

Vancouver Island Drug Checking Project

Preliminary Results for March 2023

The Vancouver Island Drug Checking Project delivers drug checking services in Campbell River, the Comox Valley, Duncan, Port Alberni, and Victoria, BC. Our service has been operating in partnership with SOLID Outreach, AVI Health and Community Services, Port Alberni Shelter Society, Vancouver Island Mental Health Society, Duncan Lookout Housing and Health Society, 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:

- The median fentanyl concentration found, across all expected drug categories, was 9.6% with a maximum of over 80%
- Carfentanil was found in 3 expected opioid-down samples at concentrations 0.21%, 0.23%, and 0.40%
- Benzodiazepines and/or etizolam were found in 43% (201/468) of expected opioid-down samples
- Bromazolam, the most common benzodiazepine found across all drug categories, was found in 163 samples with a median concentration of 1.9% and maximum concentration greater than 80%
- Xylazine was found in 12 samples (9 expected opioid-down, 2 expected cocaine, and 1 expected caffeine) with a median concentration of 1.6% and a maximum concentration of 5.1%

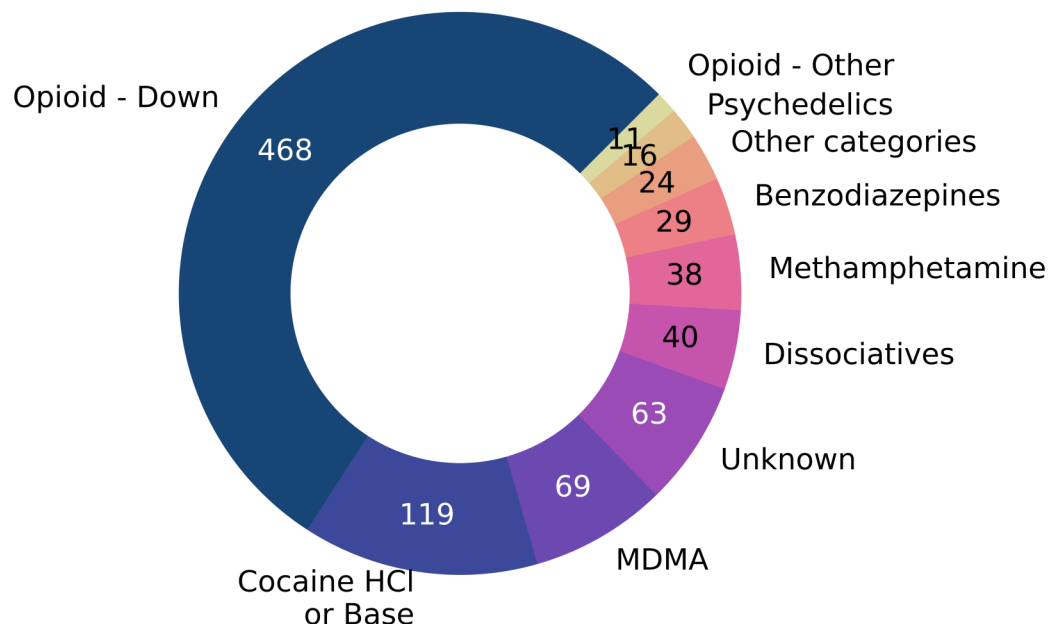
877

Samples Tested
1 - 31 March
2023

[Read our blog](#) for further interpretations of our March 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. This pie chart aggregates the total number of samples we tested by their “expected” substance (i.e. the drug category reported by the service user), with the number of samples checked included inside each slice. These data are separated by collection location/method on the following page.

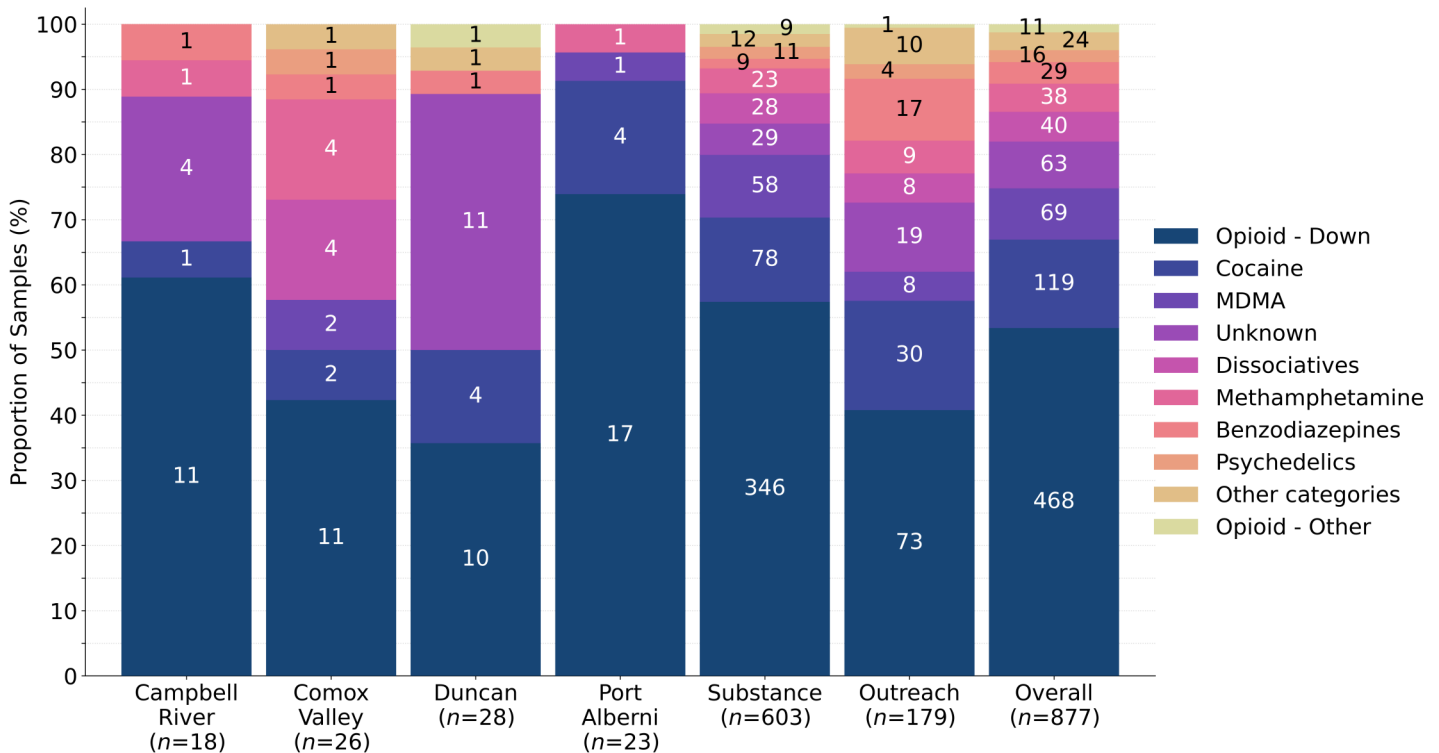


Vancouver Island Drug Checking Project

Preliminary Results for March 2023

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, “Campbell River”, “Comox Valley”, “Duncan”, and “Port Alberni” are samples received through our distributed drug checking model, and “Outreach” samples are those collected at supported housing sites, at overdose prevention and supervised consumption locations, and through no contact drop-off envelopes.



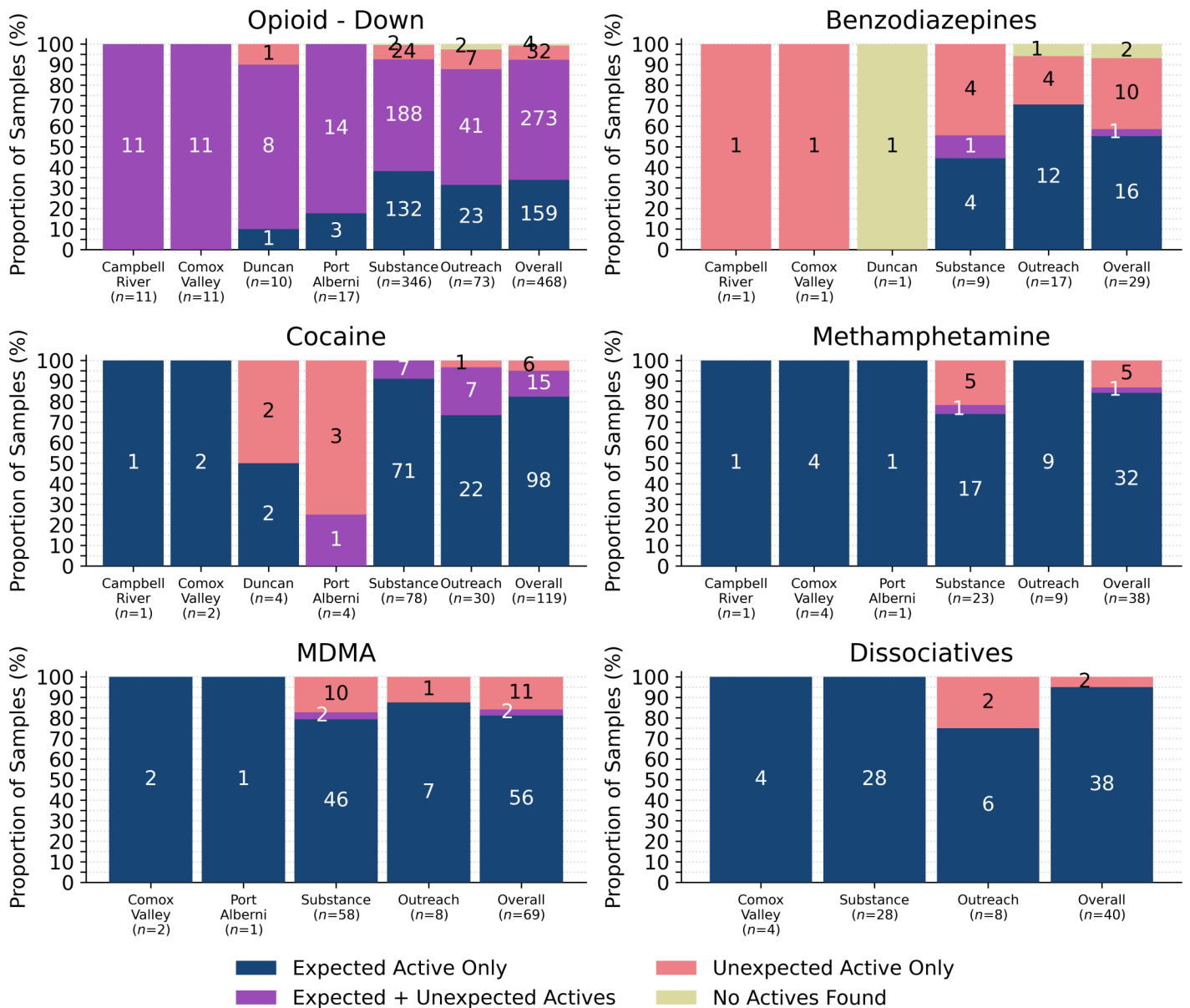
Expected substance	Campbell River	Comox Valley	Duncan	Port Alberni	Substance	Outreach	Overall
Opioid Down (fentanyl and/or heroin)	11	11	10	17	346	73	468
Cocaine (HCl or Base)	1	2	4	4	78	30	119
MDMA	0	2	0	1	58	8	69
Dissociative (ketamine)	0	4	0	0	28	8	40
Methamphetamine	1	4	0	1	23	9	38
Benzodiazepine	1	0	1	0	9	17	29
Psychedelic (2C-B, DMT, LSD)	0	1	0	0	11	4	16
Other Opioids (Dilaudid, oxycodone)	0	1	1	0	9	1	11
Other (cannabis, GHB, steroids, etc.)	0	1	1	0	12	10	24
Unknown/Missing	4	0	11	0	29	19	63
Total samples checked	18	26	28	23	603	179	877

Vancouver Island Drug Checking Project

Preliminary Results for March 2023

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 Blue** regions group samples that were simply as expected with no other notable compounds detected, **Magenta** bars show samples that contained the expected drug *and* were contaminated with an unexpected active, **Salmon** groups samples that only contained an ununexpected active (the expected drug was not found), and **Lime** displays samples where no active compounds were detected.



Vancouver Island Drug Checking Project

Preliminary Results for March 2023

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. Samples where no detected actives have been excluded for brevity.

Opioid Down	Campbell River	Comox Valley	Duncan	Port Alberni	Substance	Outreach
Expected Active Only			1	3	132	23
Fentanyl			1	3	132	23
Expected* + Unexpected Active(s)	11	11	8	14	188	41
Fentanyl*	11	11	8	14	188	40
Heroin*						2
5F-ADB		1		5		
Acetylcodeine						2
Acetylfentanyl				1		
Acetylmorphine	1					3
Benzodiazepine (undifferentiated) ¹	2	6	2	8	9	2
Bromazepam					2	
Bromazolam	4	5	5	4	100	21
Carfentanil	2		1			
Etizolam	1			1	3	3
Flualprazolam					9	3
Flubromazolam					1	
Fluorofentanyl	8	3	4	3	120	25
Furanyl UF-17				1		
Lidocaine						2
Methamphetamine	1	2			2	1
Metonitazene				1		
Phenacetin		1				
Xylazine				1	3	5

Expected Opioid - Down data continued on next page

*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 com-*

Vancouver Island Drug Checking Project

Preliminary Results for March 2023

Opioid Down (continued)	Duncan	Substance	Outreach
Unexpected Active(s) Only	1	24	7
Benzodiazepine (undifferentiated) ¹		1	2
Bromazolam	1	8	1
Cocaine HCl			1
Fluorofentanyl	1	23	5
Methamphetamine	1		

Cocaine (HCl or Base)	Campbell River	Comox Valley	Duncan	Port Alberni	Substance	Outreach
Expected Active Only	1	2	2		71	22
Cocaine Base	1	1	1		12	8
Cocaine HCl		1	1		59	14
Expected* + Unexpected Active(s)				1	7	7
Cocaine Base*				1	2	6
Cocaine HCl*					5	1
Acetaminophen					1	
Benzocaine					2	1
Bromazolam				1		
Fentanyl				1		1
Levamisole					4	5
Unexpected Active(s) Only			2	3		1
Acetylfentanyl			1			
Bromazolam			1	3		
Fentanyl			1	3		1
Fluorofentanyl						1
Methamphetamine			1			
Xylazine				2		

Dissociatives	Comox Valley	Substance	Outreach
Expected Active Only	4	28	6
Ketamine	4	28	6
Unexpected Active(s) Only			2
Fluorodeschloroketamine			1
Methamphetamine			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. ¹Benzodiazepine (undifferentiated) results are based on a positive benzo strip test and are unconfirmed by paper spray.

Vancouver Island Drug Checking Project

Preliminary Results for March 2023

Methamphetamine	Campbell River	Comox Valley	Port Alberni	Substance	Outreach
Expected Active Only				17	9
Methamphetamine	1	4	1	17	9
Expected* + Unexpected Active(s)				1	
Methamphetamine* + Fentanyl				1	
Unexpected Active(s) Only				5	
Ketamine				3	
MDA				1	
MDMA				1	

Benzodiazepines	Campbell River	Comox Valley	Substance	Outreach
Expected Active Only			4	12
3-Hydroxyphenazepam				1
Alprazolam (Xanax)				2
Bromazolam				6
Clonazepam			1	1
Etizolam				1
Flualprazolam			2	
Lorazepam (Ativan)			1	
Pyrazolam				1
Expected* + Unexpected Active(s)			1	
Alprazolam* + Etizolam			1	
Unexpected Active(s) Only			4	4
Alprazolam (Xanax)				1
Amphetamine			1	
Bromazolam			1	2
Fentanyl			1	
Flualprazolam			1	3

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. ¹Benzodiazepine (undifferentiated) results are based on a positive benzo strip test and are unconfirmed by paper spray.

Vancouver Island Drug Checking Project

Preliminary Results for March 2023

Psychedelics	Comox Valley	Substance	Outreach
Expected Active Only	1	9	4
2C-B		1	3
4-HO-DiPT			1
DMT	1	1	
LSD		7	
Unexpected Active(s) Only		1	
4-AcO-DMT (4-HO-MET expected)		1	

Opioid Other	Duncan	Substance	Outreach
Expected Active Only	1	4	1
Hydromorphone (Dilaudid)		1	1
Oxycodone		2	
Oxycodone + Acetaminophen	1	1	
Unexpected Active(s) Only		4	
Isotonitazene (Oxycodone + Acetaminophen was expected)		4	

Other	Comox Valley	Substance	Outreach
Expected Active Only	1	3	6
Amphetamine			4
Carisoprodol			1
GHB	1	1	
Ivermectin		1	
Oxandrolone		1	
Zolpidem (Ambien)			1
Expected* + Unexpected Active(s)		5	
GHB* + GBL		5	
Unexpected Active(s) Only		1	1
Benzodiazepine (undifferentiated) ¹			1
Bromazolam		1	
Cocaine HCl			1
Fentanyl		1	1
Fluorofentanyl		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. ¹Benzodiazepine (undifferentiated) results are based on a positive benzo strip test and are unconfirmed by paper spray.

Vancouver Island Drug Checking Project

Preliminary Results for March 2023

MDMA	Comox Valley	Port Alberni	Substance	Outreach
Expected Active Only	2	1	46	7
MDA			5	
MDMA	2	1	41	7
Expected* + Unexpected Active(s)			2	
MDMA* + MDA			2	
Unexpected Active(s) Only			10	1
MDA (MDMA expected)			6	1
MDMA (MDA expected)			1	
Ketamine			3	

Unknown/Missing	Campbell River	Duncan	Substance	Outreach
Unexpected Active(s) Only	3	9	16	12
4-MMC				1
Benzodiazepine (undifferentiated) ¹		1		
Bromazolam		2	4	
Clonazepam				1
Cocaine Base			1	
Cocaine HCl			3	
DMT				1
Fentanyl		7	5	2
Flubromazolam				1
Fluorofentanyl			1	
Hydromorphone (Dilaudid)		1	1	
Lorazepam (Ativan)	1			
MDMA			1	2
Metformin			2	
Methamphetamine		2	2	4
Morphine		1		
Oxycodone			1	
Sildenafil (Viagra)	1			
Tianeptine	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. ¹Benzodiazepine (undifferentiated) results are based on a positive benzo strip test and are unconfirmed by paper spray.

Vancouver Island Drug Checking Project

Preliminary Results for March 2023

Quantification

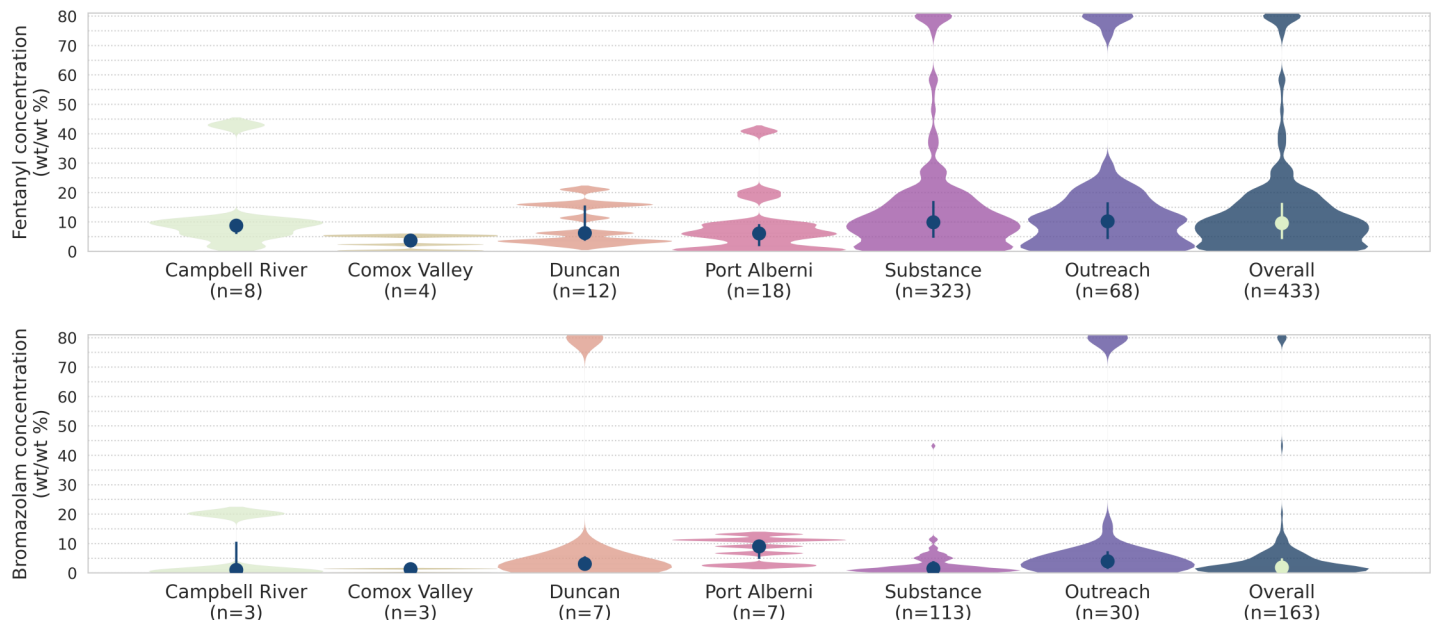
Using paper spray mass spectrometry (PS-MS) data, we were able to quantify low concentration compounds. These aggregate values are *inclusive to all expected drug categories* in which the active drugs are found. Weight percentage is reported below. “IQR” is the interquartile range: the concentration range that bounds half of the quantified samples.

Substance	# Quant.	Median	Min	Max	IQR
Fentanyl	433	9.6%	0.1%	>80%*	4.2% - 16.5%
Bromazolam	163	1.9%	0.1%	>80%*	0.8% - 5.0%
Fluorofentanyl	189	5.6%	0.2%	>80%*	0.9% - 15.0%
Flualprazolam	19	0.4	0.1%	>80%*	0.1% - 0.5%
Xylazine	12	1.6%	0.1%	5.1%	0.3% - 3.2%
Etizolam	10	4.8%	0.3%	>25%*	1.2% - 18.4%
Carfentanil	3	0.23%	0.21%	0.40%	-
Heroin	2	-	9.0%	>80%*	-
Isotonitazene	2	-	0.1%	1.0%	-

*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 Bromazolam Concentrations

The concentrations of fentanyl and bromazolam for every sample quantified, separated by collection location/model, are illustrated below to highlight the variability in the unregulated drug market. **Solid Dots** mark the median concentration of the fentanyl/bromazolam positive samples checked, **the “error bar”** bounds half of the quantified samples (IQR), and the **width** of the colored regions is proportional to the number of samples quantified at that concentration.



Vancouver Island Drug Checking Project

Preliminary Results for March 2023

The Vancouver Island Drug Checking Project is based out of the University of Victoria and operates community-wide drug checking services within Campbell River, the Comox Valley, Duncan, Port Alberni, and 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.

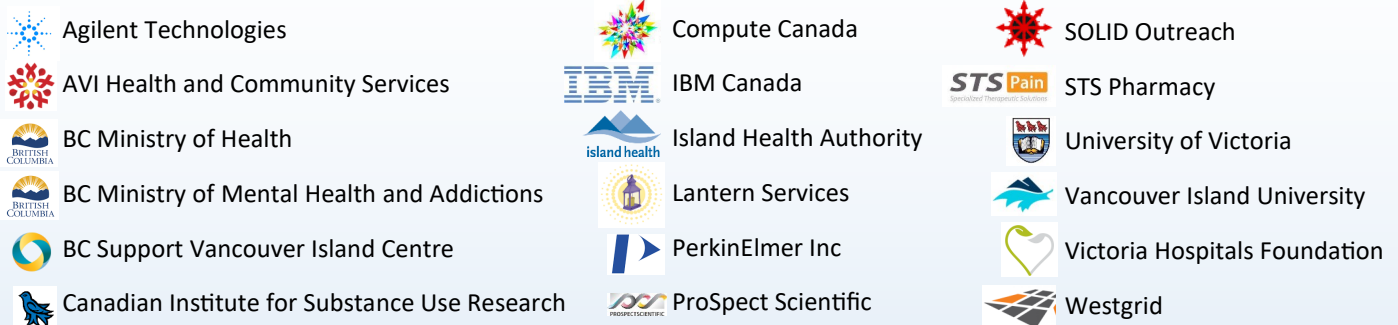
See the blog portion of our website to view our more detailed interpretations of our reports.

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



Our Funders

