Vancouver Island Drug Checking Project

Preliminary Results for May 2022

The Vancouver Island Drug Checking Project delivers drug checking services in Victoria, BC. Our service has been operating in partnership with SOLID Outreach, AVI Health and Community Services, Port Alberni Shelter Society, Lantern Services, Dr. Chris Gill and the team at Vancouver Island University, and the Island Health Authority. This free and confidential service provides information on composition of substances and harm reduction information.

Highlighted findings:

- Carfentanil was found in six expected opioid-down samples, with a maximum concentration of 0.58%
- 97% of expected opioid-down samples contained fentanyl
- The median fentanyl concentration found was 11.8%, with a maximum of over 80%
- Benzodiazepines and/or etizolam were found in 48.8% of expected opioid-down samples
- The maximum concentration of etizolam found was >25%, in an expected opioid-down sample
- We can now quantify additional benzodiazepines including adinazolam, bromazolam, flubromazepam, and meclonazepam

505

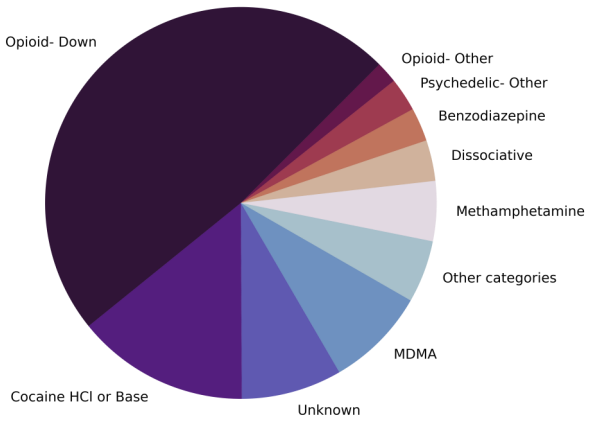
Samples Tested
1 - 31 May 2022

Read our blog for further interpretations of our May data.

What were people bringing to be tested?

Service users bring us a wide variety of substances that can be grouped into different drug classes. The table below aggregates the total number of samples we tested by their "expected" substance (i.e. the drug category reported by the service user). These data are visually represented in the pie chart below and are separated by collection location/ method on the following page.

Expected substance	Number of Samples
Opioid Down (fentanyl and/or heroin)	244
Cocaine (HCl or Base)	72
Psychedelic (MDMA, MDA, LSD, 2C-B)	56
Methamphetamine	25
Dissociative (ketamine)	17
Benzodiazepine (alprazolam, diazepam, etizolam)	14
Other Opioids (Dilaudid, oxycodone)	9
Other (GHB, cannabinoids, "research chemicals")	26
Unknown/Missing	42

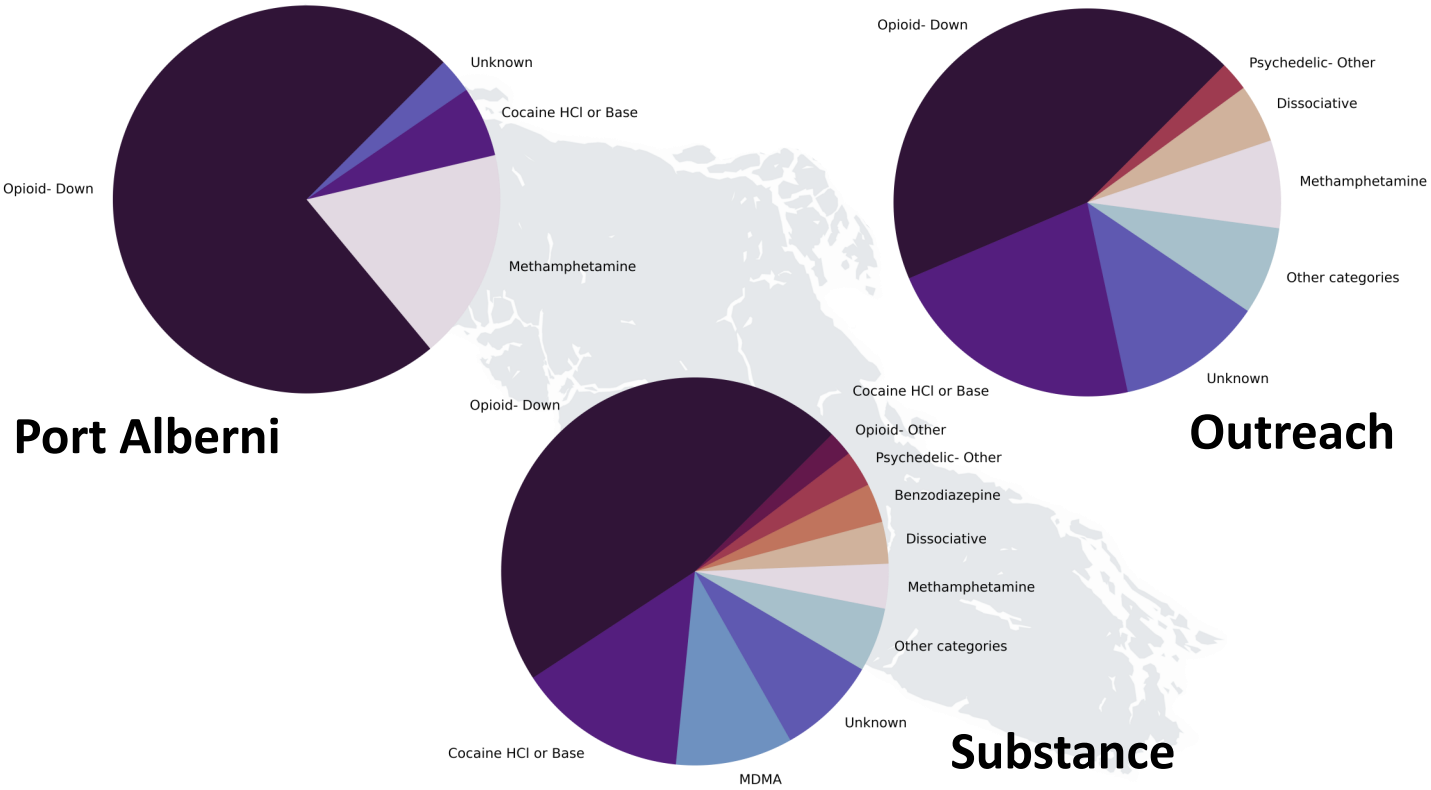


Vancouver Island Drug Checking Project

Preliminary Results for May 2022

What were people bringing to be tested by service model?

The “expected substance” data presented on the front page of this document can be separated by sample collection location/method, where “Substance” samples are those brought directly to our Victoria storefront, “Port Alberni” are samples received at Port Alberni Shelter Society’s OPS, and “Outreach” samples are those collected at other supported housing sites, at overdose prevention and supervised consumption locations, through no contact drop-off envelopes, and via mail-in envelopes. These data are tabulated and visualized below.



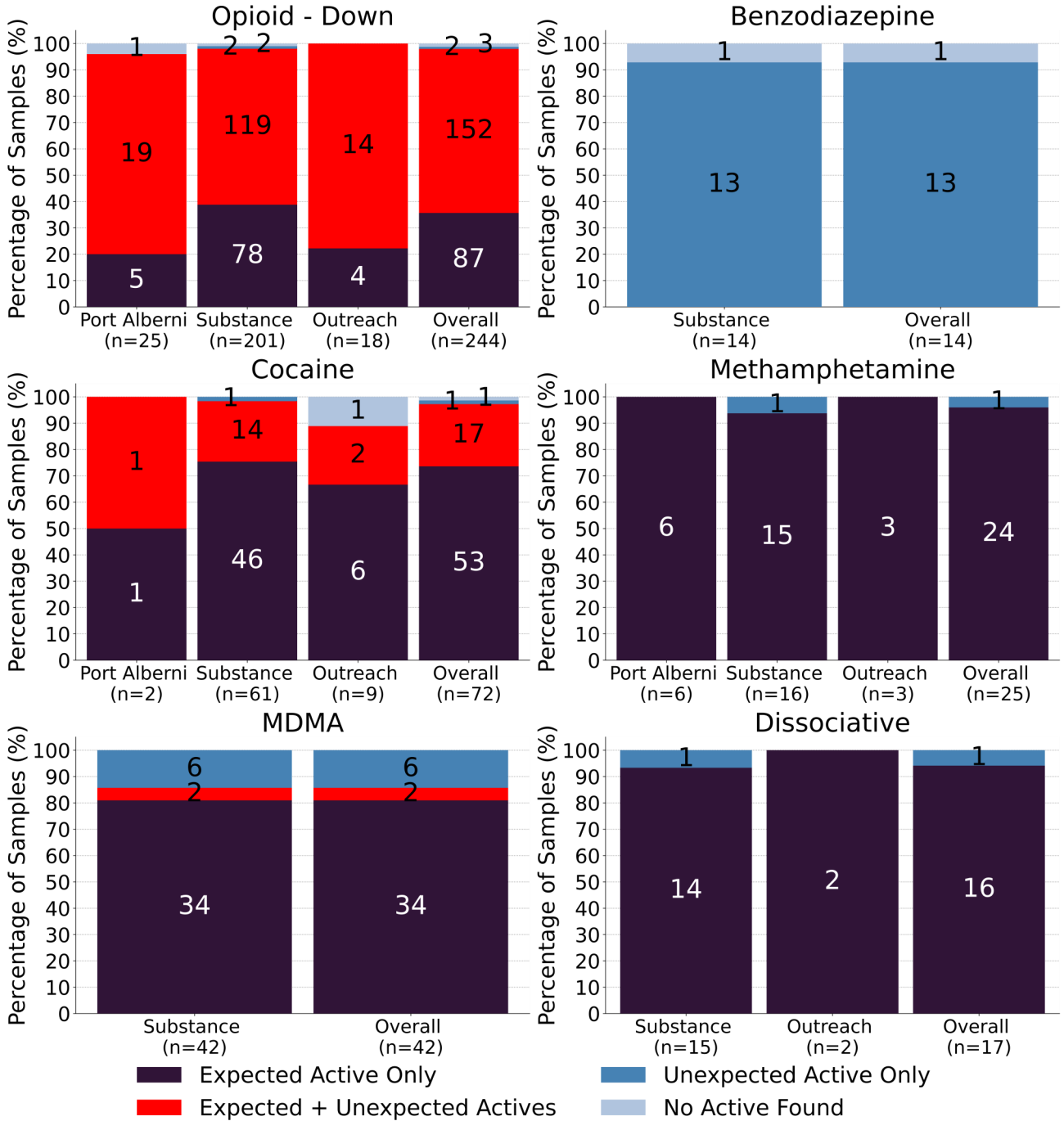
Expected substance	Port Alberni	Substance	Outreach	Overall
Opioid Down (fentanyl and/or heroin)	25	201	18	244
Cocaine (HCl or Base)	2	61	9	72
Psychedelic (MDMA, MDA, LSD, 2C-B)		55	1	56
Methamphetamine	6	16	3	25
Dissociative (ketamine)		15	2	17
Benzodiazepine (alprazolam, diazepam, etizolam)		14		14
Other Opioid (Dilaudid, oxycodone)		9		9
Other (GHB, cannabinoids, “research chemicals”)		23	3	26
Unknown/Missing	1	36	5	42
Total samples checked	34	430	41	505

Vancouver Island Drug Checking Project

Preliminary Results for May 2022

What did we find?

We tested each sample to determine what active ingredients, adulterants, and cutting agents were present. The majority of samples contained the expected active drug. However, we also detected a number of other notable components that may cause unexpected effects. The figures below illustrate the percentages and numbers of samples tested in each drug category, separated by collection location/method, color coded by their composition. **Dark Purple** regions group samples that were simply as expected with no other notable compounds detected, **Red** shows samples that contained the expected drug *and* were contaminated with an unexpected active, **Dark Blue** groups samples that only contained an unexpected active (the expected drug was not found), and **Light Blue** displays samples where no active compounds were detected.



Vancouver Island Drug Checking Project

Preliminary Results for May 2022

What did we find?

Expanding on the figures shown on the previous page, for each drug category and collection location/model, we list the number of samples that contained the expected active and/or other notable components.

Opioid Down	Port Alberni	Substance	Outreach
Expected Active Only	***5***	***78***	***4***
Fentanyl	5	78	4
Expected* + Unexpected Active(s)	***19***	***119***	***14***
Fentanyl*	19	118	13
Heroin*		2	1
Acetylcodeine		1	1
Acetylfentanyl		2	
Acetylmorphine		1	1
Alprazolam	1		
Benzocaine		2	
Benzodiazepine (undifferentiated)[2]	6	18	1
Bromazolam	1	17	1
Carfentanil	4	1	1
Etizolam	5	26	2
Flualprazolam	6	9	6
Flubromazepam	2	19	2
Flubromazolam		1	
Fluorofentanyl	2	33	2
Furanyl UF-17		1	
Lidocaine		7	3
Lorazepam		2	
Methamphetamine	2	1	
Noscapine		2	
Oxycodone		1	
Phenacetin		1	1
Xylazine	1	18	3
Unexpected Active(s) Only		***2***	
Flubromazepam		1	
THC		1	

Psychedelics	Substance	Outreach
Expected Active Only	***38***	***1***
2C-B	2	
LSD	1	1
MDA	1	
MDMA	33	
Psilocin	1	
Salvia		
Expected + Unexpected Active(s)	***5***	
2C-B	3	
Cocaine HCl	1	
Ketamine	3	
MDA	2	
MDMA	5	
Phenacetin	3	
Unexpected Active(s) Only	***6***	
Ketamine	1	
MDA	4	
MDMA	1	

Dissociatives	Substance	Outreach
Expected Active Only	***14***	***2***
3-HO-PCP		1
Ketamine	14	1
Unexpected Active(s) Only	***1***	
MDMA	1	

*Data are preliminary. There were missing data for some samples. Instruments may not be able to detect all ingredients and certainty of interpretations may vary. Multiple substances may be present in one sample and substances may be present in trace concentrations. *Expected active component. [1]May be due to limitations of technology to detect certain substances. [2]Benzodiazepine (undifferentiated) results are based on a positive benzo strip test and are unconfirmed by paper spray.*

Vancouver Island Drug Checking Project

Preliminary Results for May 2022

Cocaine (HCl or Base)	Port Alberni	Substance	Outreach
Expected Active Only	***1***	***46***	***6***
Cocaine Base		4	2
Cocaine HCl	1	43	4
Expected* + Unexpected Active(s)	***1***	***14***	***2***
Cocaine Base*	1	4	1
Cocaine HCl*		10	1
Benzocaine		1	
Fentanyl	1		1
Levamisole		7	
MDMA		1	
Phenacetin		5	1
Unexpected Active(s) Only		***1***	
MDA		1	

Methamphetamine	Port Alberni	Substance	Outreach
Expected Active Only	***6***	***15***	***3***
Methamphetamine	6	15	3
Unexpected Active(s) Only		***1***	
Ketamine		1	

Benzodiazepines	Substance
Unexpected Active(s) Only	***13***
Etizolam	6
Flubromazepam	1
Lidocaine	1
Lorazepam	6

Opioid Other	Substance
Expected Active Only	***9***
Hydromorphone	5
Morphine	5
Oxycodone	4

Other	Substance	Outreach
Expected Active Only	***14***	***1***
3-MMC	1	
5-MAPB		1
Cannabidiol	1	
Gabapentin	1	
GHB	6	
THC	5	
Unexpected Active(s) Only	***3***	
Methamphetamine	2	
Zopiclone	1	

Unknown/Missing	Substance	Outreach
Unexpected Active(s) Only	***29***	***1***
Acetaminophen	1	
Amphetamine	2	
Benzodiazepine (undifferentiated)[2]	1	
Bromazolam	1	
Cocaine Base	2	
Cocaine HCl	6	1
Fentanyl	9	
Flualprazolam	1	
Flubromazepam	2	
Hydromorphone	1	
Ketamine	3	
MDA	1	
MDMA	1	
Levamisole	1	
Lorazepam	1	
Xylazine	1	

*Data are preliminary. There were missing data for some samples. Instruments may not be able to detect all ingredients and certainty of interpretations may vary. Multiple substances may be present in one sample and substances may be present in trace concentrations. *Expected active component. [1]May be due to limitations of technology to detect certain substances. [2]Benzodiazepine (undifferentiated) results are based on a positive benzo strip test and are unconfirmed by paper spray.*

Vancouver Island Drug Checking Project

Preliminary Results for May 2022

Quantification

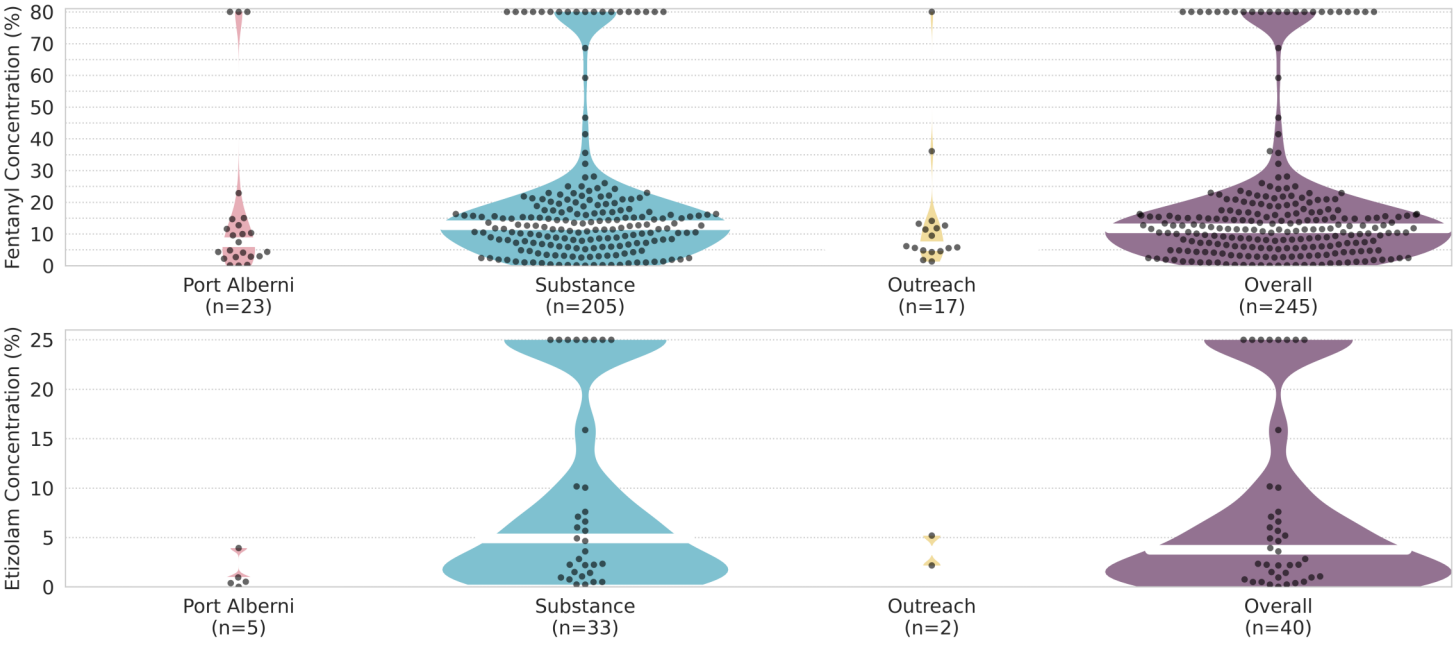
Using paper spray mass spectrometry (PS-MS) data, we were able to quantify low concentration compounds. These aggregate values are inclusive to all expected drug categories in which the active drugs are found. Weight percentage is reported below.

Substance	# Quant.	Median	Min	Max
Fentanyl	245	11.8%	0.1%	>80%*
Etizolam	40	3.8%	0.1%	>25%*
Fluorofentanyl	37	1.3%	0.1%	74.0%
Flubromazepam	27	2.3%	0.3%	47.8%
Xylazine	23	0.3%	0.1%	25.9%
Flualprazolam	22	0.6%	0.1%	3.8%
Bromazolam	20	1.6%	0.2%	21.7%
Carfentanil	6	0.22%	0.09%	0.58%
Heroin	3	>80%*	>80%*	>80%*

**There is a maximum concentration limit that the PS-MS can quantify for each compound of interest. If a sample contains a higher percentage of a compound than the PS-MS's limits, then only the upper limit will be reported. For example, the upper limit of reporting for etizolam on the PS-MS is 25% - any sample containing more than 25% etizolam will be flagged as ">25%".*

Distribution of Fentanyl and Etizolam Concentrations

The concentrations of fentanyl and etizolam for every sample quantified, separated by collection location/model, are illustrated below to highlight the variability in the unregulated drug market. **Black Dots** are individual samples, **White Lines** mark the median concentration of the fentanyl/etizolam positive samples checked, and the **width** of the colored regions is proportional to the number of samples in a concentration range.



Vancouver Island Drug Checking Project

Preliminary Results for May 2022

The Vancouver Island Drug Checking Project is based out of the University of Victoria and operates community-wide drug checking services within Victoria, BC. We are continuing to offer drug checking services in response to the dual public health emergencies, and exploring new ways to better reach those who may benefit from this service. We have partnered with Dr. Chris Gill and the team at Vancouver Island University to improve detection and reporting using their methods for the paper spray - mass spectrometer.

See the blog portion of our website to view our more detailed interpretations of our reports.

Our project respectfully acknowledges that we work as visitors on the traditional territory of the Lkwungen (Songhees), Wyomilth (Esquimalt), and WSÁNEĆ (Saanich) peoples of the Coast Salish Nation. We also acknowledge the inextricable links between research, colonization and racism against Indigenous peoples, which continue to this day. Ending the violence faced by people who use substances and the overdose crisis cannot be achieved without facing the legacy through which we have come to be in this territory.

For more information please visit: substance.uvic.ca

We gratefully acknowledge our partners and funders on this project

Our Partners

- Agilent Technologies
- AVI Health and Community Services
- BC Ministry of Health
- BC Ministry of Mental Health and Addictions
- BC Support Vancouver Island Centre
- Canadian Institute for Substance Use Research
- Compute Canada
- IBM Canada
- Island Health Authority
- Lantern Services
- PerkinElmer Inc
- ProSpect Scientific
- SOLID Outreach
- STS Pharmacy
- University of Victoria
- Vancouver Island University
- Westgrid

Our Funders

- Health Canada Substance Use and Addictions Program
- Natural Sciences and Engineering Research Council
- Vancouver Foundation
- Canadian Institutes of Health Research
- Michael Smith Foundation for Health Research

Vancouver Island Drug Checking Project: Preliminary Results for May 2022. Victoria, BC: Vancouver Island Drug Checking Project; 2022.