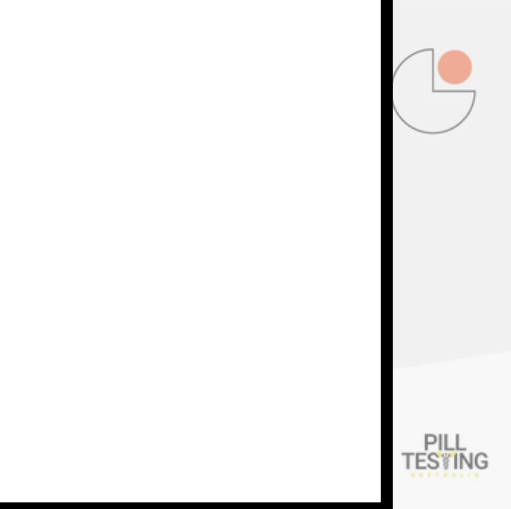
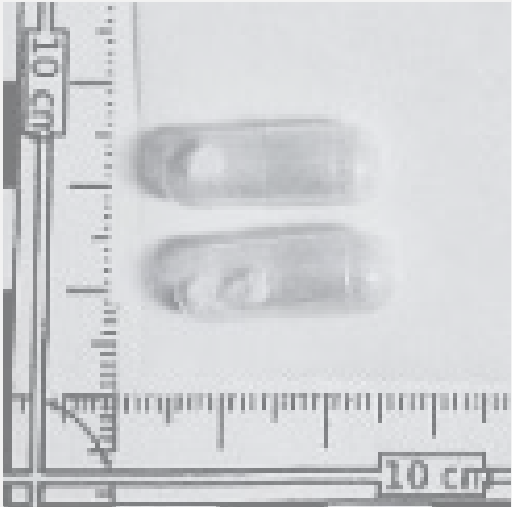
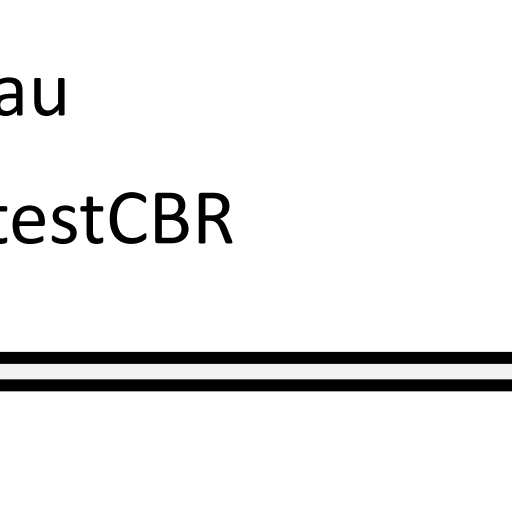
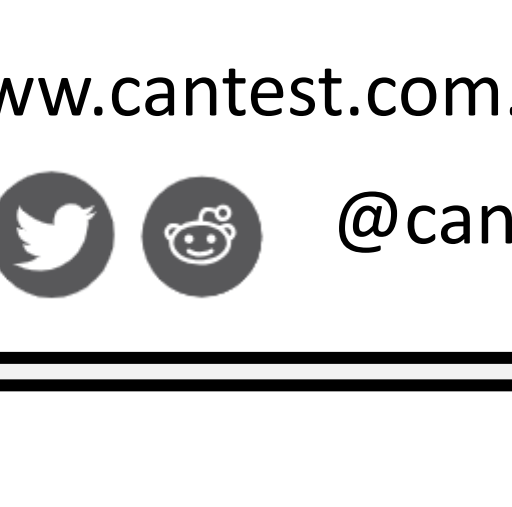
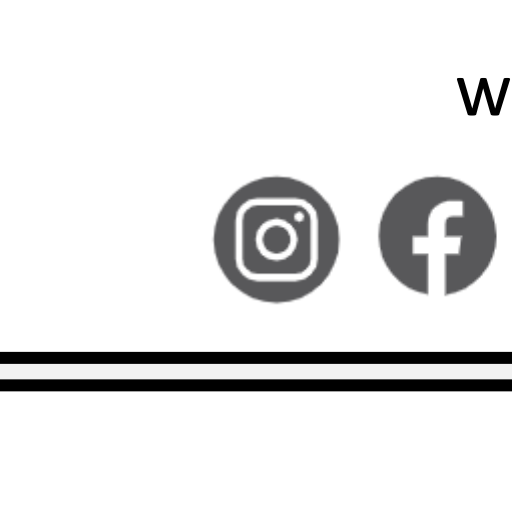
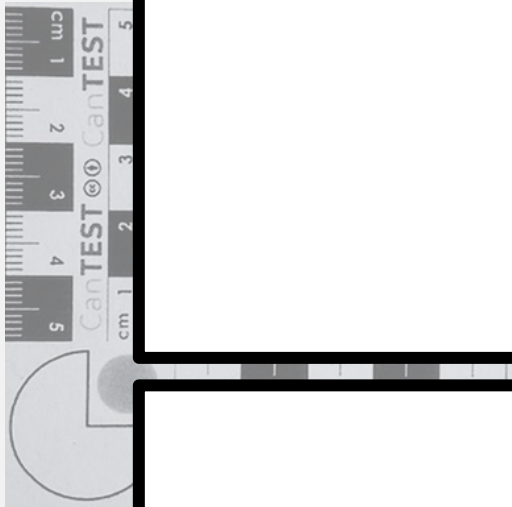
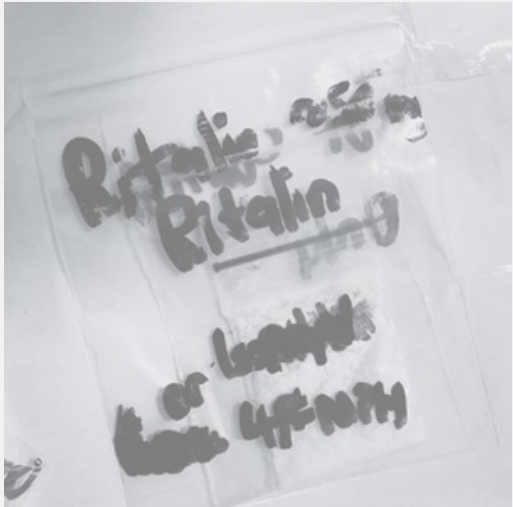
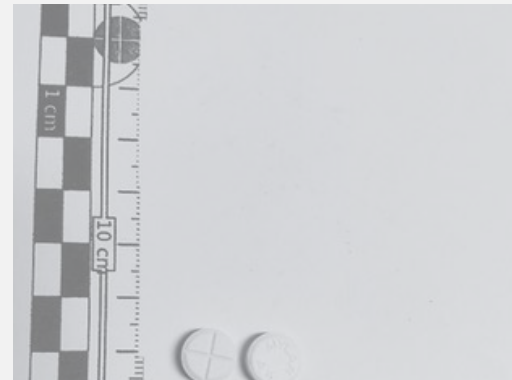


## UPLC

- Ultra-Performance Liquid Chromatography-Photo-Diode Array (UPLC-PDA) analysis
- Separates compounds using liquid chromatography
- Detects compounds using UV-visible spectroscopy
- Identify LSD and various NBOMes
- Detect but not identify non-targeted drugs
- Expanding library for identification







# The End

[www.cantest.com.au](http://www.cantest.com.au)

    @cantestCBR

# Acknowledgements



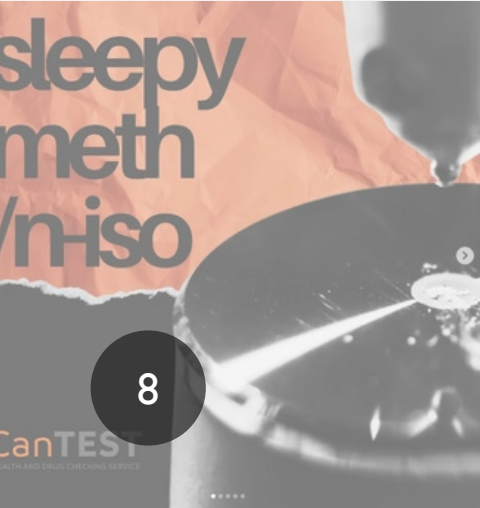
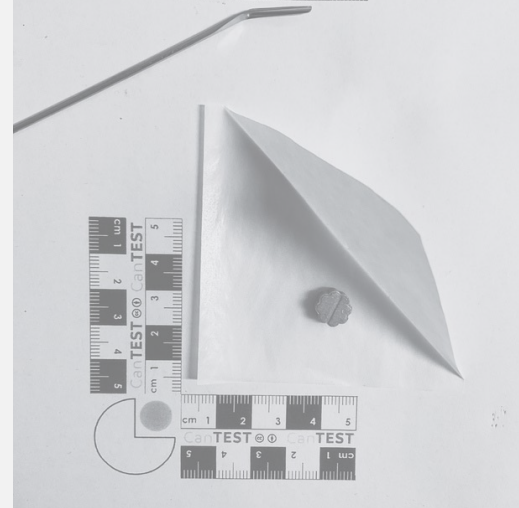
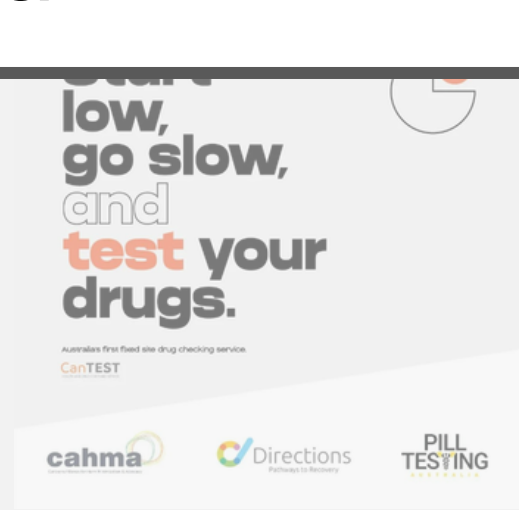
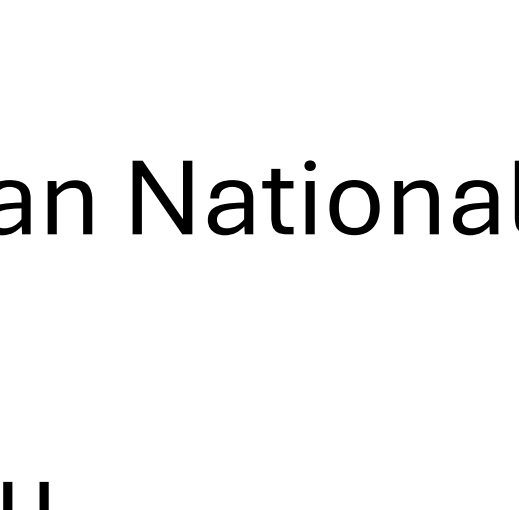
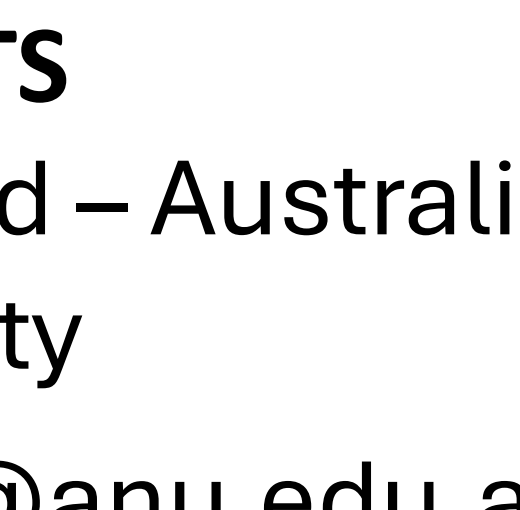
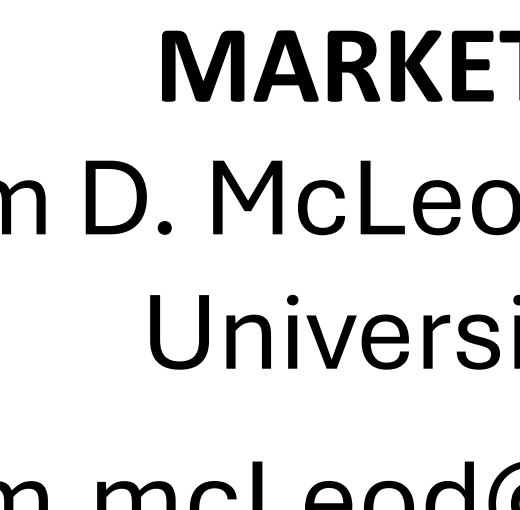
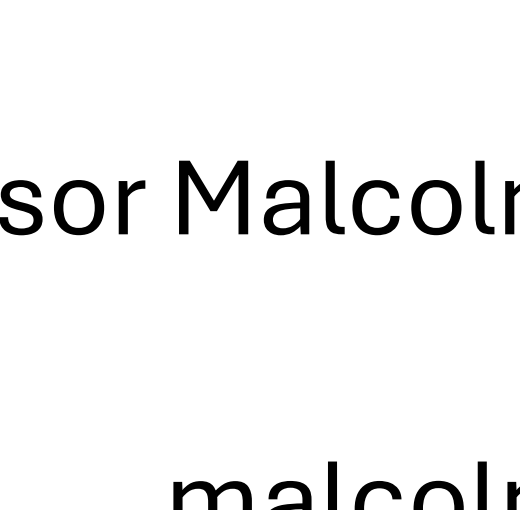
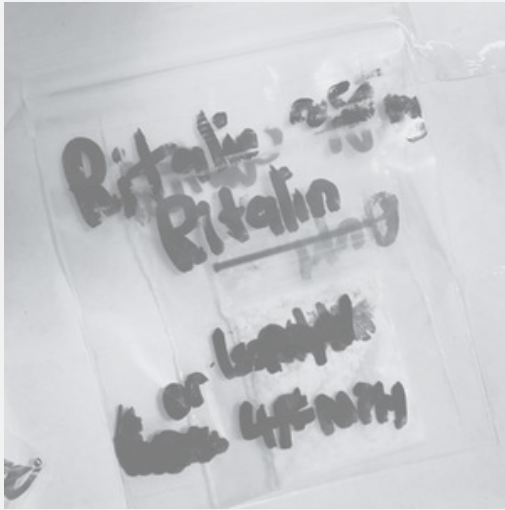




# DRUG CHECKING AS MONITOR OF LOCAL DRUG MARKETS

Professor Malcolm D. McLeod – Australian National University

malcolm.mcLeod@anu.edu.au



## CanTEST

HEALTH AND DRUG CHECKING SERVICE

PILL TESTING AUSTRALIA

Directions Health Services

cahma Canberra Alliance for Harm Minimisation & Advocacy

28 OCTOBER 2023



# ALERTS, COMMUNITY NOTICES AND MONTHLY SUMMARIES

Department of Health – Drug Advice (DA-12)  
Alert: 25C-NBOMe and 4-FA sold as 2C-B  
February 2024  
OFFICIAL

Drug alert

An off-white powder sold as ‘2C-B’ contains two synthetic drugs with a high risk of toxic effects.

➤

25C-NBOMe and 4-FA are synthetic drugs with psychedelic + stimulant properties

25C-NBOMe is a highly potent synthetic drug. People who have intentionally used this substance report it has unpredictable, stimulating psychedelic effects. The substance has been associated with a substantial number of hospitalisations and deaths worldwide. Common adverse effects include agitation, aggression, confusion, dangerously high body temperature and seizures.

4-Fluoroamphetamine (4-FA) is an amphetamine-type stimulant with both stimulating and ‘entactogenic’ properties. This means it increases sociability and empathy, but also elevates heart rate, blood pressure and body temperature.

➤

Be extremely cautious of any white or off-white powder sold as ‘2C-B’ or a psychedelic – it may contain 25C-NBOMe and 4-FA

This product was recently detected in the ACT and is understood to be circulating in Victoria. It presents as a white or off-white powder that may be ‘clumped’ and may come in a clear gel capsule.

Compared to 2C-B, 25C-NBOMe and 4-FA are significantly more likely to produce adverse effects such as confusion, agitation, unease or distress, and unpleasant hallucinations.

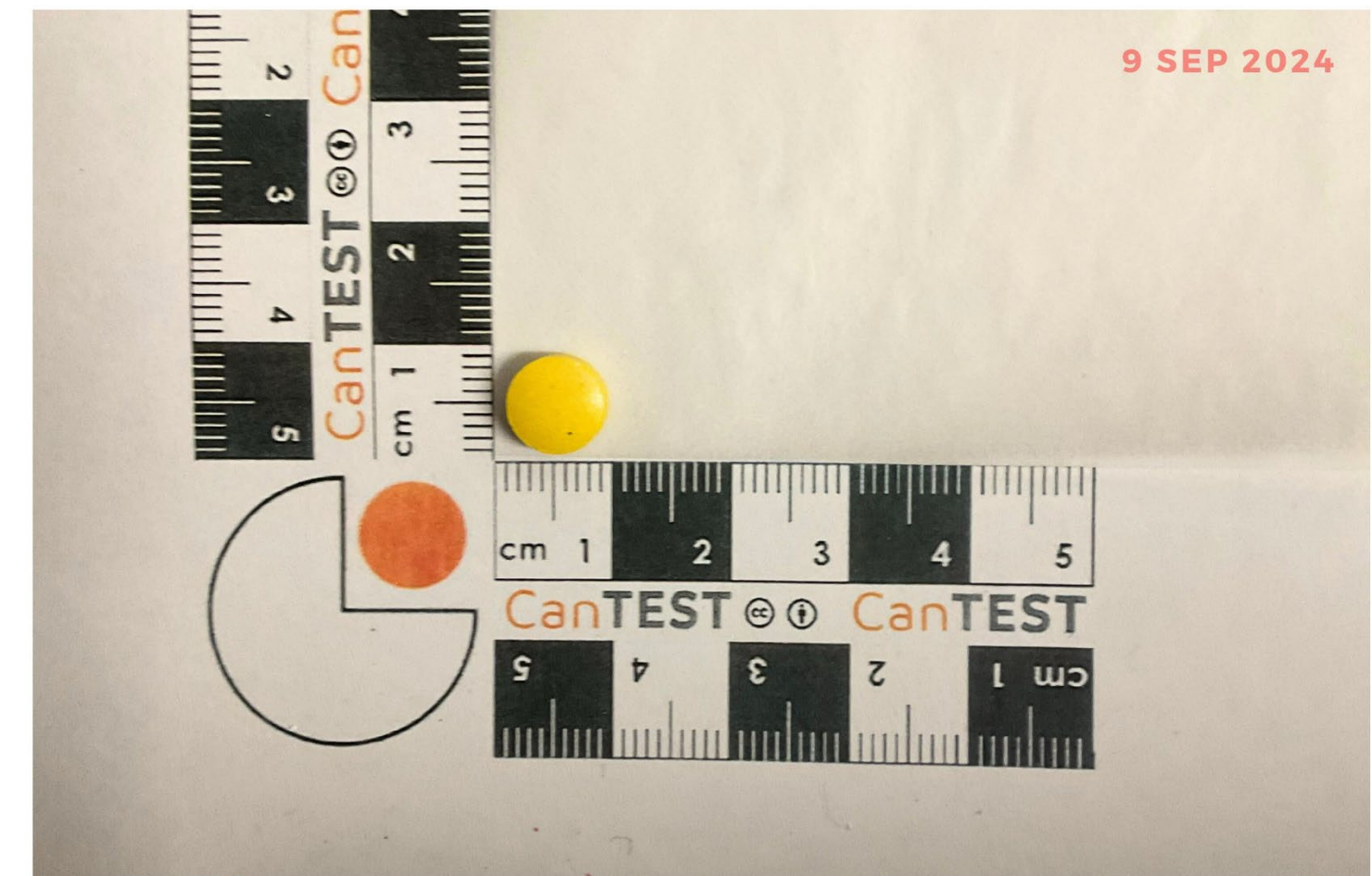
25C-NBOMe and 4-FA is a very hazardous combination which caused five deaths in Victoria between 2016 and 2017 among people who thought they were using MDMA. The presence of these two substances in a single product increases the risk of serious adverse effects. **There is a greater risk of adverse effects and harm when 25C-NBOMe is consumed via nasal insufflation (snorting), injection or sublingually (under the tongue).**

➤

Reduce the risk of harm



## N-PYRROLIDINO ISOTONITAZENE FOUND IN COUNTERFEIT OXYCODONE



CANTEST COMMUNITY NOTICE CANTEST COMMUNITY NOTICE  
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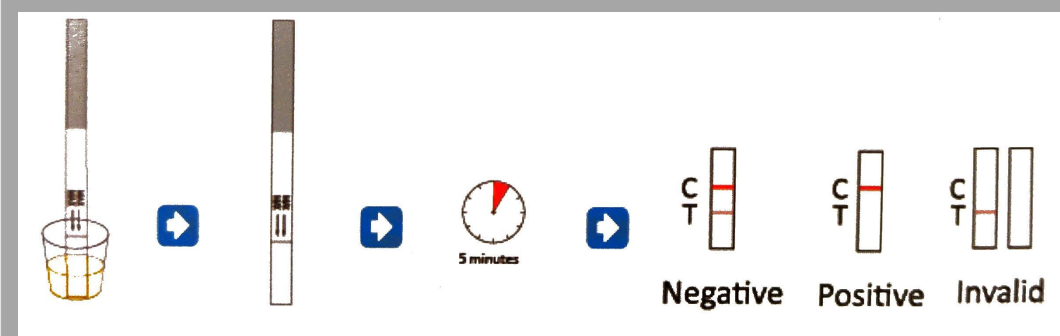
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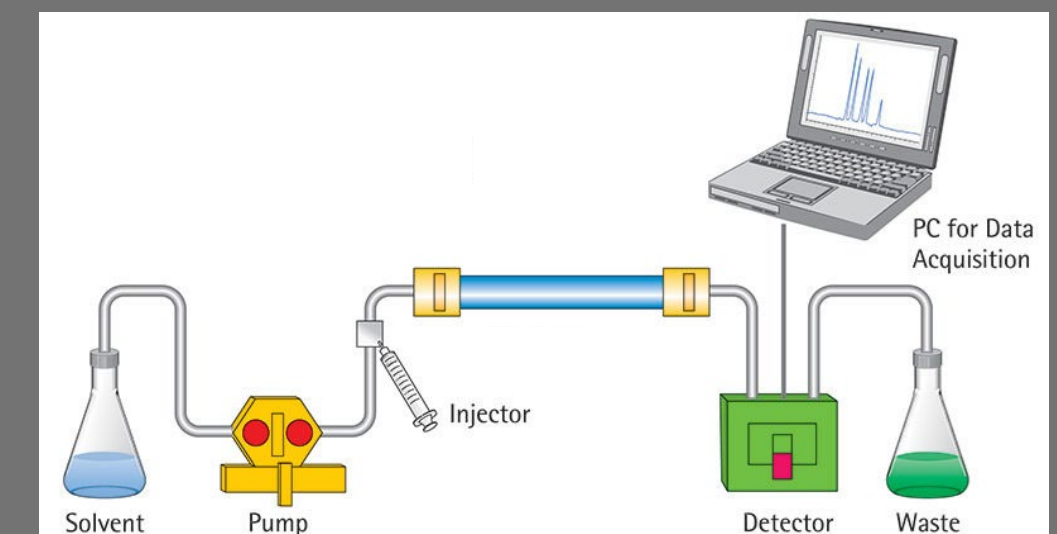
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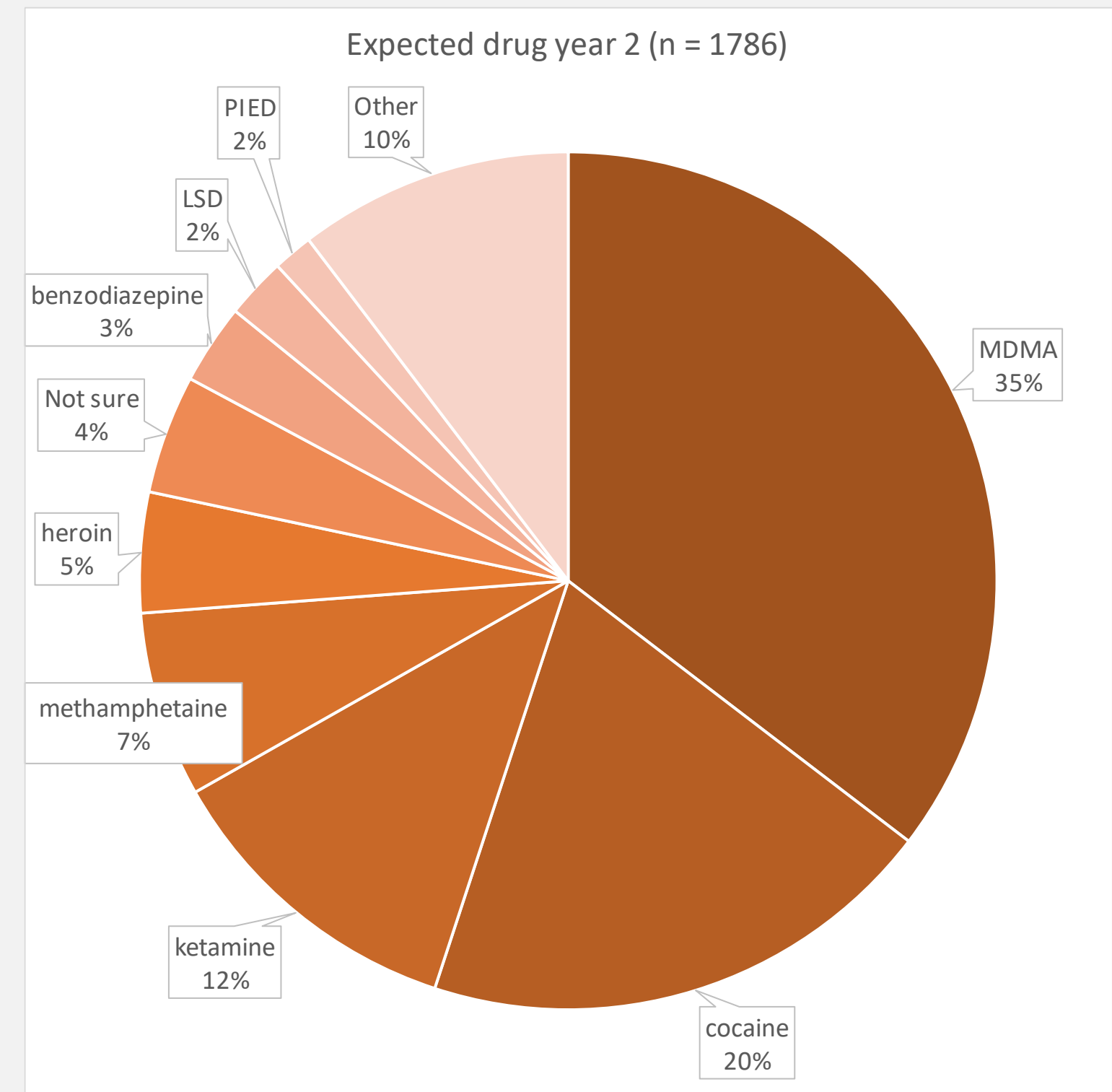
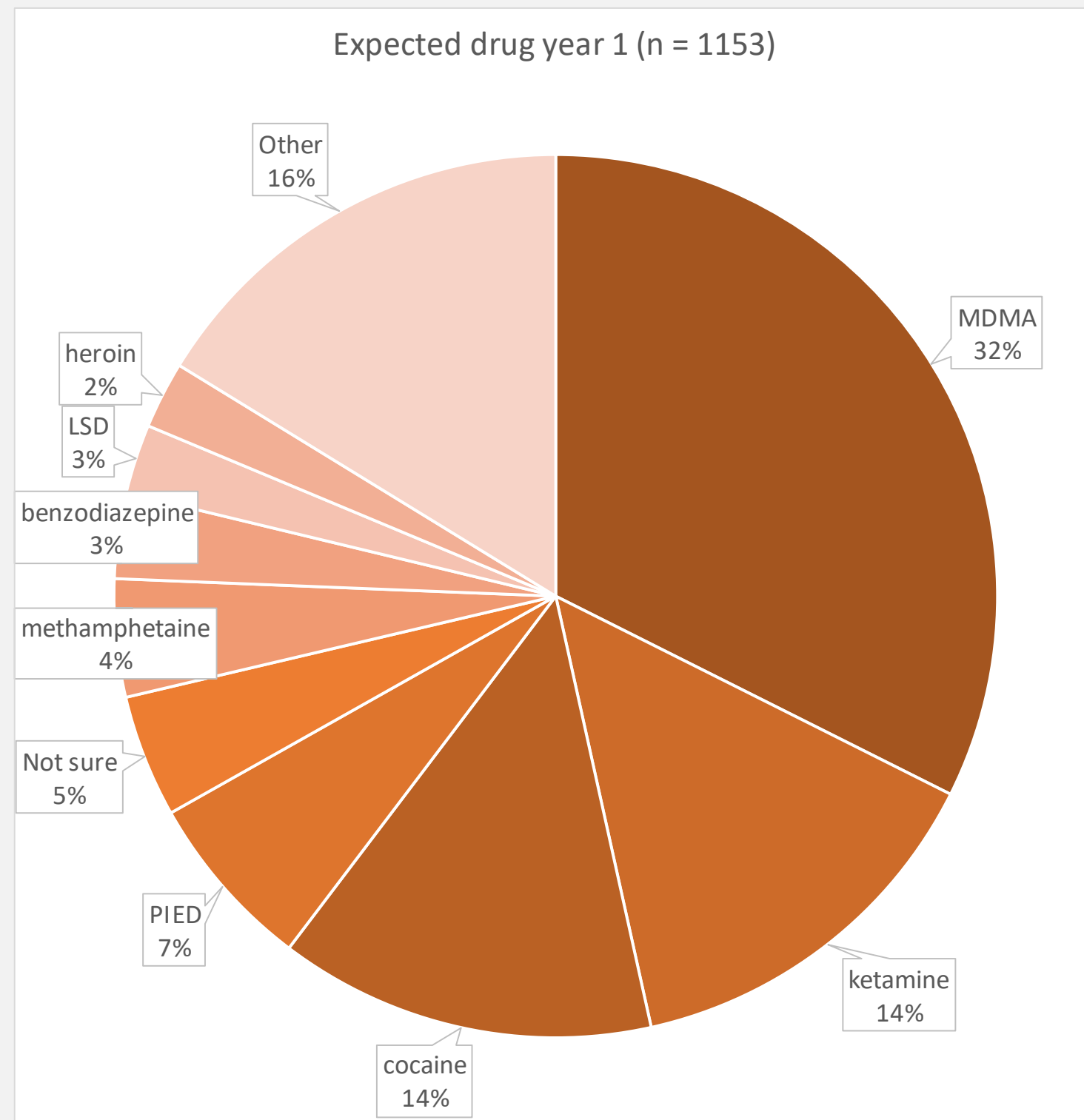
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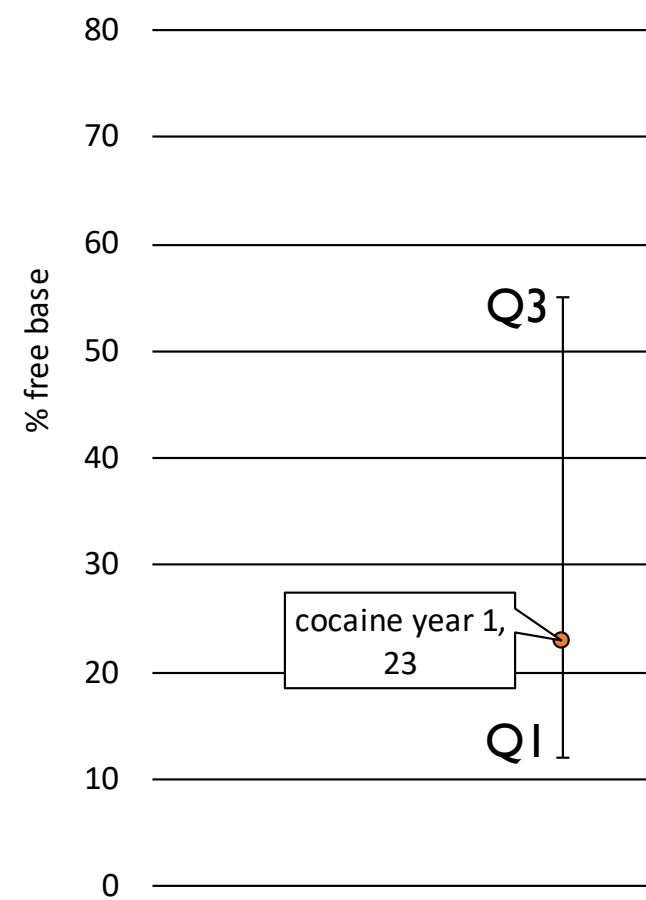
# EXPECTED DRUGS



# COMPARING DRUG PURITY AND CONTENT

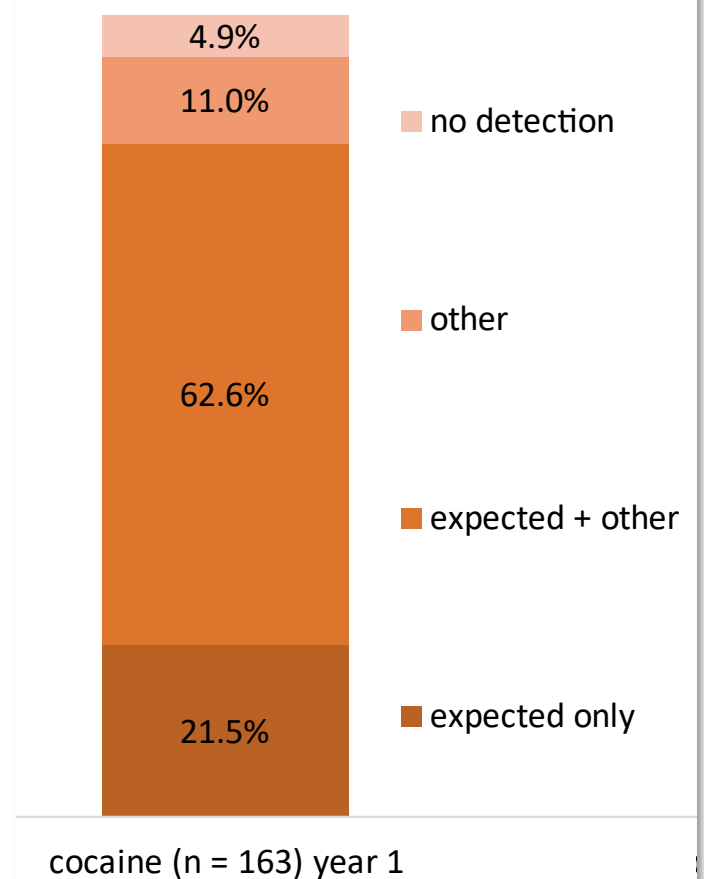
## DRUG PURITY

- The distribution of UPLC drug purity was compared for major drugs MDMA, cocaine, ketamine, methamphetamine and heroin presented to the service
- Median and inter-quartile ranges are reported
- A Mann-Whitney U test was performed to compare the purity distributions in year 1 and year 2
- There was a significant increase in purity distribution for all major drugs compared between year 1 and year 2 ( $p < 0.001$ )



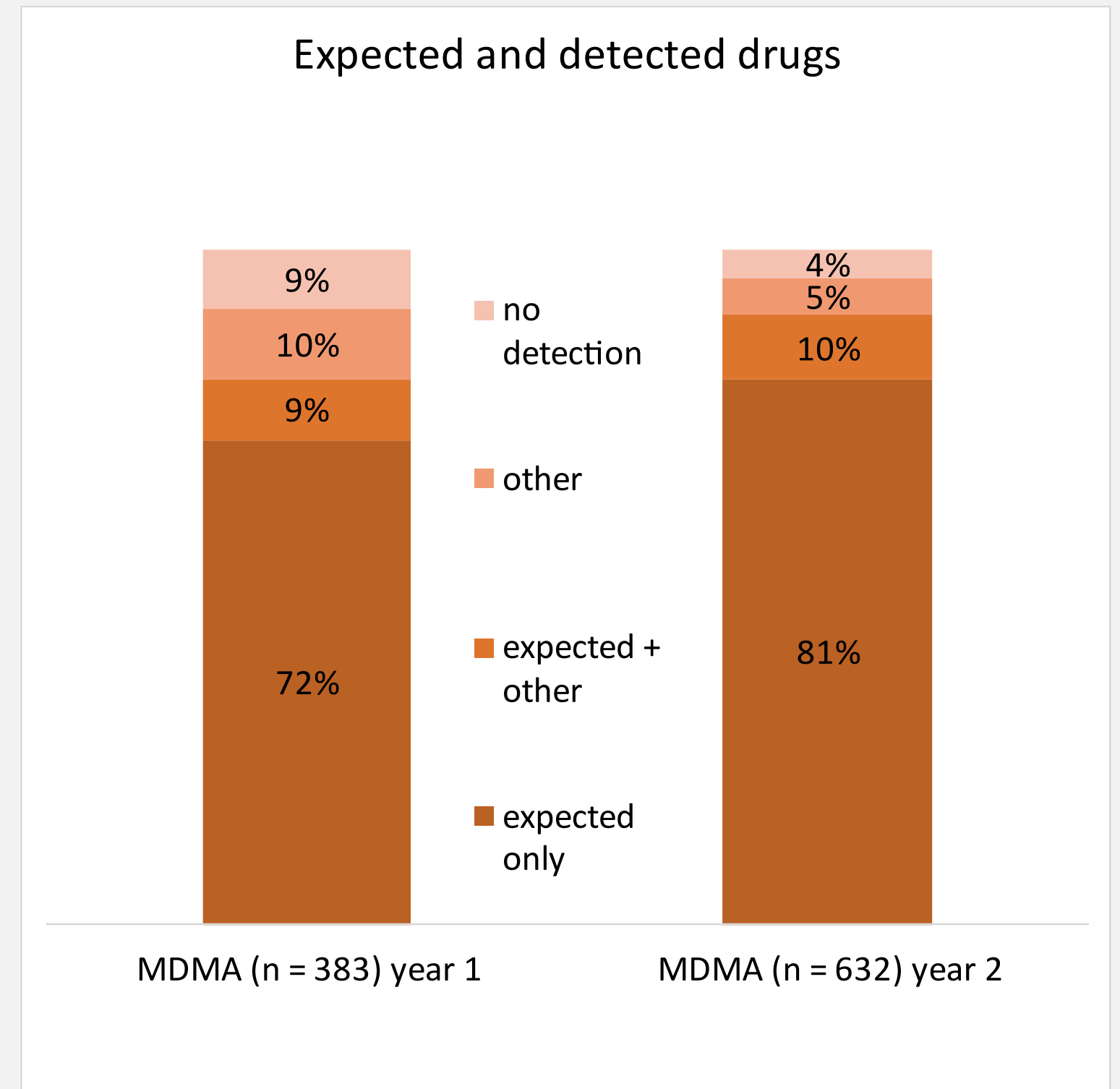
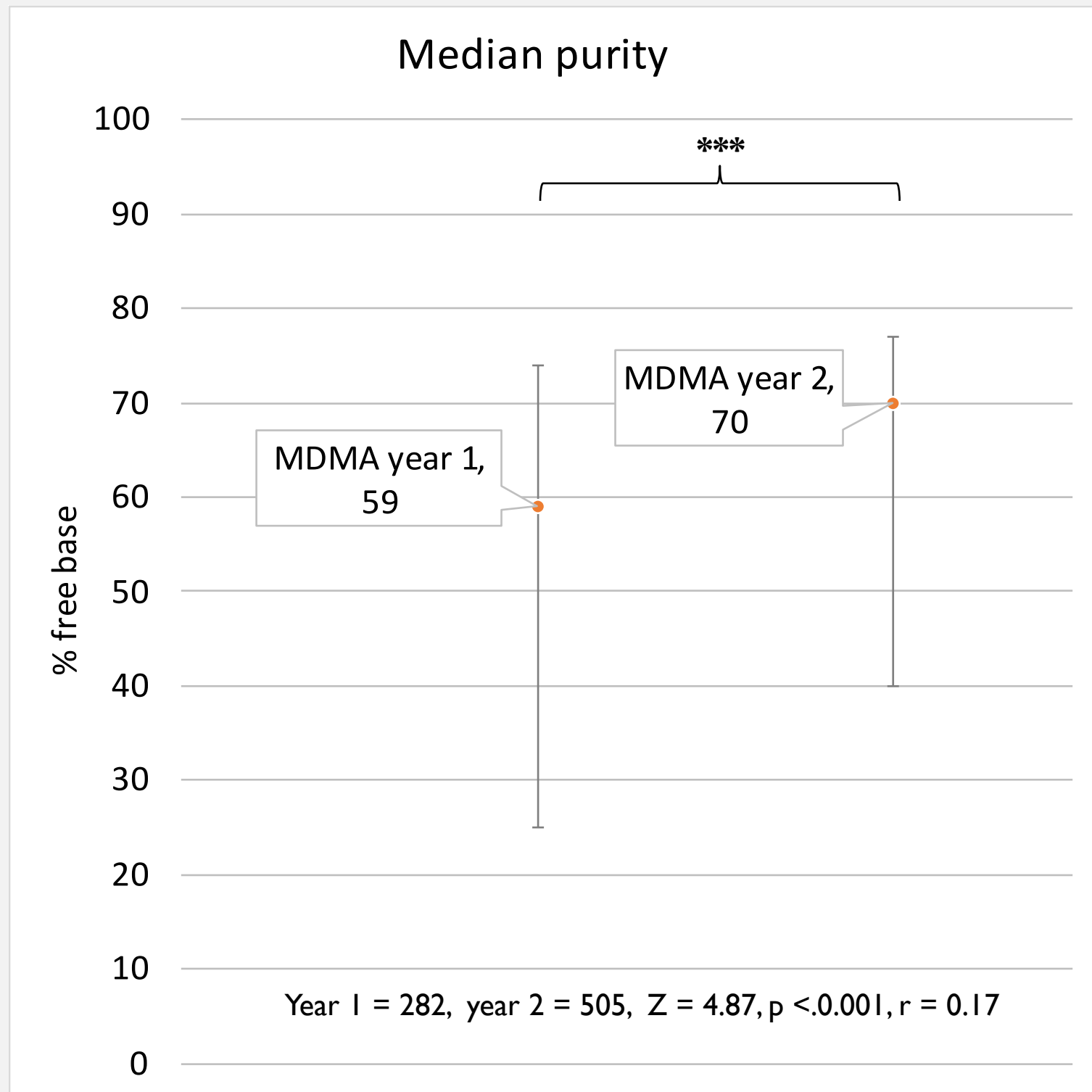
## DRUG CONTENT

- The FTIR and UPLC drug content are reported for major drugs MDMA, cocaine, ketamine, methamphetamine and heroin presented to the service
- Expected only contains only the expected drug
- Expected + other contains the expected drug with another substance that could be psychoactive, non-psychoactive or an unknown
- Other contains no expected drug and another substance that could be psychoactive, non-psychoactive or an unknown
- No detection

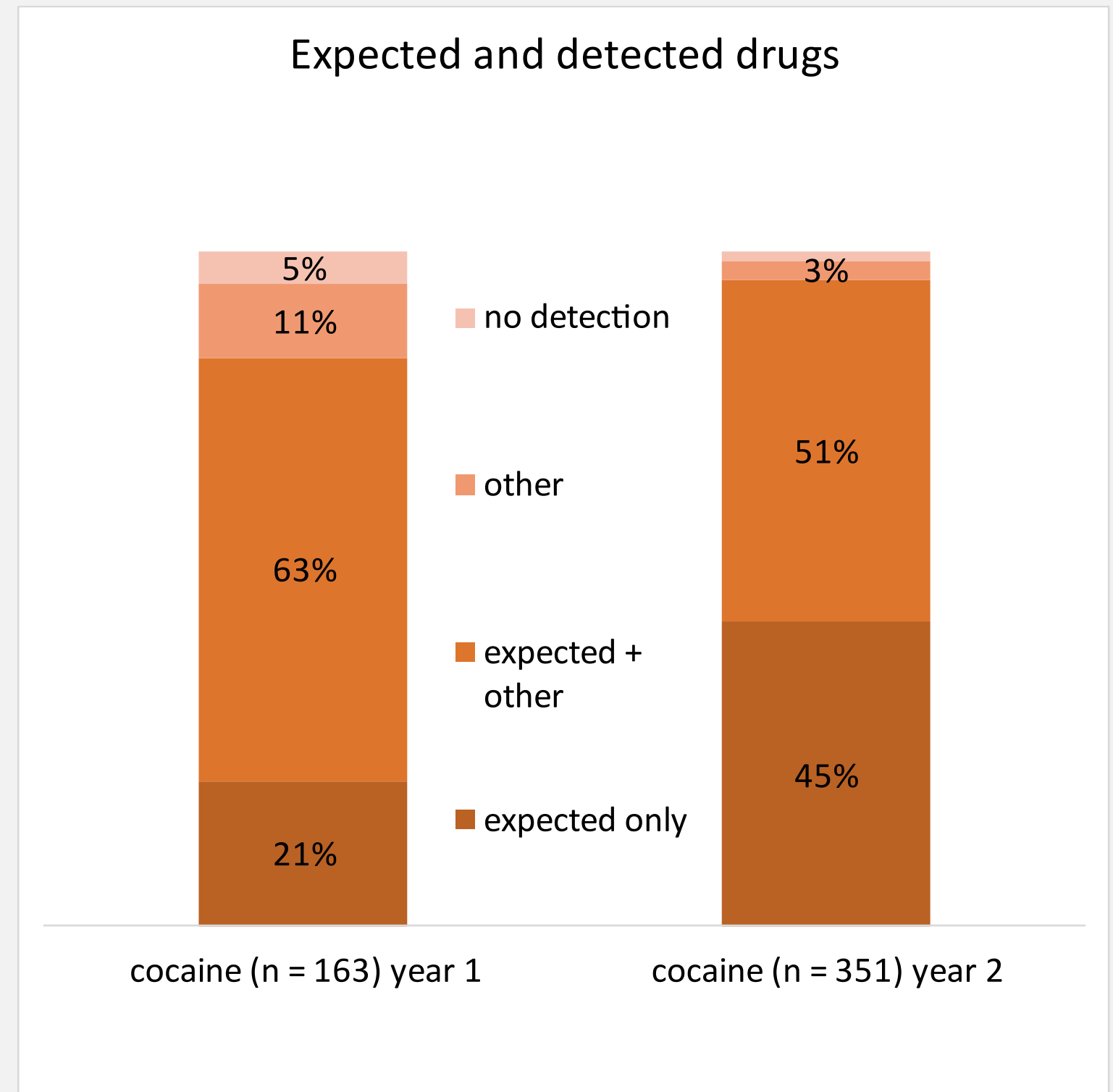
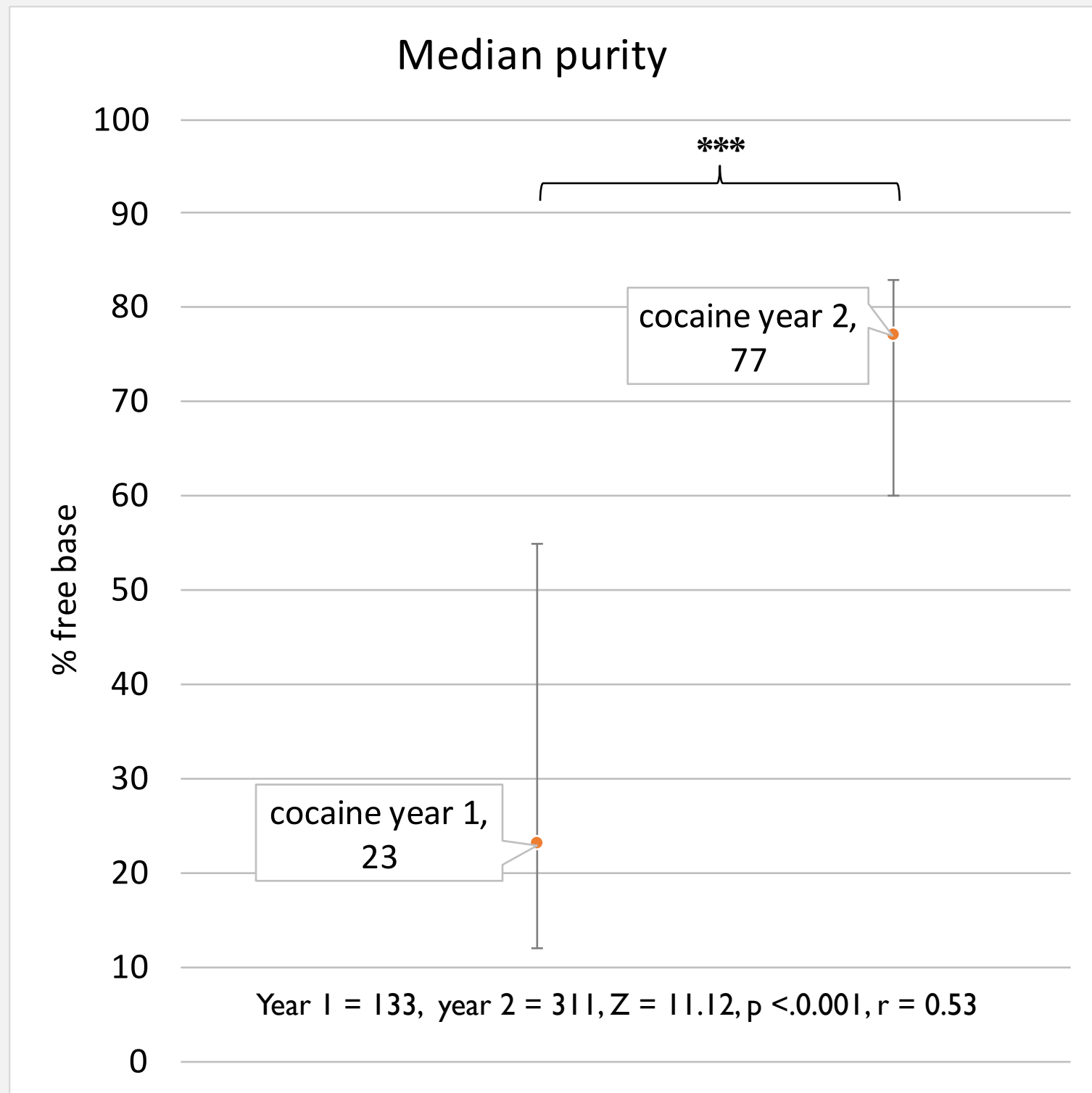




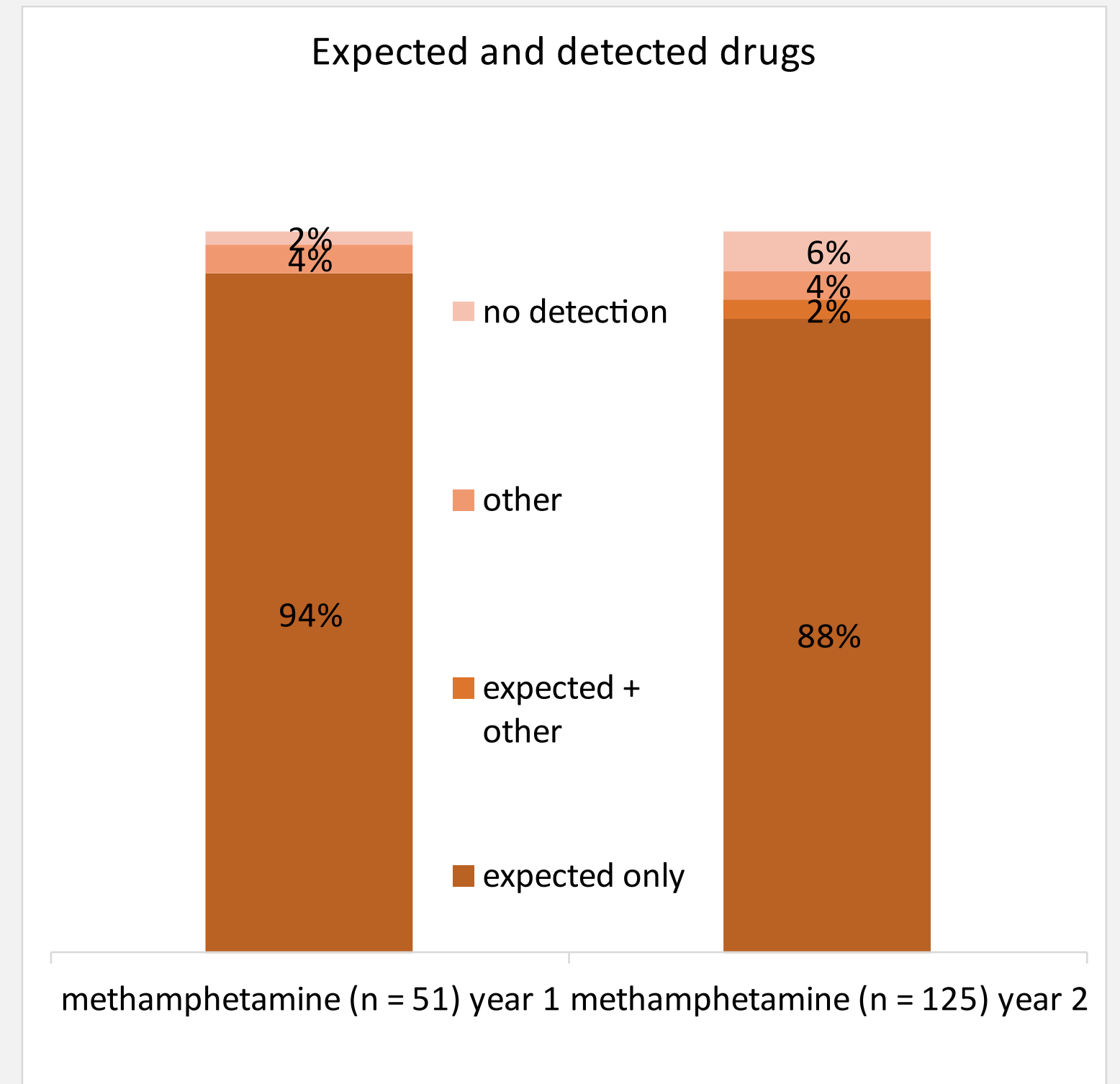
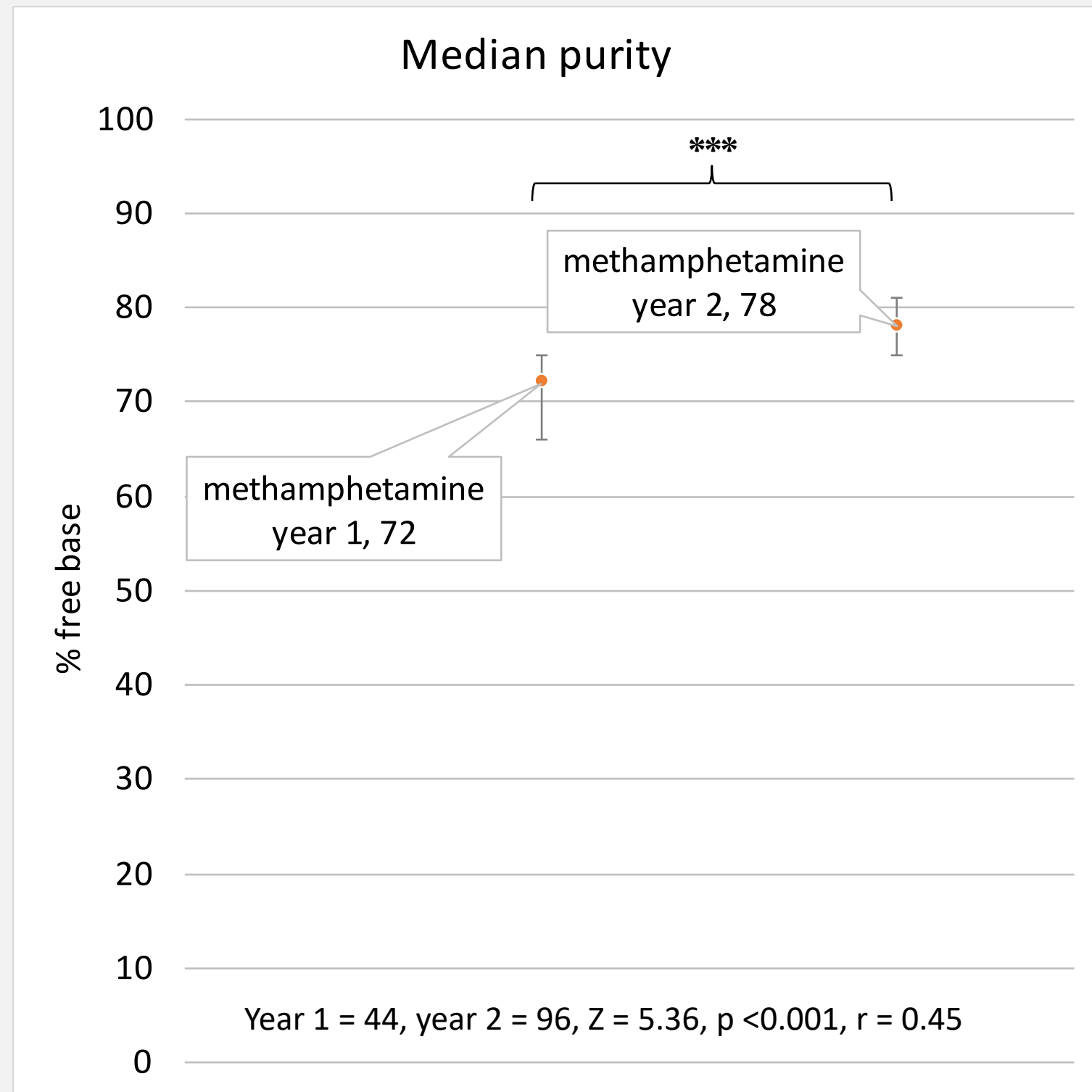
# MDMA



# COCAINE

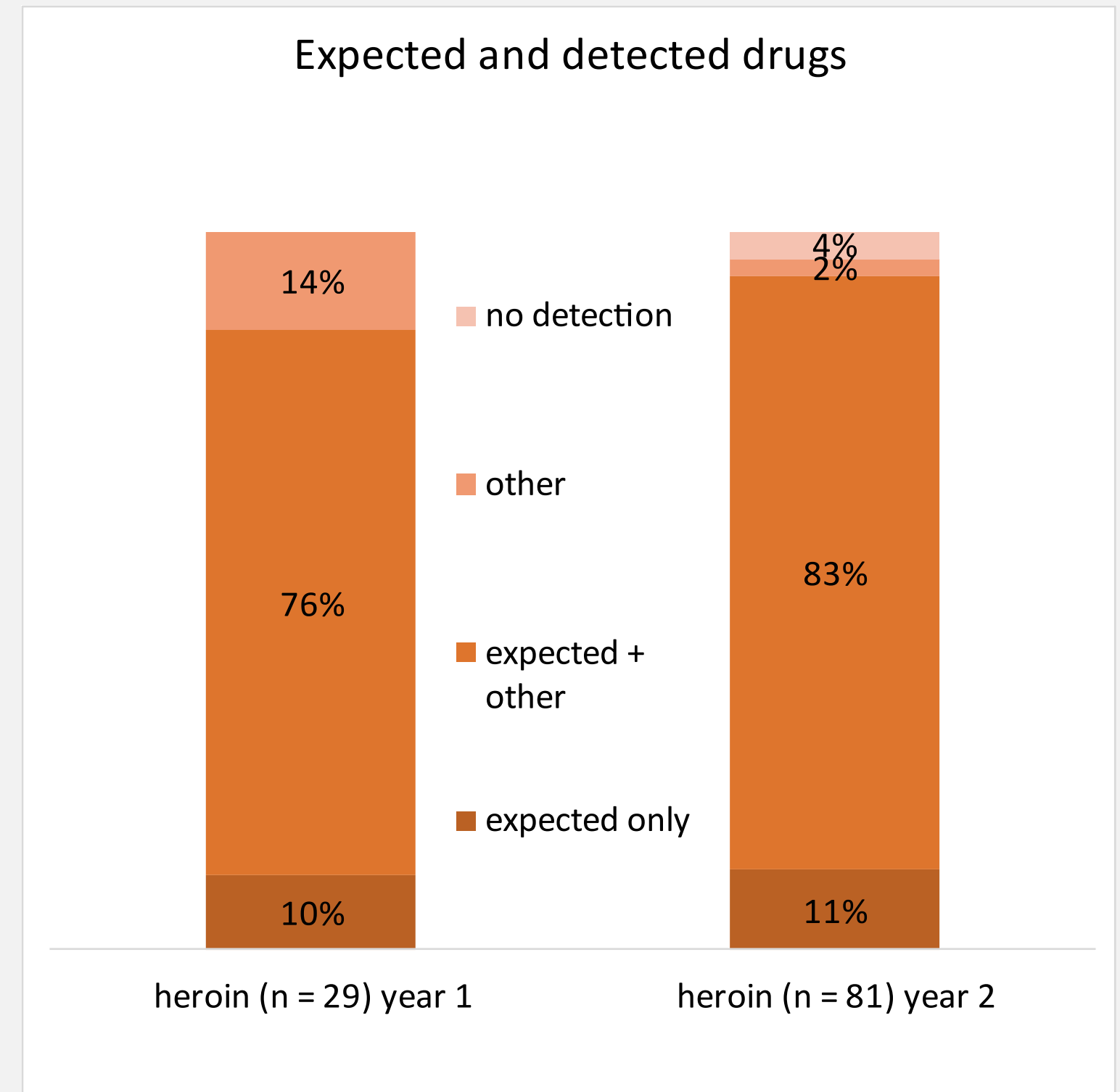
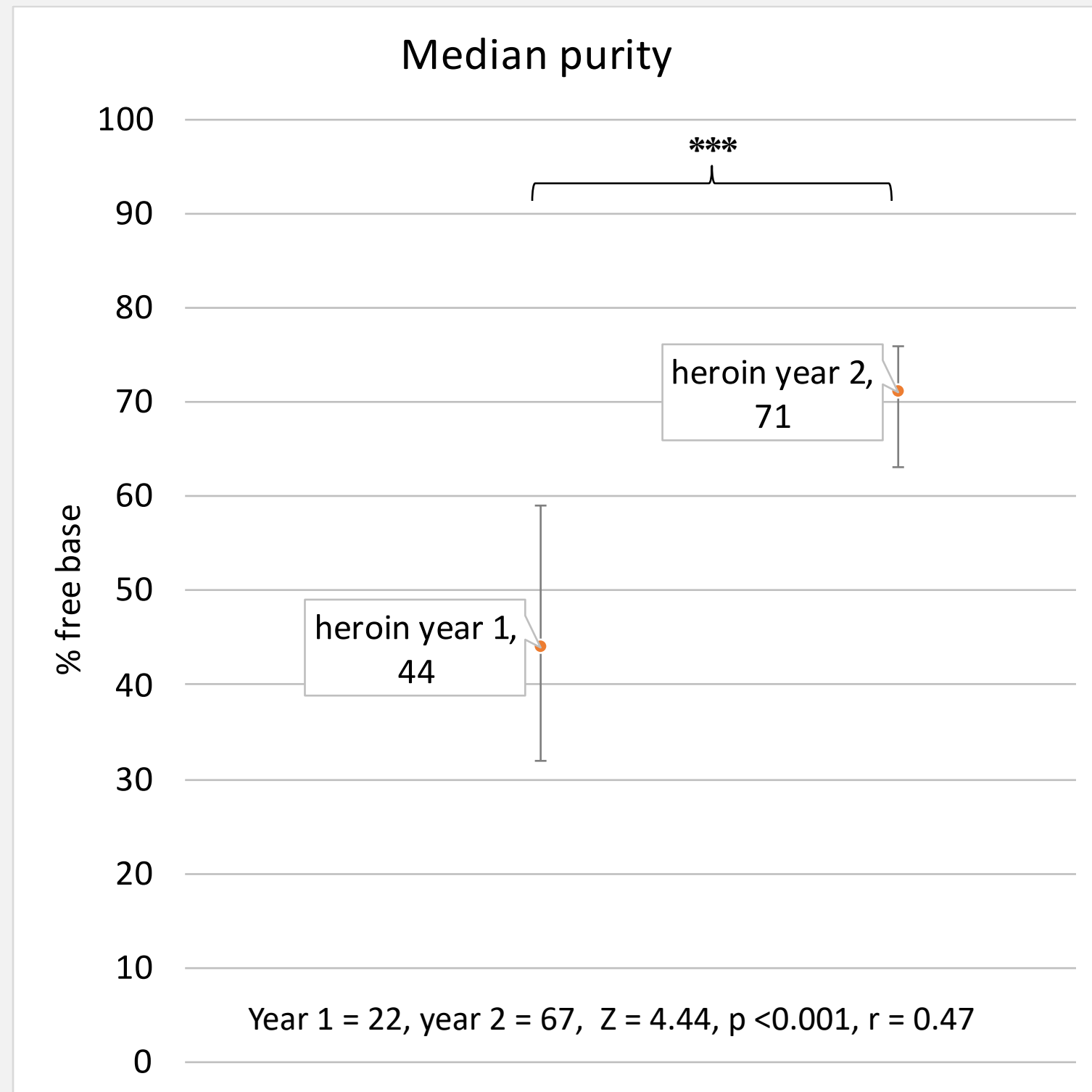


# METHAMPHETAMINE

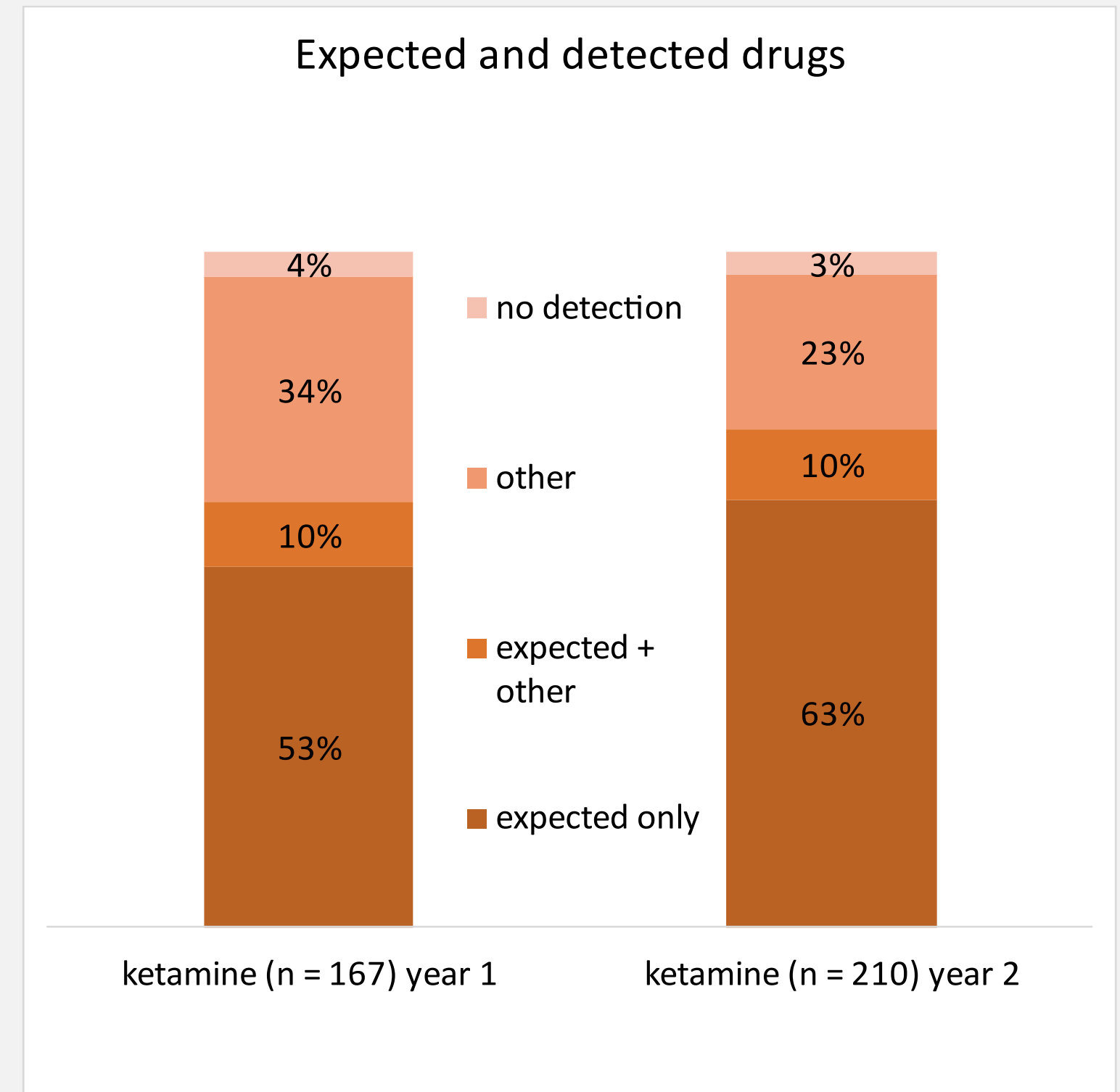
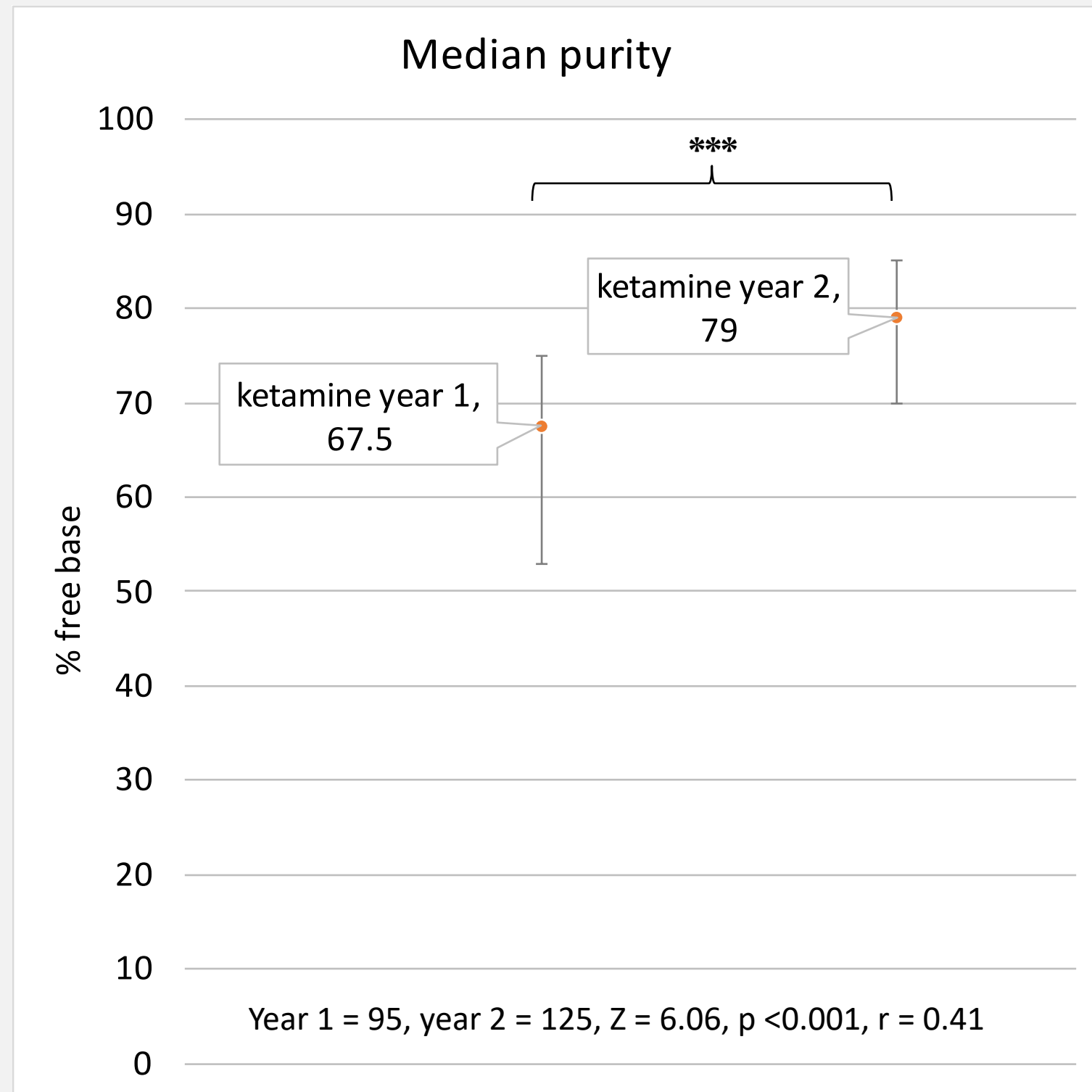




# HEROIN

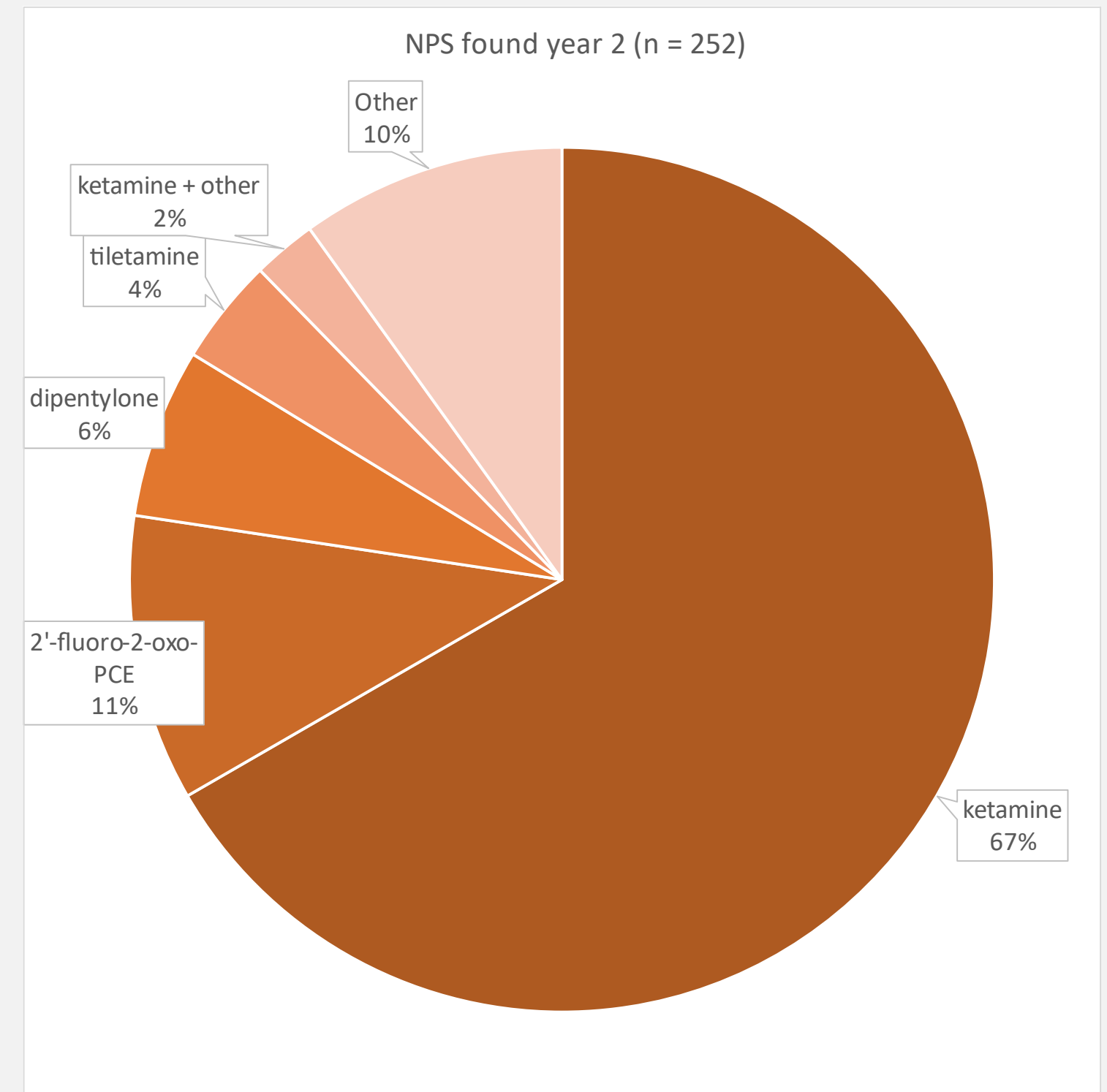
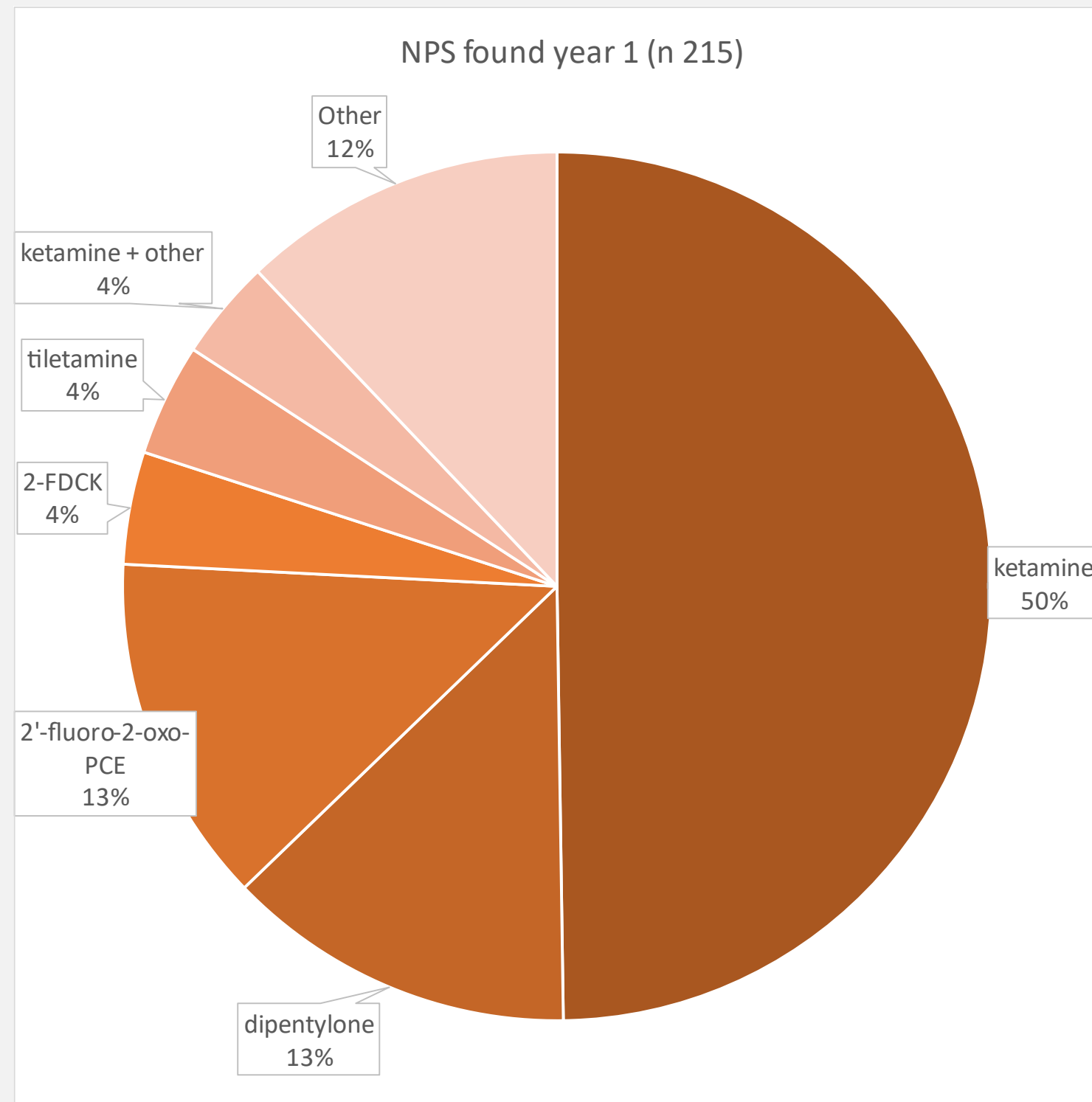


# KETAMINE





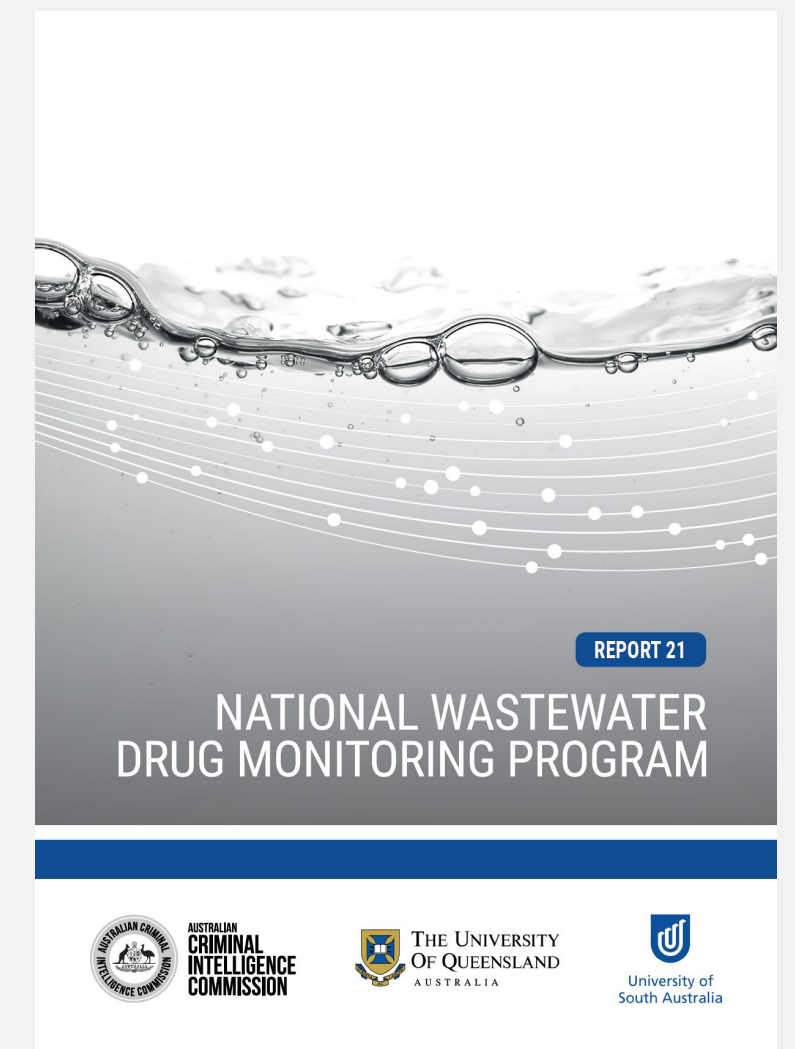
# NEW PSYCHOACTIVE SUBSTANCES (NPS)



# OTHER MONITORING SYSTEMS: WASTEWATER ANALYSIS

- Report 21 of the Australian Criminal Intelligence Commission (ACIC)'s National Wastewater Drug Monitoring Program
- August and October 2023 data
- CanTEST year 1 July 2022 to July 2023
- ACT increase in heroin median purity and consumption
- National decrease in consumption

Drug	National % Change Consumption	ACT % Change Consumption
MDMA	↑ 33	↑ 62
Cocaine	↑ 19	↑ 17
Methamphetamine	↑ 17	↑ 13
Heroin	↓ -7	↑ 31



<https://www.acic.gov.au/sites/default/files/2024-03/Wastewater%2021%20FOR%20WEB2.PDF>

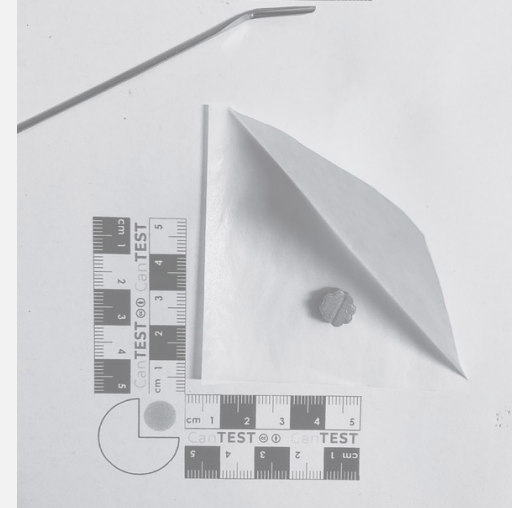
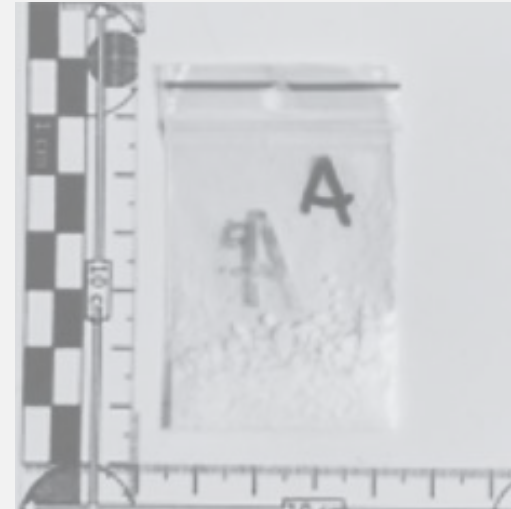
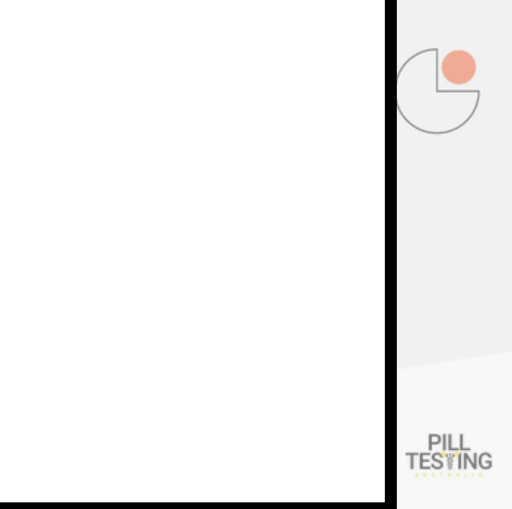
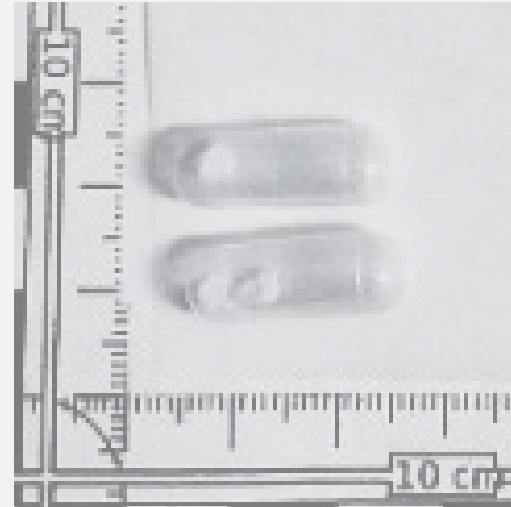
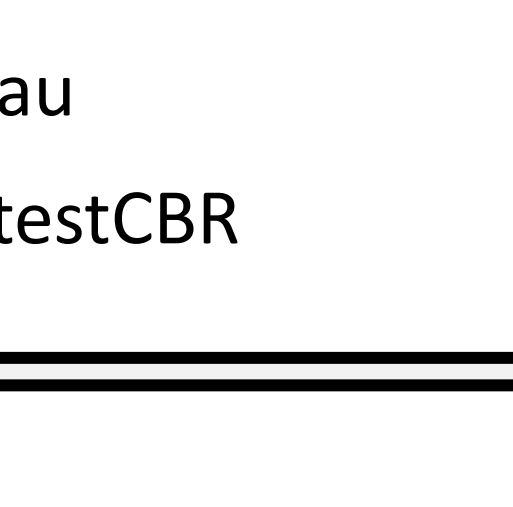
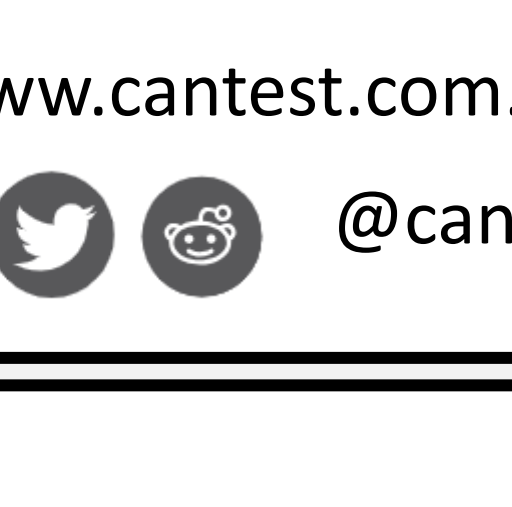
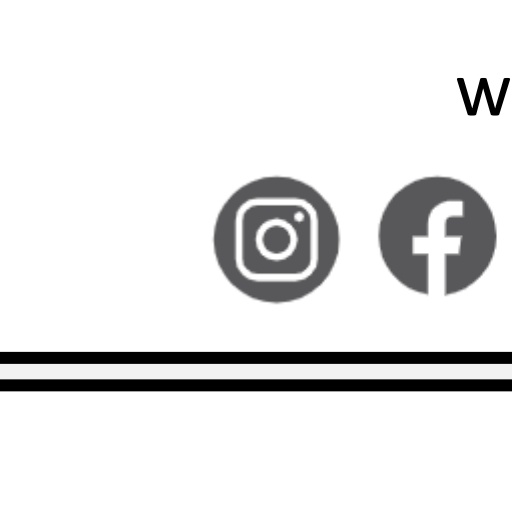
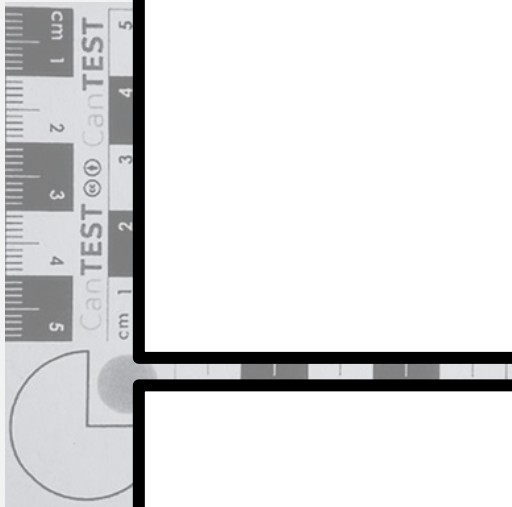
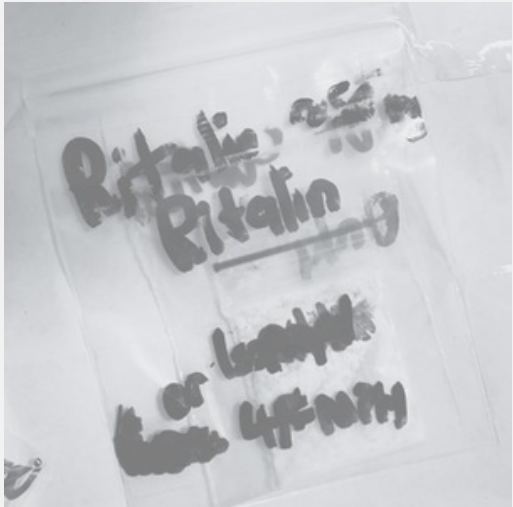
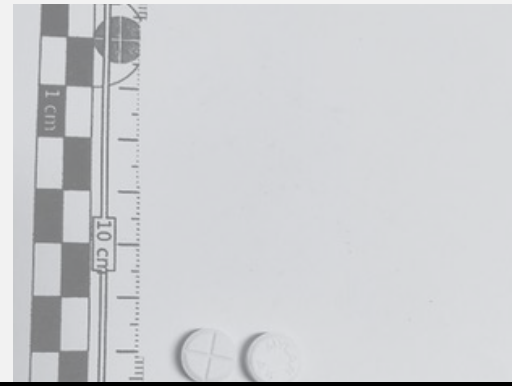


# OTHER MONITORING SYSTEMS: DRUG TRENDS

- Australian Drug Trends 2022: Key Findings from the National Ecstasy and Related Drugs Reporting System (EDRS) Interviews.
- New psychoactive substance markets and monitoring in Australia: An update. Drug Trends Bulletin Series.
- CanTEST year 1 July 2022 to July 2023
- CanTEST detected dissociative NPS and any NPS higher than expected
- Suggests significant levels of unwitting NPS use

Drug	EDRS 2022 Reported % (n = 700)	CanTEST year 1 Expected % (n = 1153)	CanTEST year 1 Detected % (n = 1153)
Ketamine	49 (21, ACT)	14	9
Dissociative NPS	1	2	6
Any NPS	9 (7, ACT)	4	10





# The End

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# Acknowledgements







# Complementing Mobile and Fixed Site Drug Checking Services During Major Festivals

Steph Tzanetis – CanTEST Program Coordinator – Directions Health  
Executive Officer—Pill Testing Australia

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**PILL  
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28 OCTOBER 2023

## Festival Drug Checking Timeline

Date	S/T	Festival	Patrons	Tests + Clients
29 Apr 2018	ACT	<i>Groovin the Moo</i>	~20k	T=83 C=125
28 Apr 2019	ACT	<i>Groovin the Moo</i>	~20k	T=170 C=234
25 Nov 2023	ACT	<i>Spilt Milk</i>	~35k	T=93 C=165
28-31 Mar 2024	QLD	<i>Rabbits Eat Lettuce</i>	~3.5k	T=210 C=257



GTM 2019



Opened July  
2022



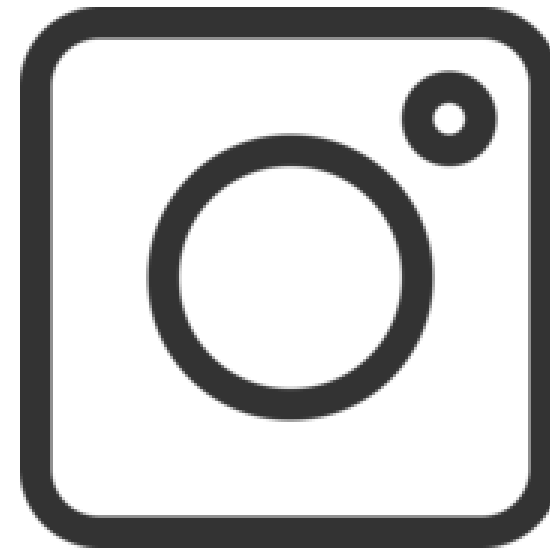
@cantestcbr (Tues 21 Nov 2023)



THURSDAY 23RD NOVEMBER ⌚ 3:00PM - 6:00PM  
FRIDAY 24TH NOVEMBER ⌚ 4:00PM - 9:00PM  
SATURDAY 25TH NOVEMBER ⌚ 10:00AM - 1:00PM



1 MOORE STREET  
CANBERRA CITY



**SPILT MILK**  
event  
hours.

SATURDAY 25TH NOVEMBER ⌚ 11:30 AM-  
ONSITE

**PILL  
TESTING**  
AUSTRALIA

@pilltestingaustraliaofficial  
(Fri 24 Nov, photo & copy  
provided by festival)

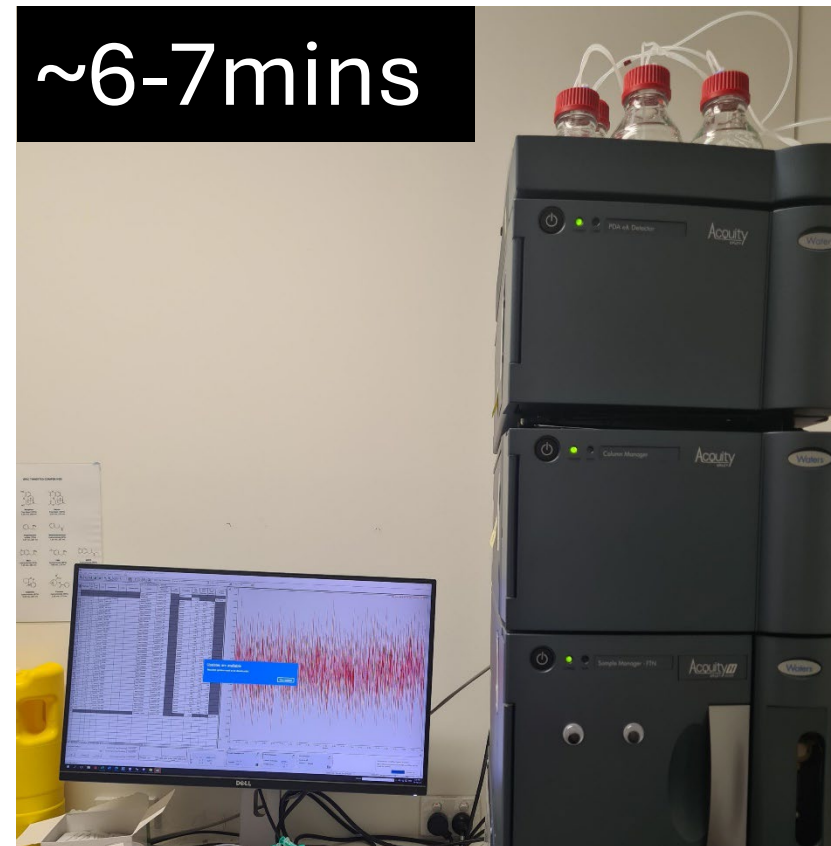




# CanTEST

## Fixed site

- Scientific scales (Quant.)
- Ehrlich reagent & FTS (Qual.)
- Bruker's Fourier Transform Infrared (FTIR) Spectrometer (Qual.)
- Water's Ultra Performance Liquid Chromatography (UPLC)
  - Qualitative  
(detects unknowns)
  - Quantitative  
(purity % for target drugs)

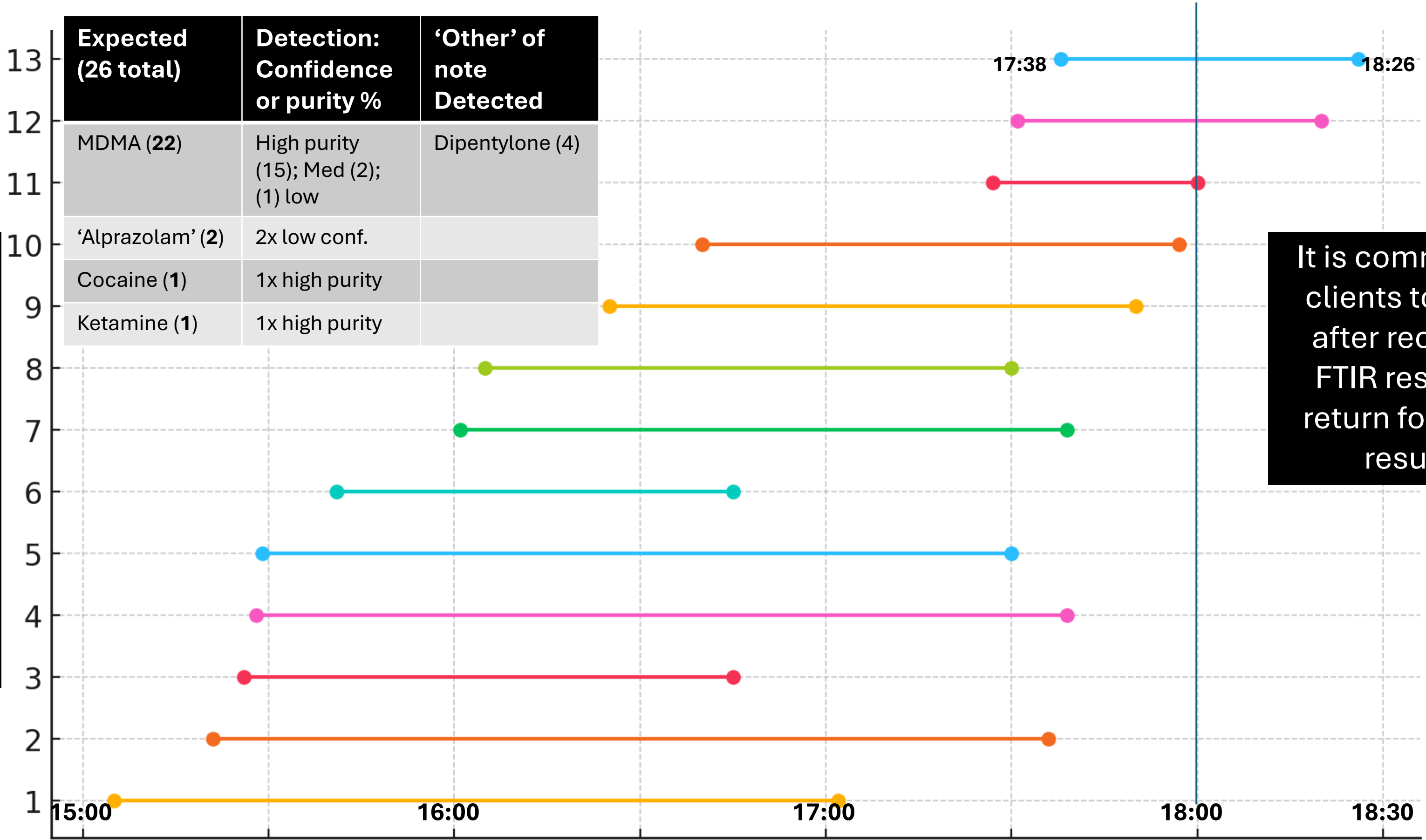


# CanTEST clients *in/out* Thurs 23 Nov 2023, 15:00-18:00

Y =  
Groups or  
individual  
Clients

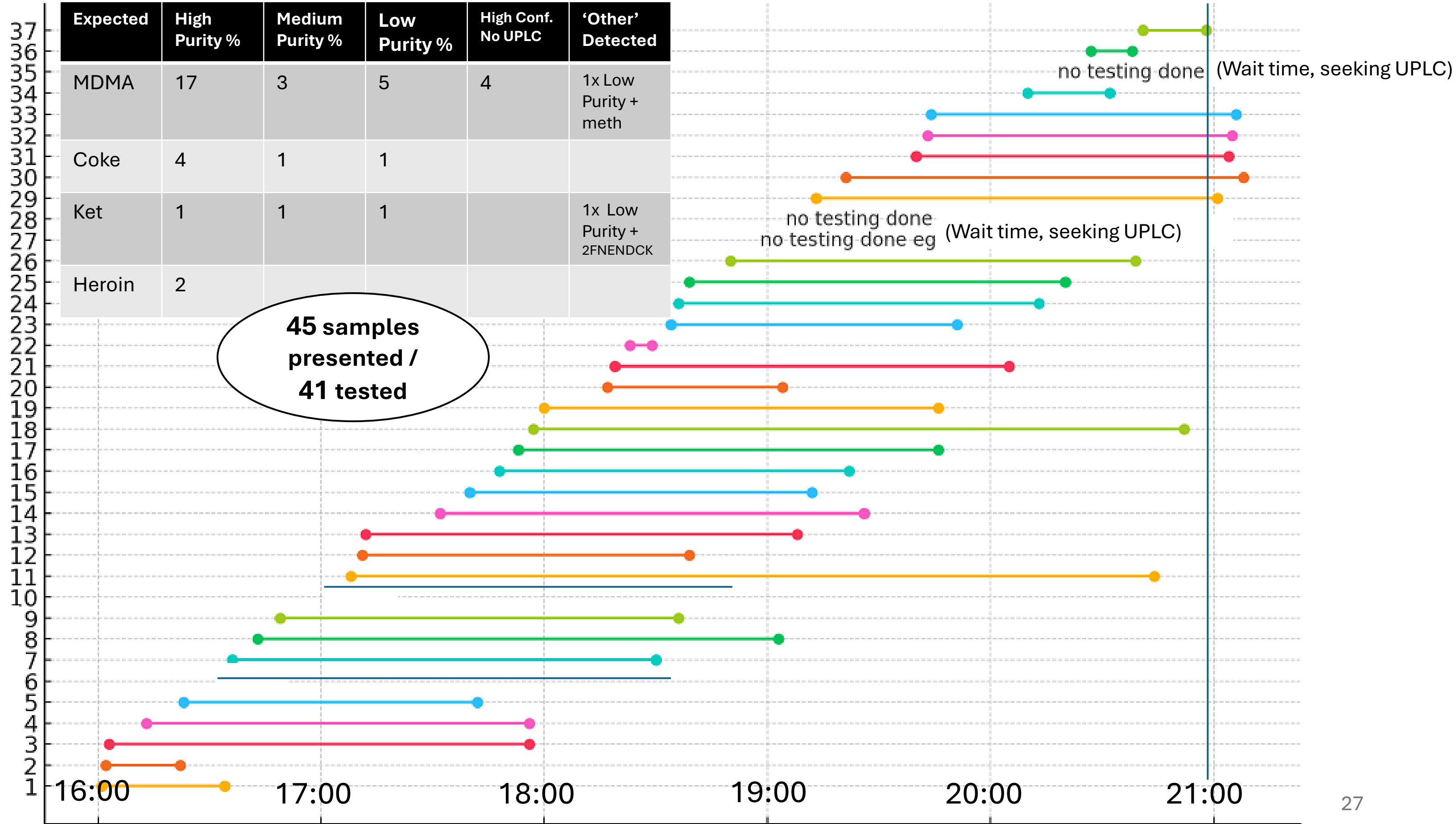
18 pax  
total

10/13  
going to  
festival



It is common for clients to leave after receiving FTIR results & return for UPLC results

# CanTEST clients *in/out* Fri 24 Nov 2023, 16:00-21:00



Y =  
Groups or individual  
Clients

57 pax total

9/37 going to festival

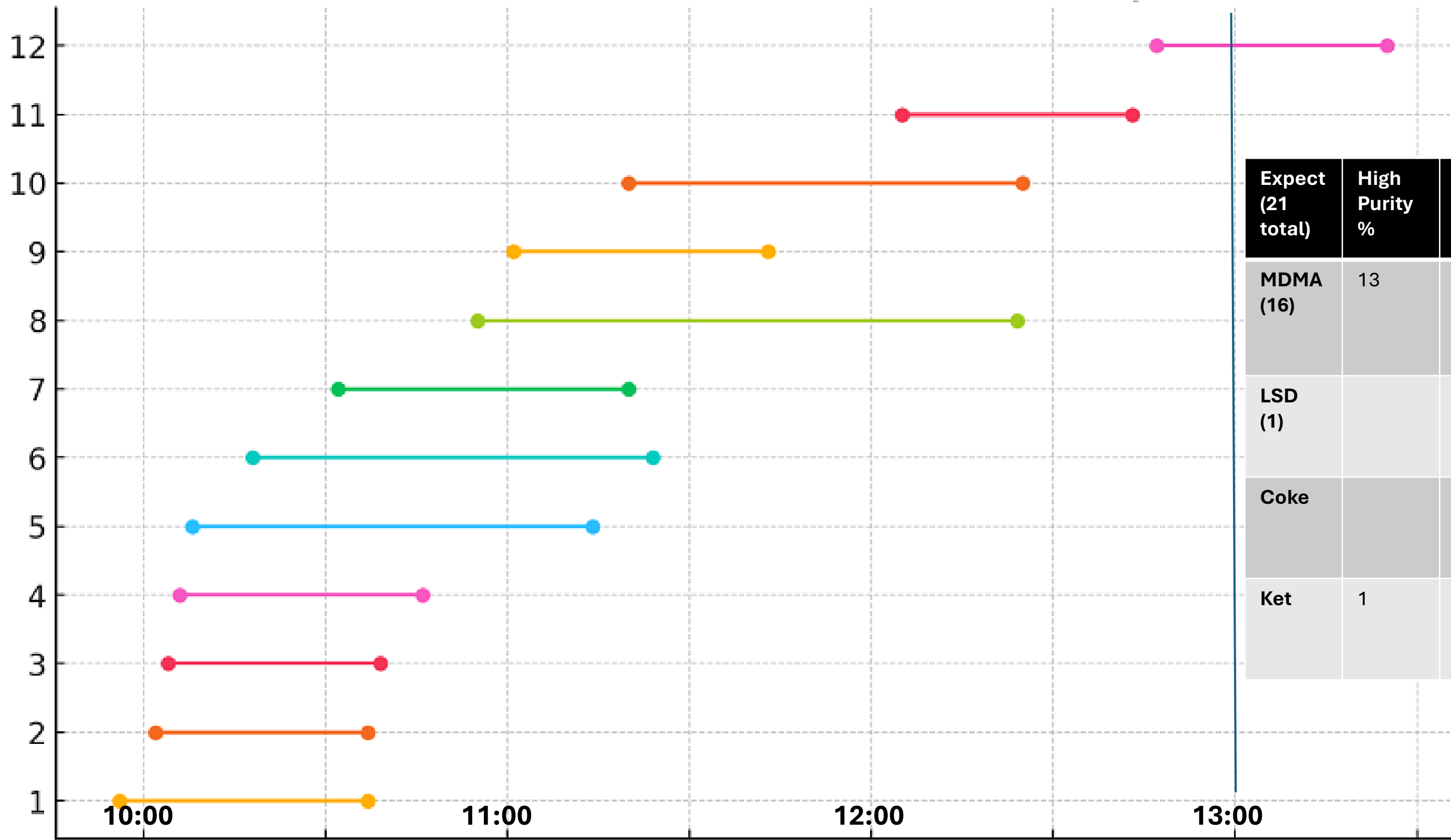


# CanTEST clients *in/out* Sat 25 Nov 2023, 10:00-13:00

Y =  
Groups or  
individual  
Clients

X pax total

X going to  
festival



Expect (21 total)	High Purity %	Med Purity %	Low Purity %	Other
MDMA (16)	13		3	Med. Purity + DMP (2)
LSD (1)				Yes+
Coke			1	
Ket	1			

# Festival site

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- Scientific scales (Quant.)
- Ehrlich reagent & FTS (Qual.)
- Bruker's Fourier Transform Infrared (FTIR) Spectrometer (Qual.)





# clients/patrons *in-FTIR-out* timestamps

23:00  
Event  
finish

73

Gates  
open  
midday

13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00

**73 Groups or Individuals**  
17 individuals  
56 groups (largest group 4)  
165 total clients

**93 samples**  
Expect MDMA (69); High Conf. (44); **DMP (2)**  
Expect coke (7); High Conf. (5)  
Expect / High Conf. detect Ketamine (3)  
Other: LSD, GHB, benzo, psilocybin  
Expect 'Unsure': High Conf. **2F-NENDCK (2)**



# clients/patrons *in-FTIR-out* timestamps

23:00  
Event  
finish

X

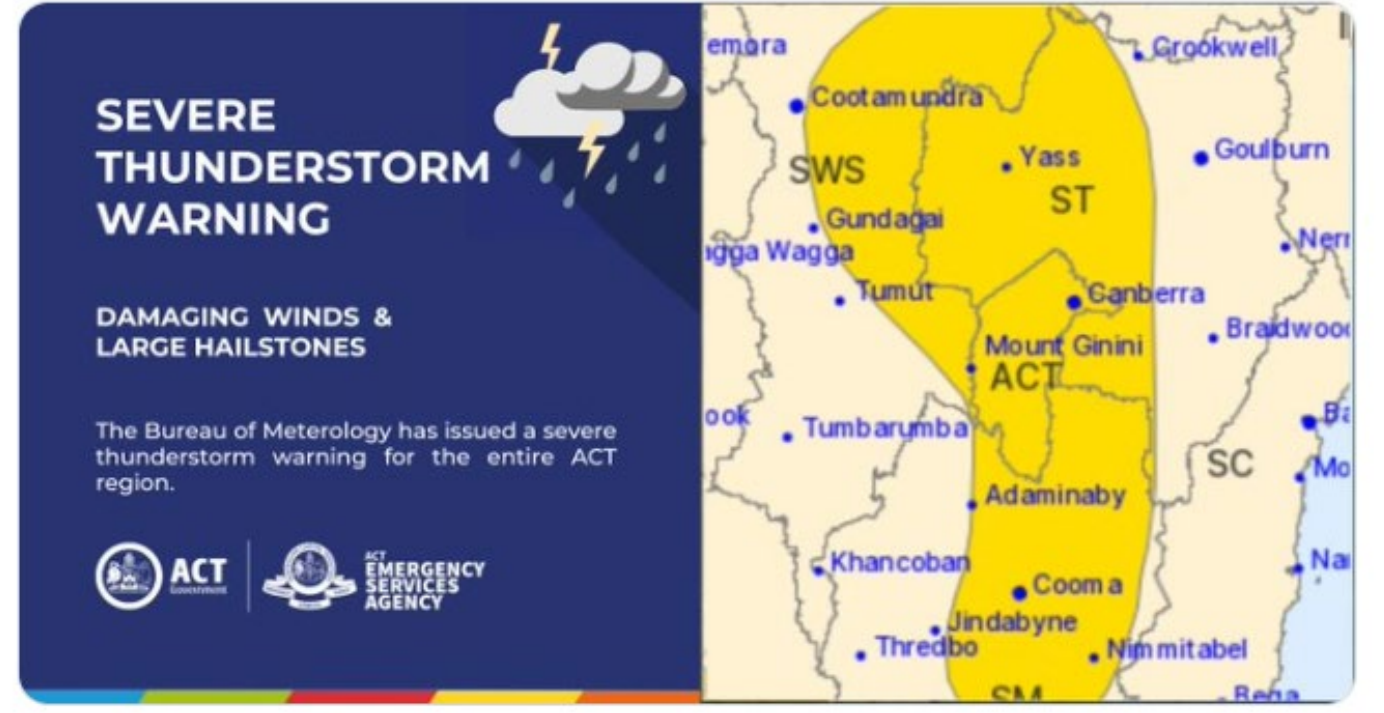


ACT ESA  
@ACT\_ESA · Follow

Severe Thunderstorm Warning - Canberra

The Bureau of Meteorology (BOM) has issued a Severe Thunderstorm Warning for large hailstones and damaging winds effecting the entire ACT region.

[esa.act.gov.au/node/6102](https://esa.act.gov.au/node/6102)



4:40 PM · Nov 25, 2023

i

Gates  
open  
midday

13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00



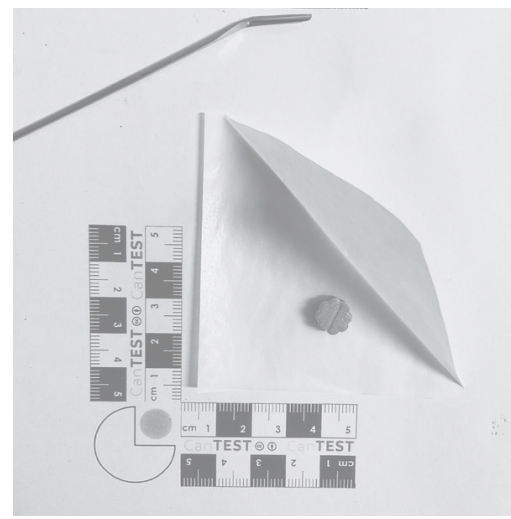
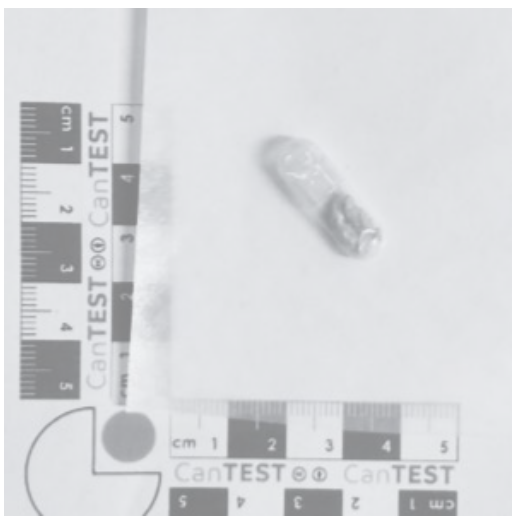
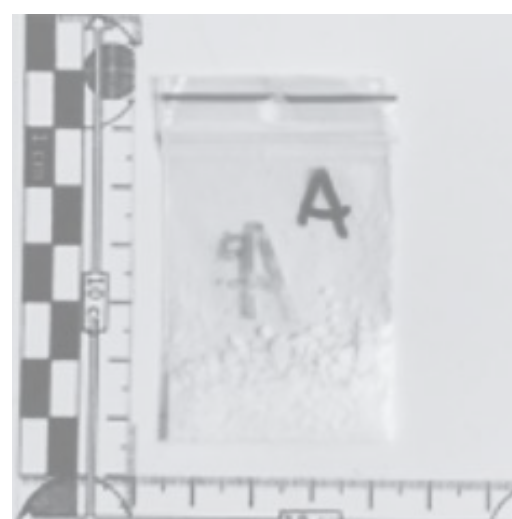
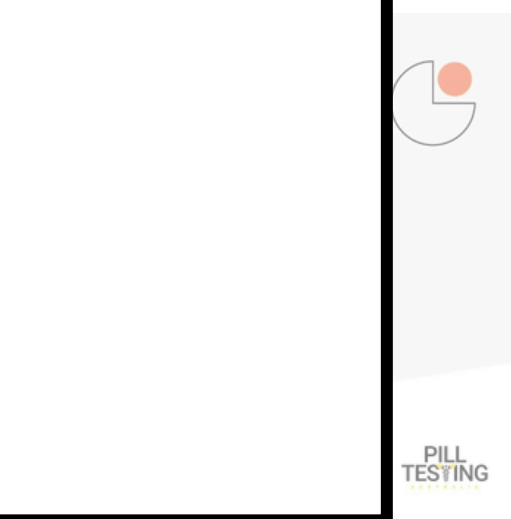
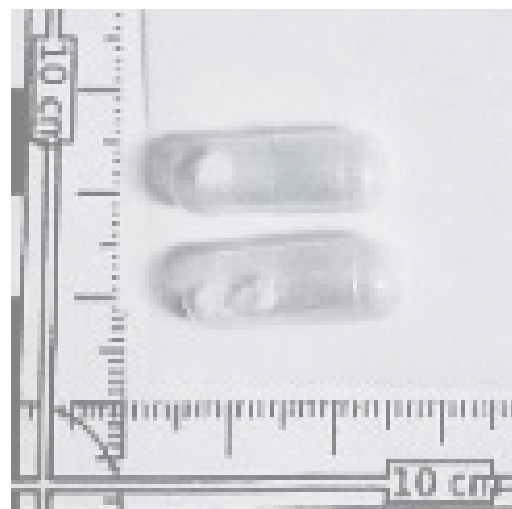
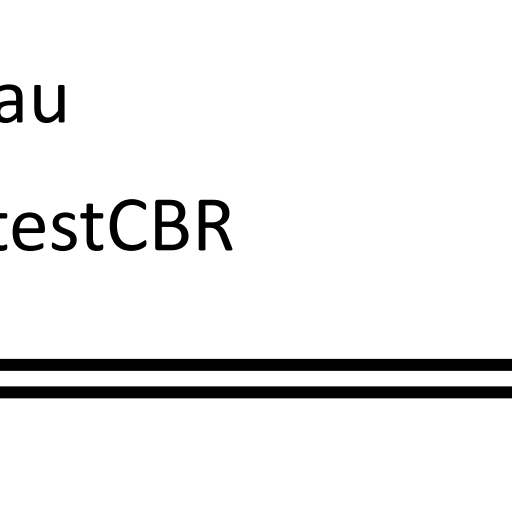
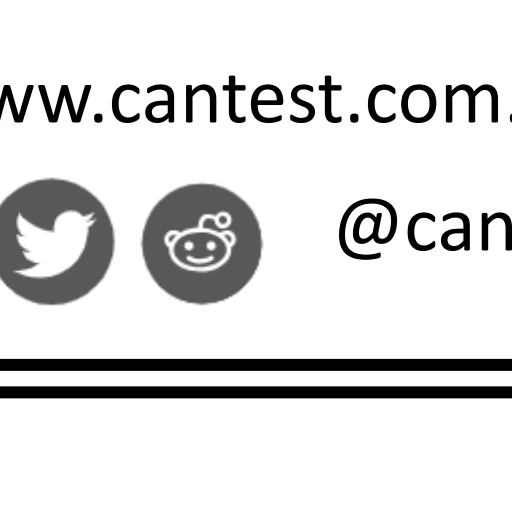
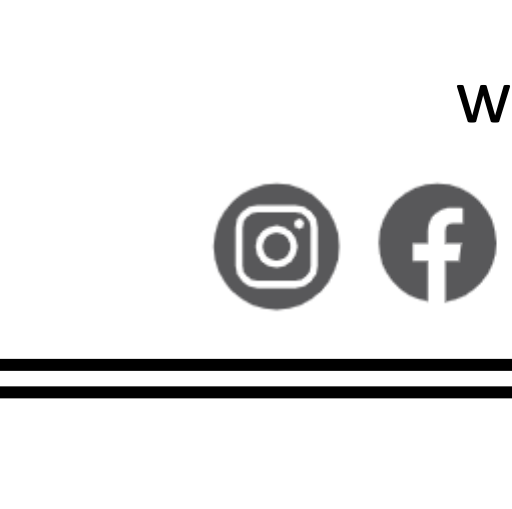
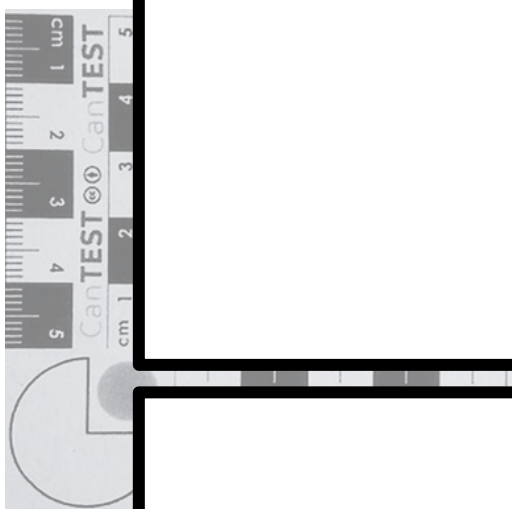
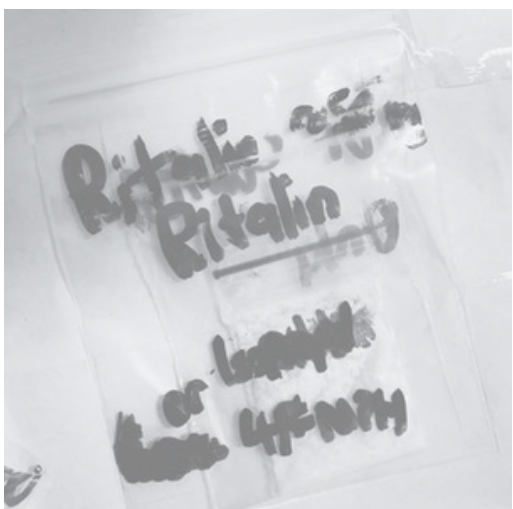
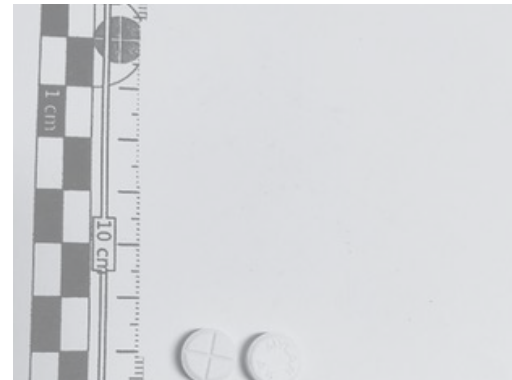


- Demand & throughput impacted by weather, event lineup & event organiser on-sharing social media comms etc

## Summary

- Groups more common at event service than fixed site
- Reach of service is greater than number of clients
- ‘Group rep.’ accessing the service may need to consult before discarding





**The End**

[www.cantest.com.au](http://www.cantest.com.au)

    @cantestCBR

**Acknowledgements**

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   Australian National University



# Community and Chemistry: Uncovering Real-Time Information on Emerging Novel Psychoactive Substances

Mitch Lamb – Peer Educator – CAHMA

## CanTEST

HEALTH AND DRUG CHECKING SERVICE

PILL  
TESTING  
AUSTRALIA



Directions  
Health Services

cahma  
Canberra Alliance for Harm Minimisation & Advocacy

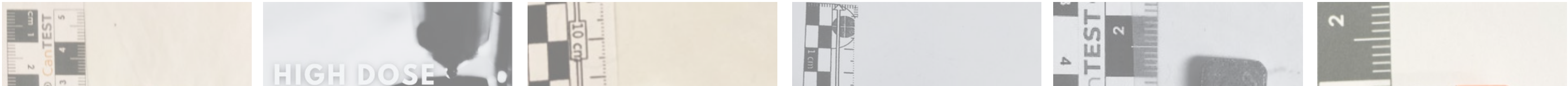
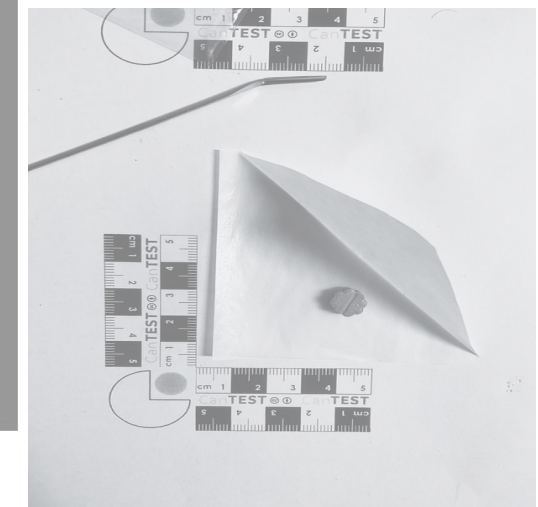
28 OCTOBER 2023

### WHAT'S NALOXONE?

An easy to use nasal  
spray that can reverse  
the effects of an  
opioid overdose.



**FILLERS  
AND  
ADDITIVES**  
**BORIC  
ACID**  
ARE COMMON IN  
UNREGULATED DRUG  
MARKETS



# ACKNOWLEDGEMENT OF COUNTRY

We acknowledge the traditional owners of the lands on which we are meeting – the Ngunnawal people - and pay our respect to their ancestors and elders both past and present. We acknowledge sovereignty was never ceded and are strongly committed to reconciliation and a positive future for all Aboriginal and Torres Strait Islander communities.

## **Valuing diversity**

We value the contribution of lived experience and diverse cultures, identities and lifestyles to the richness of our service and community.



## CANBERRA ALLIANCE FOR HARM MINIMISATION & ADVOCACY (CAHMA)

**CAHMA** exists to promote  
the health and human rights  
of people who use drugs and  
drug treatment services.





## CAHMA Peer Educators:

Guide community through CanTEST's service with respect & care.

Discuss and dissect drug checking results

Refer to other AOD / health services where applicable

Develop harm reduction safer using guides for Novel Psychoactive Substances (NPS)



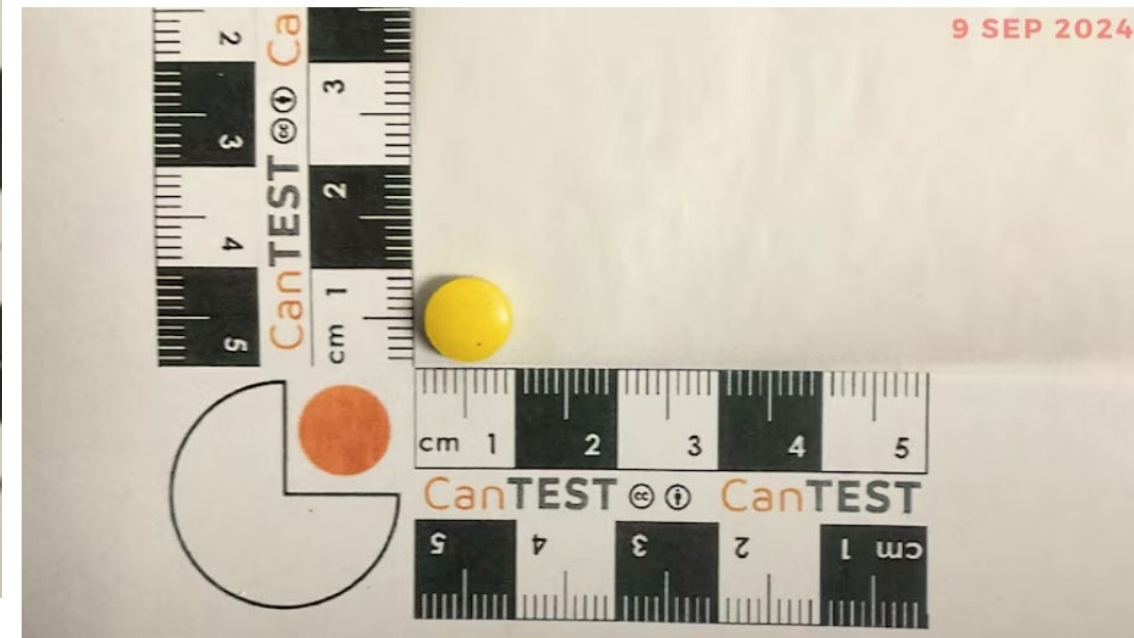
4-chloromethcathinone (4-CMC),  
N,N-dimethylpentylone (DMP)  
and MDMA found in 'MDMA'  
sample

ACT | Community notice

Highly potent opioid 100 times stronger than fentanyl  
detected in Canberra, purchased on the dark web

By Victor Petrovic Drugs

Tue 10 Sep

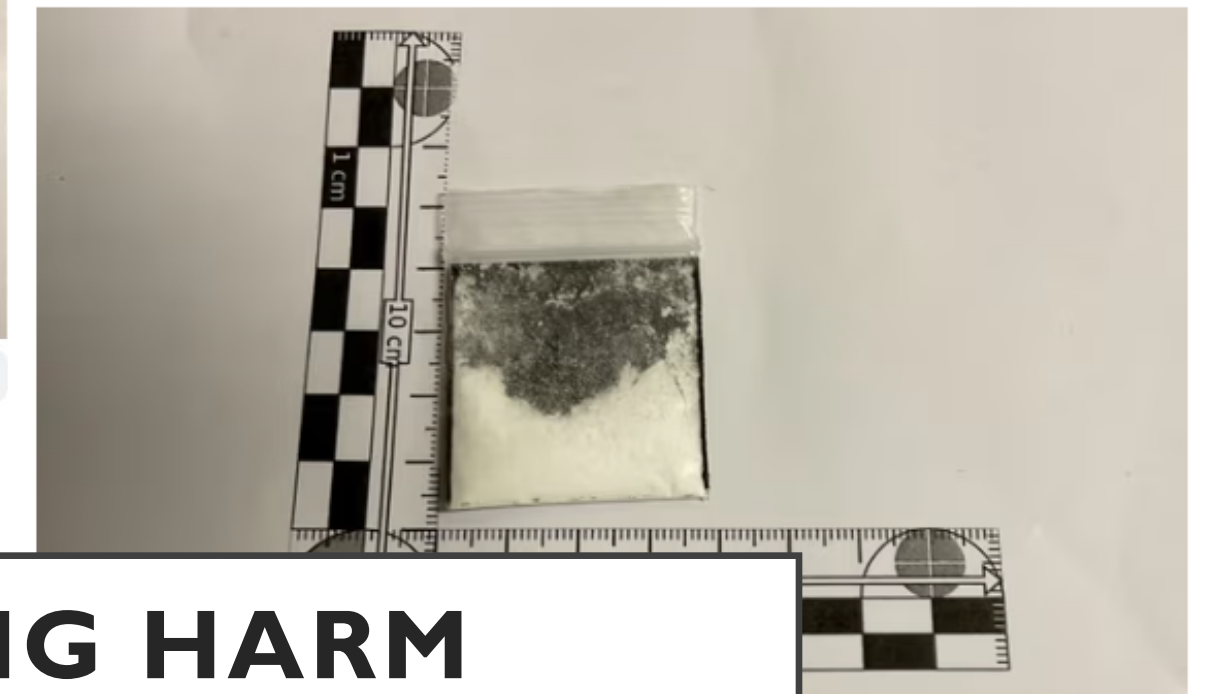


The yellow pill was purchased on the dark web and was thought to be Oxycodone. (Supplied: CanTEST)

'Canberra ketamine': new recreational  
drug discovered at Australian pill-  
testing service

'As far as we're aware, this is the first detection of a new drug  
by a drug-checking service anywhere in the world,' says  
professor

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- Get our [morning](#) and [afternoon](#) news emails, [free app](#) or [daily news podcast](#)



THE CHALLENGE – DEVELOPING HARM  
REDUCTION ADVICE FOR RAPIDLY EMERGING  
NOVEL PSYCHOACTIVE SUBSTANCES (NPS)

**INFORMATION ON EMERGING  
DRUGS IS LIMITED – AND OFTEN  
HARM REDUCTION INFO IS NON  
EXISTANT**

← BACK

**Sorry, no results were found**

### **Search suggestions**

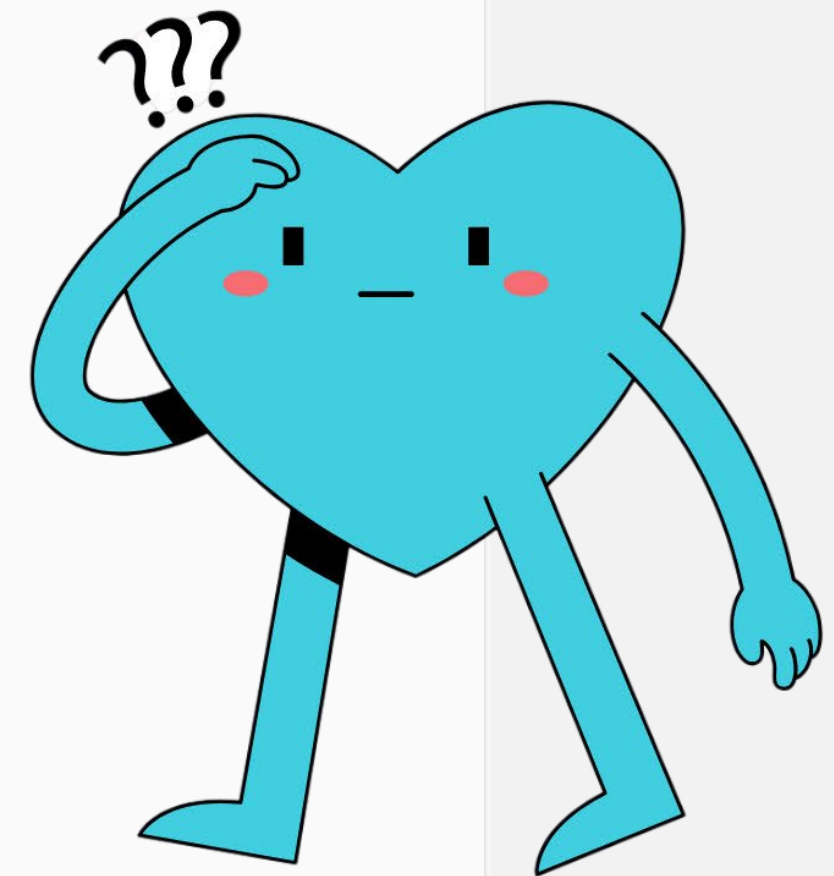
Check your spelling

Try more general words

### **Popular pages**

[Scheduler](#)

[Registration](#)





For example:

There are few sources online regarding illicit Nitazene dosage, harm reduction.

CAHMA's resource on Nitazene's is one of the top results on google because it includes the word "dosage".

Google search results for "nitazene dosage".

Search bar: nitazene dosage

Navigation: All Images Shopping Videos News Web Maps More

**Alcohol and Drug Foundation**  
https://adf.org.au › drug-facts › nitazenes

### Nitazenes

Information on nitazenes, synthetic opioids, including their effects, appearance, use methods and associated risks. Overdose symptoms and harm reduction.

**CAHMA**  
https://www.cahma.org.au › Articles

### Safer Using - Nitazenes

Nitazenes, also known as benzimidazole opioids, are a class of synthetic opioids which vary widely in potency. Get info about safer use of nitazenes.

**NSW Health**  
https://www.health.nsw.gov.au › aod › Pages › nitazene...

### Nitazenes causing severe opioid overdoses in NSW

29 May 2024 — NSW Public Drug Warning - nitazenes (synthetic opioids) causing severe overdose.

**WE KNOW THERE  
IS A DEMAND FOR  
THIS LIFE SAVING  
KNOWLEDGE**

CAHMA WEBSITE  
SEARCH STATISTICS –  
AUGUST TO  
OCTOBER 2024

## Performance

↓ EXPORT

Date: Last 3 months ▾

Search type: Web ▾

+ Add filter

Last updated: 2 hours ago ?

Top queries	↓ Clicks	Impressions
mdma dosage	1,232	9,064
ghb dosage	757	11,199
lsd dosage	757	5,541
cantest	666	3,626
canket	454	29,624
mdma dose	448	4,952





CAHMA AI: Hi! How can I help you?

Type your message...

Send

I'm an AI language model designed to assist you with general information about CAHMA and related services. For specific concerns or questions, please contact our peer workers at (02) 6253 3643.

"Where can u buy nitazene testing strips?"

- CAHMA bot user question September 2024

"Is there a way to use Nitazenes safely?"

- CAHMA bot user question August 2024

"I saw that Nitazene alert how can I check my gear for it?"

- CAHMA bot user question August 2024

**WE KNOW THERE IS A DEMAND FOR  
THIS LIFE SAVING KNOWLEDGE**





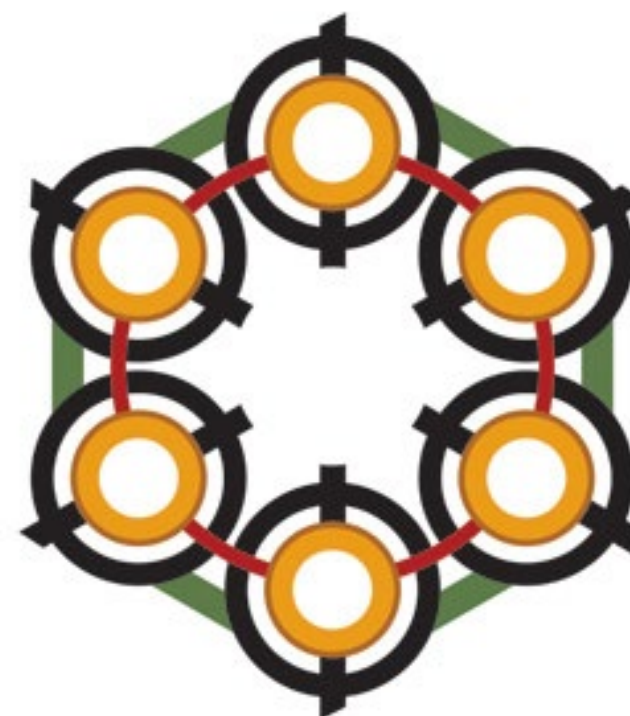
# CANTEST AND ITS ROLE IN GATHERING REAL-TIME DATA




CanTEST serves as the mechanism to unite community, chemists and peers – Helping to improve our understanding of NPS.



DRUG USER EXPERIENCE REPORTS  
ARE NOTHING NEW...





A man with dark hair and a nose ring, wearing a black lab coat with green accents and blue gloves, is seated at a desk in a laboratory. He is looking at a large computer monitor displaying a complex data table. His right hand is resting on a red object on the desk. In the background, there are several stacked grey storage bins with labels. A white paper with text is also visible on the desk.

HOWEVER, THE ABILITY  
TO VERIFY WITH  
ANALYTICAL TESTING IN  
PERSON IS A RARE  
OCCURANCE

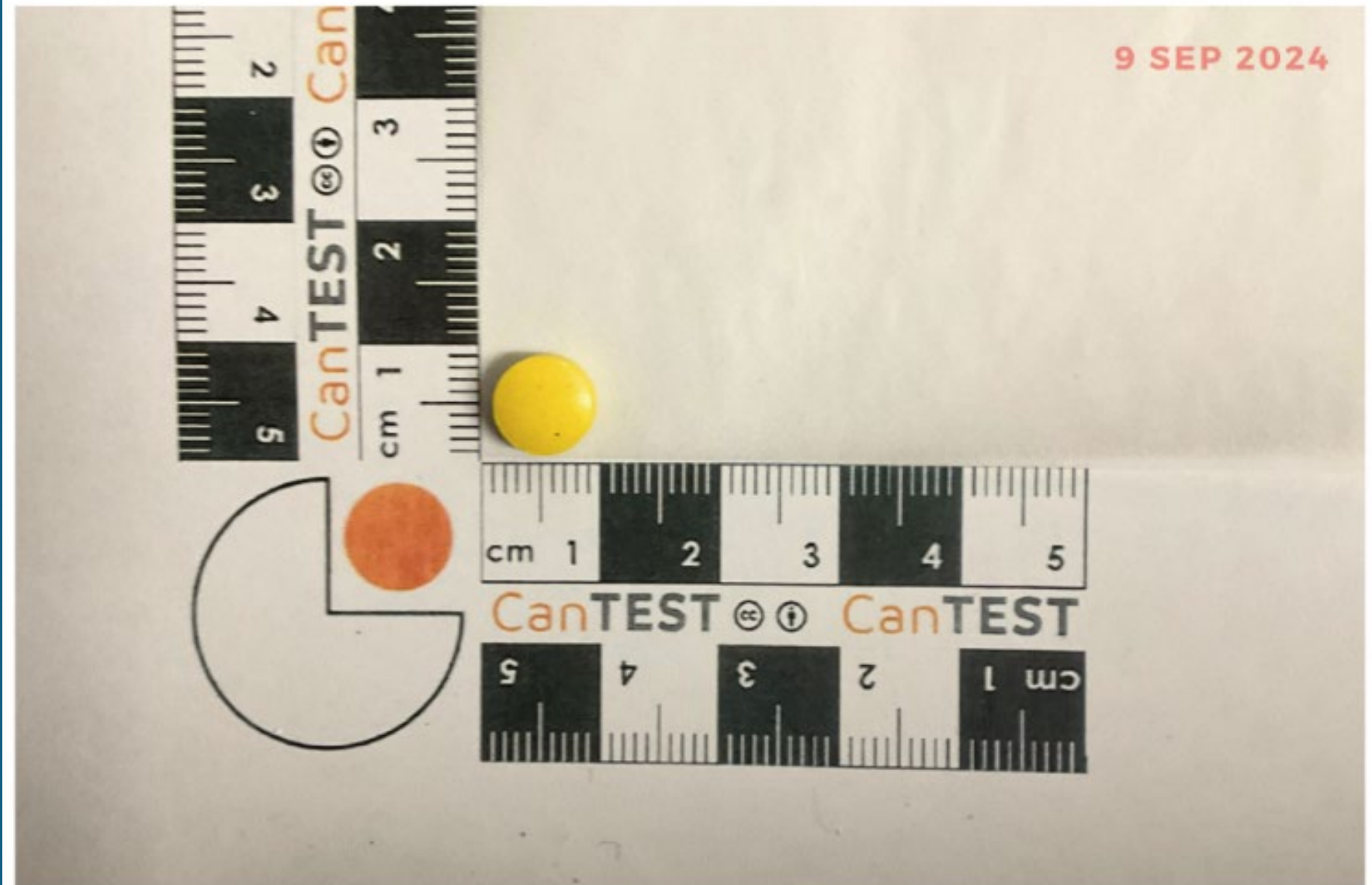


**CASE STUDY –**

**N-PYRROLIDINO  
ISOTONITAZENE  
DETECTION AT  
CANTEST**

**TO HARM  
REDUCTION  
RESOURCE**

# **N-PYRROLIDINO ISOTONITAZENE FOUND IN COUNTERFEIT OXYCODONE**

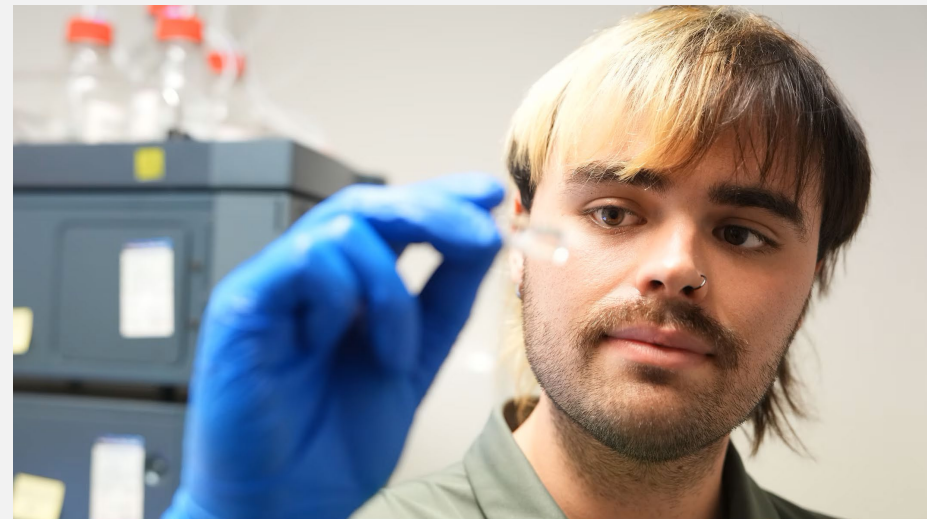


CANTEST COMMUNITY NOTICE CANTEST COMMUNITY NOTICE



## FROM USER REPORT TO DRUG RESOURCE @ CANTEST

CLIENT ENTERS AND IS GREETED BY HARM  
REDUCTION WORKER – FILLS OUT SURVEY  
AND HAS A YARN ABOUT THEIR DRUG/S



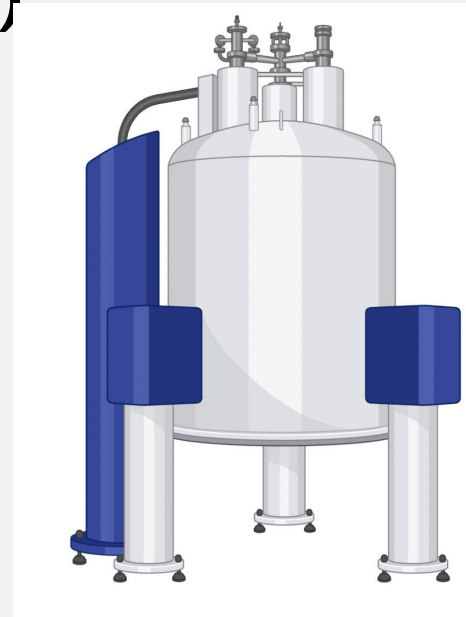
NITAZENE  
SAMPLE  
ANALYSED  
FTIR NO  
DETECTION. UPLC  
UNKNOWN PEAK.

INITIAL FINDINGS & HARM  
REDUCTION CHAT,  
EXPERIENCE REPORT OF  
CLIENT IS RECORDED



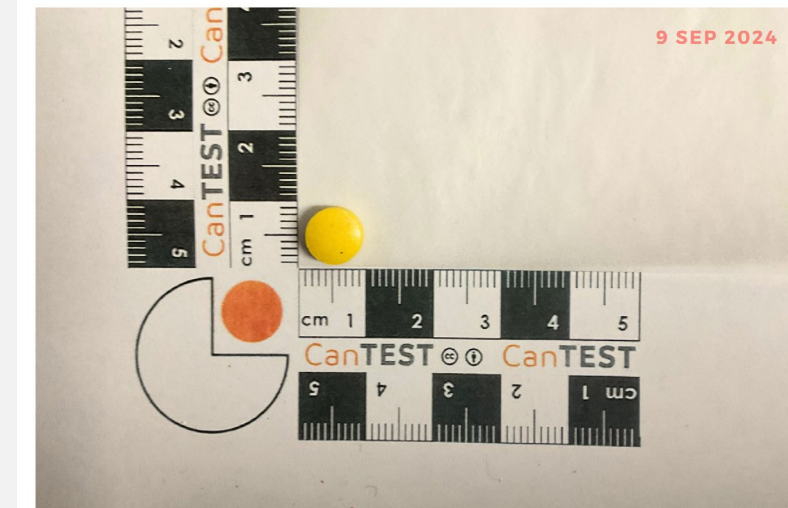
(CONTD)

**FURTHER  
CONFIRMATORY  
ANALYSIS AT ANU  
(NMR)**

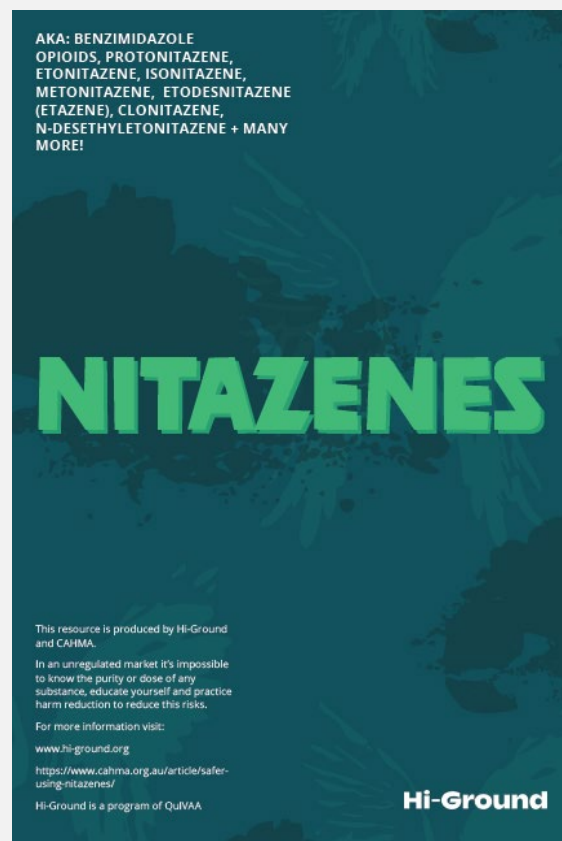


**RESULTS + GLOBAL DRUG  
CHECKING SIGNALS, USER  
EXPERIENCE AND MEDICAL  
EXPERTISE COMBINE TO  
CONSIDER ALERT**

**N-PYRROLIDINO  
ISOTONITAZENE FOUND IN  
COUNTERFEIT OXYCODONE**



**ALERT PUBLISHED**



**RESOURCE CREATED AND  
DISSEMINATED**

**NEED FOR ADDITIONAL  
HARM REDUCTION INFO  
IDENTIFIED**



# Safer Using – Nitazenes



Got a question ? Click here to ask.



About Nitazenes

# RESOURCES PRODUCED AND DISSEMINATED IN DIGITAL AND PHYSICAL FORMATS

# NITAZENES

This resource is produced by Hi-Ground and CAHMA.

In an unregulated market it's impossible to know the purity or dose of any substance, educate yourself and practice harm reduction to reduce this risks.

For more information visit:

[www.hi-ground.org](http://www.hi-ground.org)

<https://www.cahma.org.au/article/safer-using-nitazenes/>

Hi-Ground is a program of QuIVAA

Hi-Ground

# FROM PRESENTATION TO CONFIRMATORY ANALYSIS IN 48 HOURS.

Nitazenes, also known as benzimidazole opioids, are a highly potent class of synthetic opioids which vary widely in potency. Some nitazenes, including protonitazene and etonitazene, are more potent than fentanyl and thus pose a very high risk of overdose. Nitazenes were first synthesised in the late 1950s but never reached the market as medicines. Since the early 2010s, synthetic opioids have flooded the drug market in the United States and have significantly contributed to opioid-related overdoses and deaths. Beginning in 2019, nitazenes have been detected in forensic laboratories across the United States, Canada, Europe and Australia.

**ADMINISTRATION**

Most commonly swallowed but can also be shelved (rectal), snorted or injected (IV or IM liquids).

**DURATION OF EFFECTS**

Duration and Half Life is dependent on the type of nitazene and differentiate between onset, peak and total durations. Research the specific one you are taking. The duration of effects may also differ depending on the routes of administration.

Even though the apparent effects of the drug may have worn off, nitazenes can stay active for a long period of time (up to a couple of days) depending on what type. Do your research and remember this if taking other drugs!

**EFFECTS**

The effects of nitazenes are similar to other opioids, but they can be anywhere from 2 to 1000 times more potent than morphine. The effects of nitazenes vary from person to person but can include

**MOST COMMON EFFECTS**

Pain Relief, Euphoria, Feeling of wellbeing, Contentment, Decreased heart rate, Decreased blood pressure, Warm sensations in extremities, Lethargy, Drowsiness, Constipation, Relief of anxiety, A 'rush' of warmth, Confusion, Constricted ("pinpoint") pupils, Slowed breathing

**LESS COMMON EFFECTS**

Unconsciousness, Vomiting, Nausea, Sensitivity to light, Respiratory depression / failure, Muscle spasms, Death

**RARE COMMON EFFECTS**

Risk of coma, Bluish fingers, toes, lips, Brain damage due to respiratory depression

**POSSIBLE LONG-TERM EFFECTS**

These effects are possible with extended use: Poor dental health with gum swelling and damaged teeth, Severe constipation, Malnutrition, Dependency and risk of acute withdrawal symptoms, Weakened immune system, Insomnia

**DRUG CHECKING**

Even with specialised chemistry equipment, detecting nitazenes in drug samples can be difficult since they are often present in extremely small amounts (e.g., a few milligrams). Unfortunately, fentanyl test strips are unable to detect nitazenes.

Nitazene overdoses in Australia have been linked to counterfeit pharmaceutical pills such as Xanax, Kalmia pills and Oxycodone. They have also shown up in samples of heroin and ketamine.

**SAFER DOSING**

The active dose depends on the exact nitazene being ingested which is extremely difficult to verify. The relative potency of nitazenes compared to morphine is roughly as follows: Etonitazene > isonitazene > protonitazene > metonitazene > etodesnitazene (etazene) > clonitazene > morphine. The strength of the dose also depends on the route of administration, with intravenous, intramuscular, and subcutaneous injection being more potent than oral administration.

**SAFER USING**

- Use around friends/people you trust and in a safe environment - somewhere you feel comfortable
- Wait at least 30mins after eating before taking.
- Each nitazene is different, and strength can vary greatly so start with a small dose.
- When prescribed by a doctor, medications come with dosage instructions.
- Carry naloxone.** Depending on your state you can either buy naloxone over the counter in a pharmacy with/without a prescription. QuIVAA's NSP service also offer free naloxone training and then you receive a free take home one with you.
- If you're taking the drug orally, use as per recommended packaging if available, otherwise start with a very small amount.

**SAFER INJECTING**

Use around friends/people you trust and in a safe environment - somewhere you feel comfortable

- Injecting nitazenes may pose a greater risk of overdose as the lethal dose may be many times smaller than when ingested orally
- Avoid Blood Borne Viruses by using new & sterile syringes & equipment.
- Use sterile water to mix up.
- Wash your hands thoroughly before and after, you can also use an alcohol swab to clean your fingertips.
- Alcohol wipes can reduce the risk of skin infections if they are used correctly. For maximum effect, swab once, in one direction on the injection site, and leave to dry naturally.
- Dispose of syringes & equipment responsibly in a yellow disposal bin, all NSPs have bins available.

## Nitazene Dosing

The active dose depends on the exact nitazene being ingested which is extremely difficult to verify.<sup>1</sup> The relative potency of nitazenes compared to morphine is roughly as follows:<sup>1</sup>

Etonitazene > isonitazene > protonitazene > metonitazene > etodesnitazene (etazene) > clonitazene > morphine

5-10 milligrams of oral clonitazene is considered a moderate dose, whereas only 0.25 milligrams of oral etonitazene is sufficient to produce effects.<sup>1,10</sup> The strength of the dose also depends on the route of administration, with intravenous, intramuscular, and subcutaneous injection being more potent than oral administration.<sup>1</sup>

## Nitazene Effects

The effects of nitazenes are similar to other opioids, but they can be anywhere from 2 to 1000 times more potent than morphine.<sup>1</sup> The effects of nitazenes can include:<sup>1</sup>

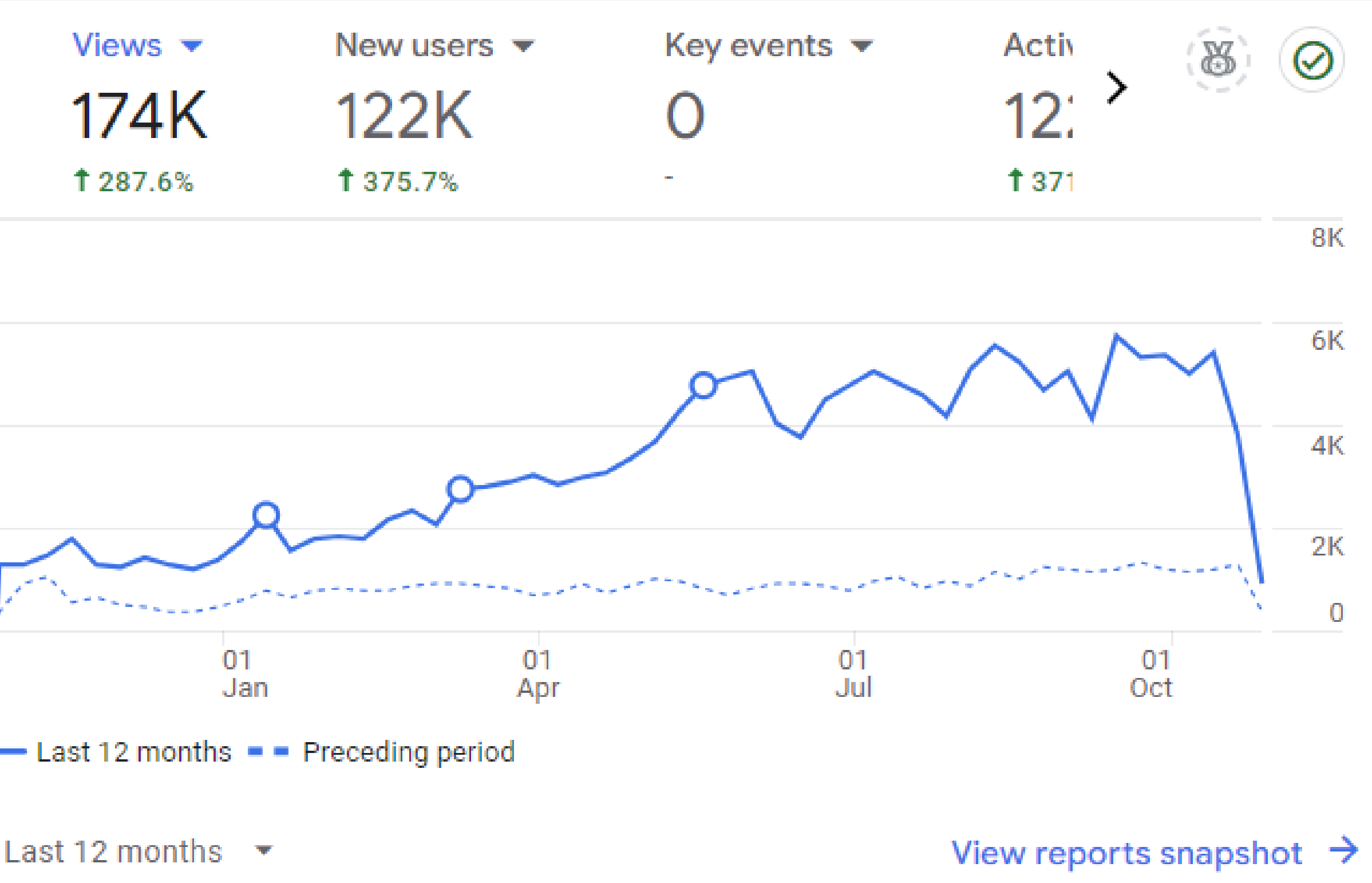
- Pain relief.
- Euphoria.
- Fatigue and sedation.
- Sleepiness and drowsiness.
- Nausea and vomiting.
- Dizziness.
- Confusion.
- Slowed breathing.

The effects of clonitazene typically last 4 or more hours when taken orally.<sup>1,10</sup> The duration of effects may differ for other nitazenes and other routes of administration.

OUR RESOURCES  
INCLUDE TOPICS THAT  
ARE OFTEN AVOIDED DUE  
TO STIGMA OR LEGAL /  
RISK CONCERNS



# 170k VIEWS OF CAHMA'S SAFER USING GUIDES IN 12 MONTHS



# IN CONCLUSION

## IMPACT OF REAL TIME INFORMATION ON NPS HARM REDUCTION RESOURCES

ChemRxiv<sup>®</sup>

[How To Submit](#) [Browse](#) [About](#) [News](#) [🔗](#)

### Analytical Chemistry

## Identification of the novel synthetic opioid N-pyrrolidino isotonitazene at an Australian drug checking service.

23 October 2024, Version 1

Working Paper

[Blake Curtis](#) <sup>id</sup>, [Douglas Lawes](#), [David Caldicott](#), [Malcolm D. McLeod](#) <sup>id</sup>

[Show author details](#) [▼](#)



This content is a preprint and has not undergone peer review at the time of posting.

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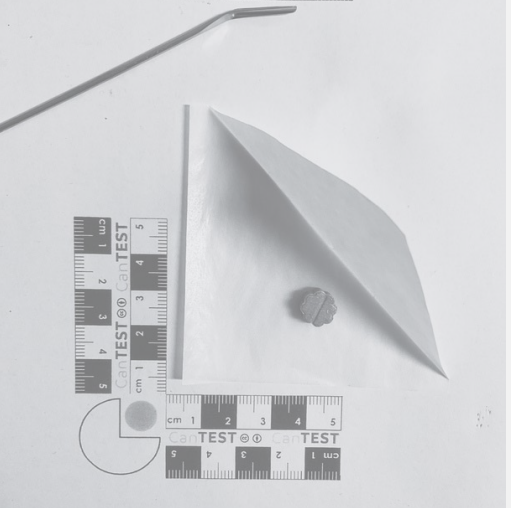
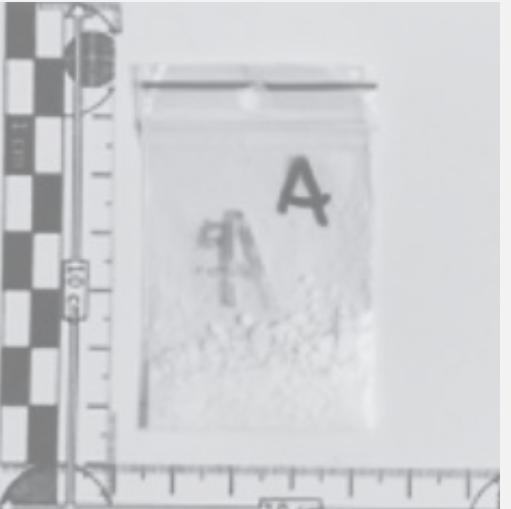
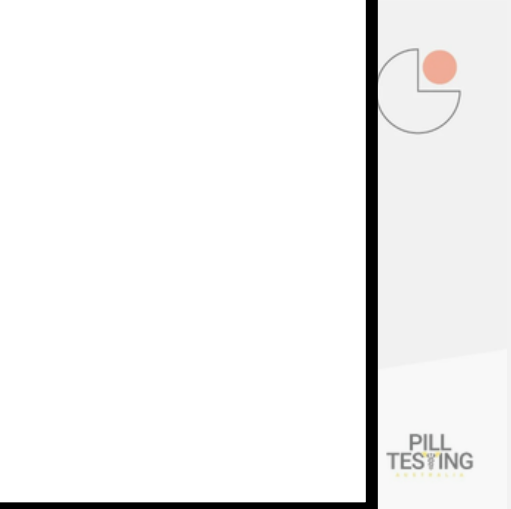
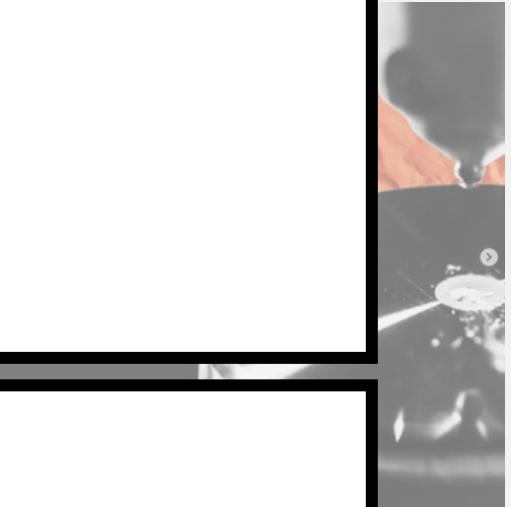
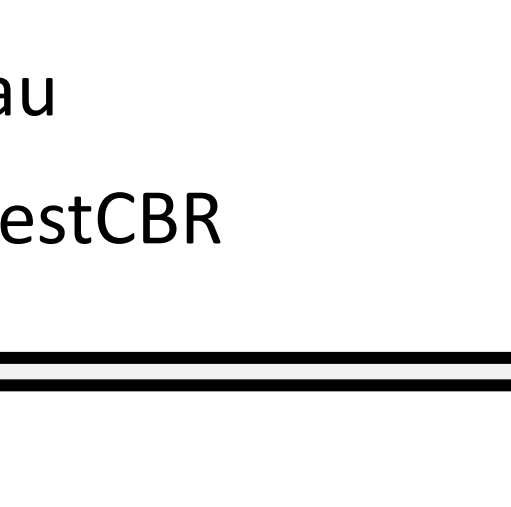
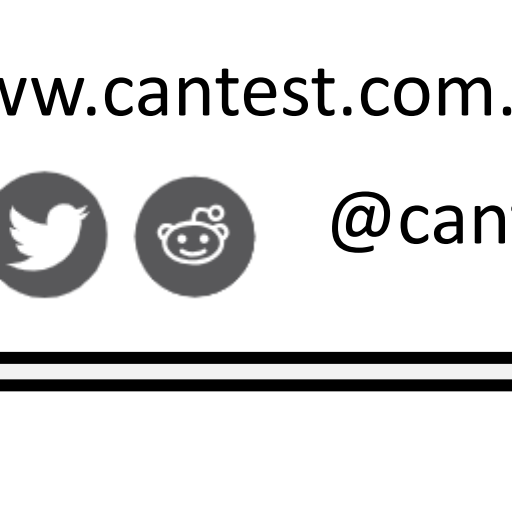
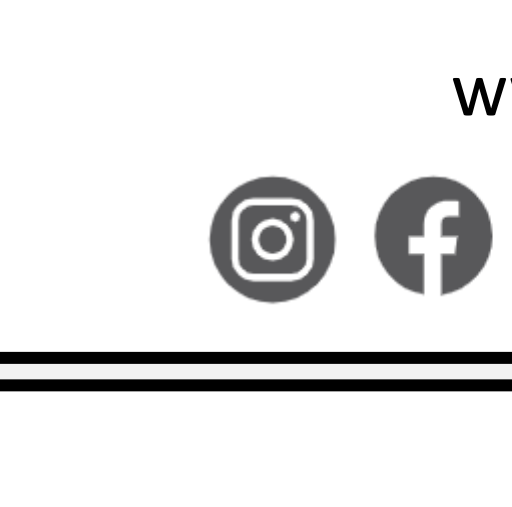
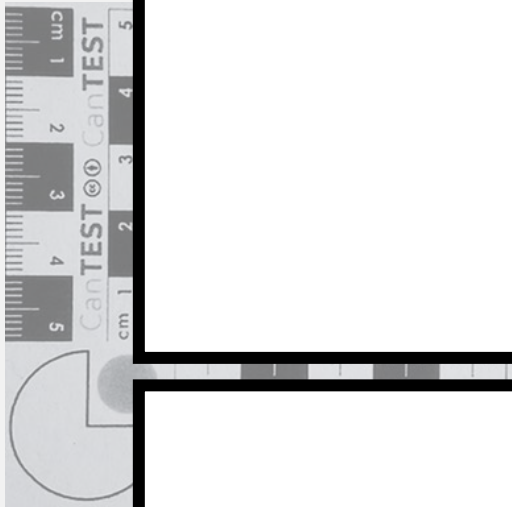
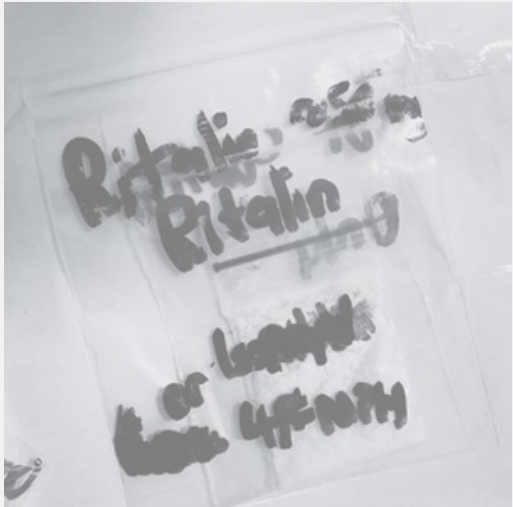
[Cite](#)

[Comment](#)

### Abstract

2-Benzylbenzimidazole opioids and related derivatives, also known as 'nitazenes', present a growing threat to public health. Emerging in Europe in 2019, the nitazene group of drugs is a recent addition to the novel synthetic opioid class and has been associated internationally with adverse effects in drug users, overdose clusters and significant mortality. The high potency of many nitazene derivatives, which can in many cases exceed that of fentanyl, poses a significant challenge to the public health and early warning systems used to detect and respond





# The End

[www.cantest.com.au](http://www.cantest.com.au)

    @cantestCBR

# Acknowledgements



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