

# Vancouver Island

## Drug Checking Project

Preliminary Results for November 2022

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, Lantern Services, Vancouver Island University, and the Island Health Authority. This free and confidential service provides information on composition of substances and harm reduction information.

# 576

Samples Tested  
1 - 30 November  
2022

### Highlighted findings:

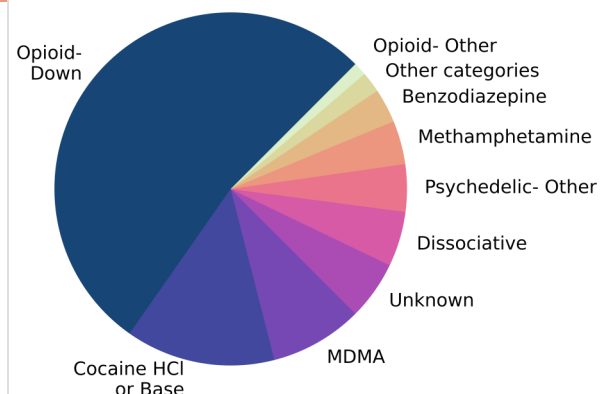
- The median fentanyl concentration found, across all expected drug categories, was 9.7%, with a maximum of over 80%
- Carfentanil was found in 5 expected opioid-down samples, with a median concentration of 0.39% and maximum concentration of 0.45%
- Benzodiazepines and/or etizolam were found in 43% (130/304) of expected opioid-down samples
- The median concentration of bromazolam, the most common benzodiazepine found across all expected drug categories, was 1.8%, with a maximum of over 80%
- We now offer distributed drug checking in Duncan at the Duncan Lookout Housing and Health Society Overdose Prevention Site!

[Read our blog](#) for further interpretations of our November 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)        | 304               |
| Cocaine (HCl or Base)                       | 79                |
| Psychedelic (2C-B, DMT, LSD, MDMA/MDA)      | 74                |
| Dissociative (ketamine)                     | 29                |
| Methamphetamine                             | 23                |
| Benzodiazepine (alprazolam, etizolam, etc.) | 18                |
| Other Opioids (Dilaudid, oxycodone)         | 7                 |
| Other (GHB, THC, “research chemicals”)      | 11                |
| Unknown/Missing                             | 31                |



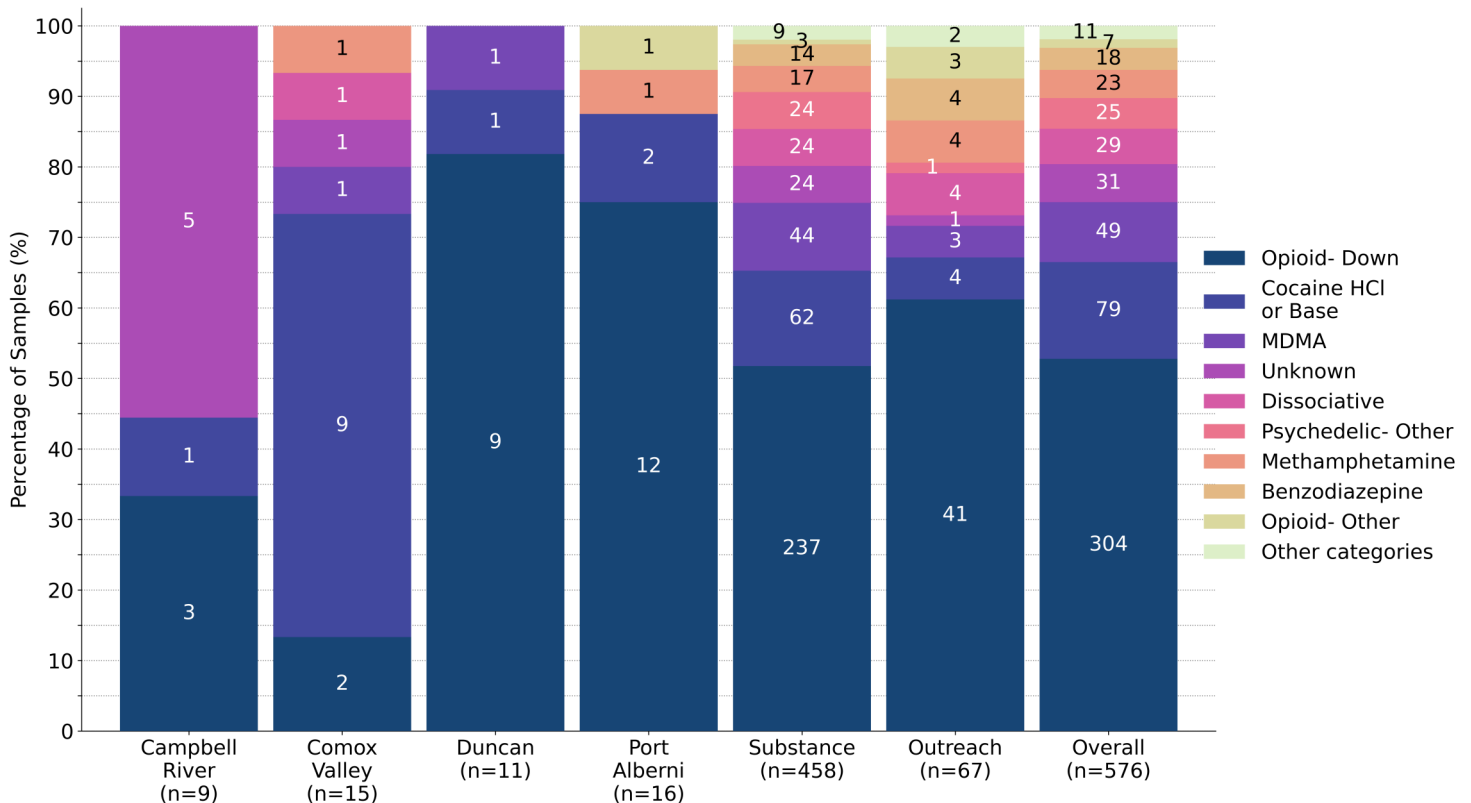
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### What were people bringing to be tested by service model?

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, through no contact drop-off envelopes, and via mail-in envelopes.



| Expected substance                     | Campbell River | Comox Valley | Duncan | Port Alberni | Substance | Outreach | Overall |
|--|----------------|--------------|--------|--------------|-----------|----------|---------|
| Opioid Down (fentanyl and/or heroin)   | 3              | 2            | 9      | 12           | 237       | 41       | 304     |
| Cocaine (HCl or Base)                  | 1              | 9            | 1      | 2            | 62        | 4        | 79      |
| Psychedelic (2C-B, DMT, LSD, MDMA)     |                | 1            | 1      |              | 68        | 4        | 74      |
| Dissociative (ketamine)                |                | 1            |        |              | 24        | 4        | 29      |
| Methamphetamine                        |                | 1            |        | 1            | 17        | 4        | 23      |
| Benzodiazepine                         |                |              |        |              | 14        | 4        | 18      |
| Other Opioids (Dilaudid, oxycodone)    |                |              |        | 1            | 3         | 3        | 7       |
| Other (GHB, THC, “research chemicals”) |                |              |        |              | 9         | 2        | 11      |
| Unknown/Missing                        | 5              | 1            |        |              | 24        | 1        | 31      |
| Total samples checked                  | 9              | 15           | 11     | 16           | 458       | 67       | 576     |

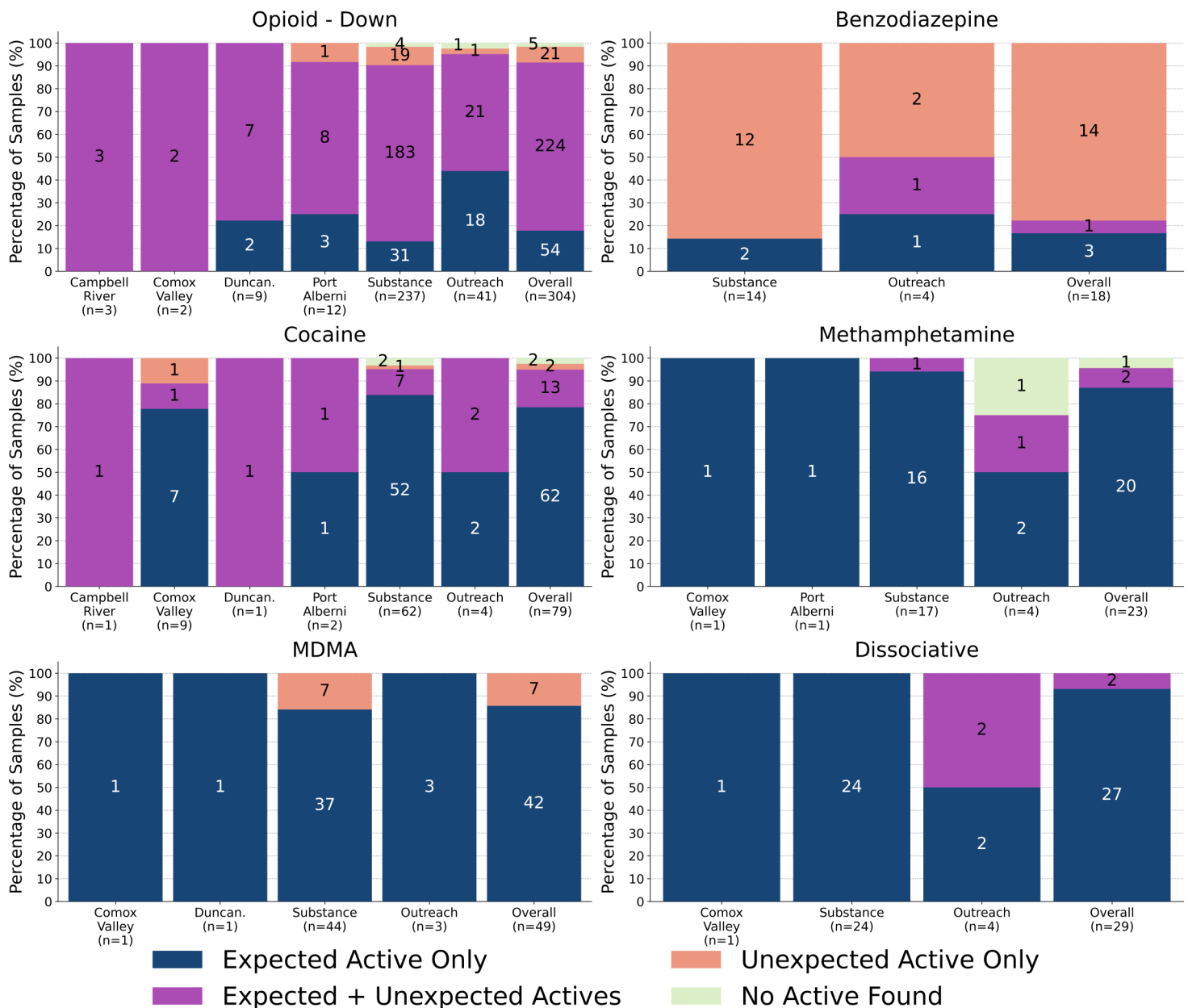
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### What did we find?

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 unexpected active (the expected drug was not found), and **Lime** displays samples where no active compounds were detected.



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### 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  |
|--|----------------|--------------|----------|--------------|------------|-----------|
| <b>Expected Active Only</b>                    |                |              | <b>2</b> | <b>3</b>     | <b>31</b>  | <b>18</b> |
| Fentanyl                                       |                |              | 2        | 3            | 31         | 18        |
| <b>Expected* + Unexpected Active(s)</b>        | <b>3</b>       | <b>2</b>     | <b>7</b> | <b>8</b>     | <b>183</b> | <b>21</b> |
| Fentanyl*                                      | 3              | 2            | 7        | 8            | 179        | 21        |
| Heroin*  |                |              |          |              | 8          | 2         |
| Acetylcodeine                                  |                |              |          |              | 7          | 1         |
| Acetylfentanyl                                 |                |              |          |              | 3          |           |
| Acetylmorphine                                 |                |              |          |              | 3          | 1         |
| Alprazolam                                     |                |              |          |              | 1          |           |
| Benzocaine                                     |                |              |          | 1            |            |           |
| Benzodiazepine (undifferentiated) <sup>1</sup> | 1              | 2            | 6        | 2            | 13         |           |
| Bromazolam                                     | 2              | 1            | 1        | 1            | 83         | 2         |
| Buprenorphine                                  |                |              |          |              | 1          |           |
| Carfentanil                                    | 1              |              |          | 3            |            | 1         |
| Cocaine HCl                                    |                |              |          |              | 1          |           |
| Etizolam                                       | 1              |              |          | 1            | 2          | 4         |
| Flualprazolam                                  |                |              |          |              |            | 1         |
| Flubromazepam                                  |                |              |          | 4            | 3          |           |
| Fluorofentanyl                                 |                |              |          | 4            | 133        | 13        |
| Isotodesnitazene                               |                |              |          |              |            | 1         |
| Lidocaine                                      |                |              |          |              |            | 2         |
| Methamphetamine                                |                |              |          |              |            | 2         |
| Metonitazene                                   |                |              |          |              |            | 1         |
| Phenacetin                                     |                |              |          |              | 3          | 1         |
| Procaine                                       |                |              |          | 1            |            |           |
| Xylazine                                       |                |              |          |              | 5          | 2         |
| <b>Unexpected Active(s) Only</b>               |                |              |          | <b>1</b>     | <b>19</b>  | <b>1</b>  |
| Bromazolam                                     |                |              |          |              | 2          | 1         |
| Fluorofentanyl                                 |                |              |          | 1            | 18         | 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. <sup>1</sup>Benzodiazepine (undifferentiated) results are based on a positive benzo strip test and are unconfirmed by paper spray.

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| Cocaine (HCl or Base)                   | Campbell River | Comox Valley | Duncan   | Port Alberni | Substance | Outreach |
|---|----------------|--------------|----------|--------------|-----------|----------|
| <b>Expected Active Only</b>             |                | <b>7</b>     |          | <b>1</b>     | <b>52</b> | <b>2</b> |
| Cocaine Base                            |                |              |          |              | 10        |          |
| Cocaine HCl                             |                | 7            |          | 1            | 42        | 2        |
| <b>Expected* + Unexpected Active(s)</b> | <b>1</b>       | <b>1</b>     | <b>1</b> | <b>1</b>     | <b>7</b>  | <b>2</b> |
| Cocaine Base*                           | 1              |              | 1        | 1            |           | 1        |
| Cocaine HCl*                            |                | 1            |          |              | 7         | 1        |
| Benzocaine                              |                |              |          |              | 4         |          |
| Levamisole                              |                |              | 1        |              | 2         | 2        |
| Lidocaine                               |                |              |          |              | 1         |          |
| Phenacetin                              | 1              | 1            |          | 1            | 1         |          |
| <b>Unexpected Active(s) Only</b>        |                | <b>1</b>     |          |              | <b>1</b>  |          |
| 3-MMC                                   |                | 1            |          |              |           |          |
| Fentanyl                                |                |              |          |              | 1         |          |
| Fluorofentanyl                          |                |              |          |              | 1         |          |
| Heroin                                  |                |              |          |              | 1         |          |

| Methamphetamine                         | Comox Valley | Port Alberni | Substance | Outreach |
|---|--------------|--------------|-----------|----------|
| <b>Expected Active Only</b>             | <b>1</b>     | <b>1</b>     | <b>16</b> | <b>2</b> |
| Methamphetamine                         | 1            | 1            | 16        | 2        |
| <b>Expected* + Unexpected Active(s)</b> |              |              | <b>1</b>  | <b>1</b> |
| Methamphetamine*                        |              |              | 1         | 1        |
| Bromazolam                              |              |              |           | 1        |
| Fentanyl                                |              |              |           | 1        |
| Fluorofentanyl                          |              |              | 1         | 1        |

| Opioid Other                     | Substance | Outreach |
|----------------------------------|-----------|----------|
| <b>Expected Active Only</b>      | <b>2</b>  | <b>1</b> |
| Hydromorphone                    | 2         |          |
| Oxycodone + Acetaminophen        |           | 1        |
| <b>Unexpected Active(s) Only</b> | <b>1</b>  | <b>2</b> |
| Fentanyl                         | 1         | 2        |

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| Psychedelics                            | Comox Valley | Duncan   | Substance | Outreach |
|---|--------------|----------|-----------|----------|
| <b>Expected Active Only</b>             | <b>1</b>     | <b>1</b> | <b>57</b> | <b>3</b> |
| 5-MeO-DMT                               |              |          | 3         |          |
| DMT                                     |              |          | 2         |          |
| LSD                                     |              |          | 13        |          |
| MDA                                     |              |          | 3         |          |
| MDMA                                    | 1            | 1        | 34        | 3        |
| Psilocybin                              |              |          | 2         |          |
| <b>Expected* + Unexpected Active(s)</b> |              |          | <b>1</b>  | <b>1</b> |
| 2C-B*                                   |              |          | 1         | 1        |
| 2C-H                                    |              |          | 1         | 1        |
| <b>Unexpected Active(s) Only</b>        |              |          | <b>8</b>  |          |
| MDA                                     |              |          | 7         |          |
| MDMA                                    |              |          | 1         |          |

| Benzodiazepines                         | Substance | Outreach |
|---|-----------|----------|
| <b>Expected Active Only</b>             | <b>2</b>  | <b>1</b> |
| Alprazolam                              |           | 1        |
| Bromazolam                              | 1         |          |
| Diclozepam                              | 1         |          |
| <b>Expected* + Unexpected Active(s)</b> |           | <b>1</b> |
| Bromazolam*                             |           | 1        |
| Fluorofentanyl                          |           | 1        |
| <b>Unexpected Active(s) Only</b>        | <b>12</b> | <b>2</b> |
| Bromazolam                              |           | 1        |
| Cyclobenzaprine                         | 1         |          |
| Etizolam                                | 1         |          |
| Fentanyl                                | 2         |          |
| Flualprazolam                           | 9         | 1        |
| Fluorofentanyl                          | 1         |          |

| Dissociatives                           | Comox Valley | Substance | Outreach |
|---|--------------|-----------|----------|
| <b>Expected Active Only</b>             | <b>1</b>     | <b>24</b> | <b>2</b> |
| Ketamine                                | 1            | 24        | 2        |
| <b>Expected* + Unexpected Active(s)</b> |              |           | <b>2</b> |
| Ketamine*                               |              |           | 2        |
| MDA                                     |              |           | 1        |
| Phenacetin                              |              |           | 1        |

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| Other                            | Substance | Outreach |
|----------------------------------|-----------|----------|
| <b>Expected Active Only</b>      | <b>5</b>  | <b>2</b> |
| 4-MMC                            |           | 1        |
| Amphetamine                      | 2         |          |
| GHB                              | 1         |          |
| Methaqualone                     |           | 1        |
| THC                              | 1         |          |
| Zopiclone                        | 1         |          |
| <b>Unexpected Active(s) Only</b> | <b>1</b>  |          |
| Methamphetamine                  | 1         |          |

| Unknown/Missing                                | Campbell River | Comox Valley | Substance | Outreach |
|--|----------------|--------------|-----------|----------|
| <b>Unexpected Active(s) Only</b>               | <b>5</b>       | <b>1</b>     | <b>19</b> | <b>1</b> |
| Acetylcodeine                                  |                |              | 1         |          |
| Benzodiazepine (undifferentiated) <sup>1</sup> | 3              |              |           |          |
| Bromazolam                                     | 1              |              | 3         |          |
| Cocaine HCl                                    |                |              |           | 1        |
| Fentanyl                                       | 5              |              | 7         |          |
| Fluorofentanyl                                 |                |              | 1         |          |
| Heroin   |                |              | 1         |          |
| Methamphetamine                                |                |              | 4         |          |
| MDA  |                | 1            | 3         |          |
| MDMA   |                |              | 1         |          |
| Phenobarbital                                  |                |              | 1         |          |

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### Quantification

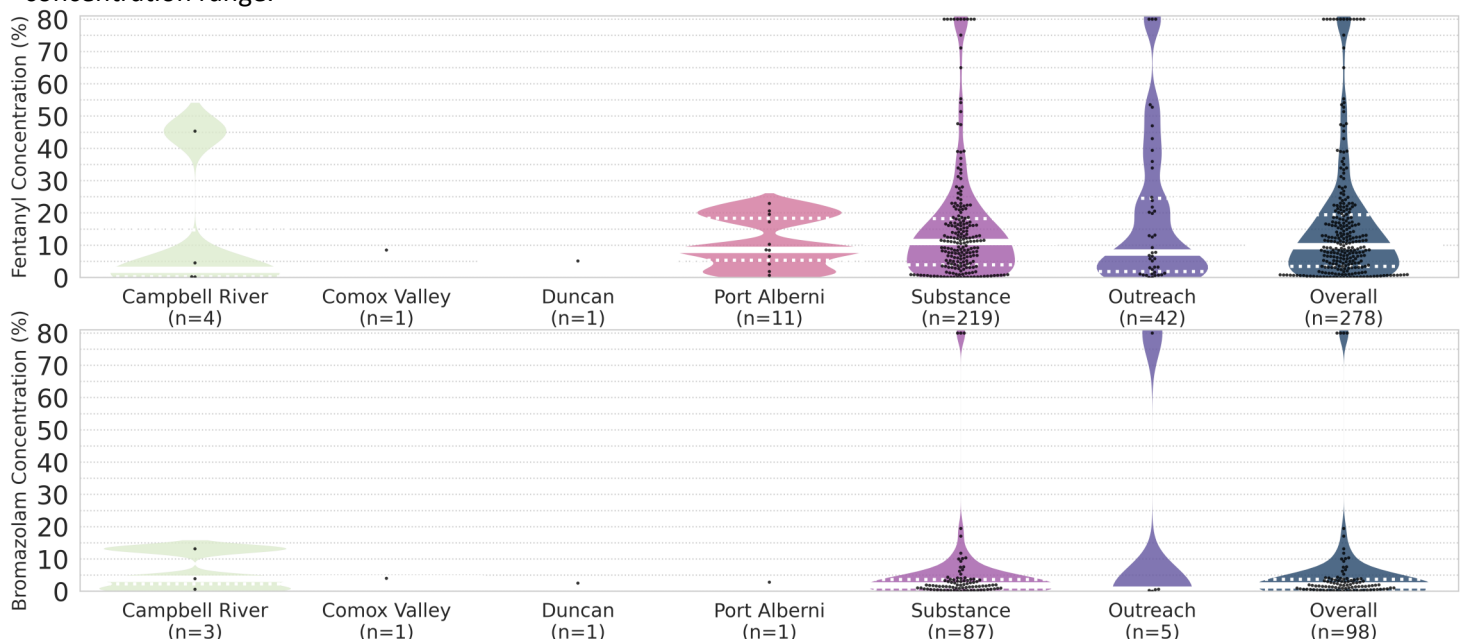
Using paper spray mass spectrometry (PS-MS) data, we were able to quantify low concentration compounds. These aggregate values are *inclusive to all expected drug categories* in which the active drugs are found. Weight percentage is reported below.

| Substance      | # Quant. | Median | Min   | Max   |
|----------------|----------|--------|-------|-------|
| Fentanyl       | 278      | 9.7%   | 0.1%  | >80%* |
| Fluorofentanyl | 177      | 2.0%   | 0.1%  | >80%* |
| Bromazolam     | 98       | 1.8%   | 0.1%  | >80%* |
| Flualprazolam  | 11       | 0.7%   | 0.2%  | >80%* |
| Heroin         | 10       | 67.7   | 15.5% | >80%* |
| Etizolam       | 9        | 3.7%   | 0.2%  | >25%* |
| Flubromazepam  | 7        | 1.5%   | 0.4%  | 3.3%  |
| Xylazine       | 7        | 0.1%   | 0.1%  | 7.1%  |
| Carfentanil    | 5        | 0.39%  | 0.06% | 0.45% |

\*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. **Black Dots** are individual samples, **Solid White Lines** mark the median concentration of the fentanyl/bromazolam positive samples checked, **Dotted White Lines** bound 50% of the samples, and the **width** of the colored regions is proportional to the number of samples in a concentration range.





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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.

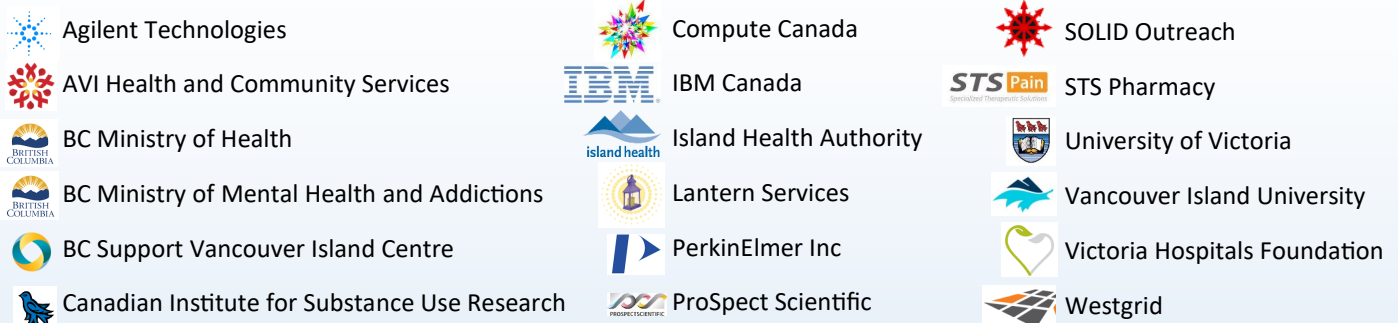
See the blog portion of our website to view our more detailed interpretations of our reports.

*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](https://substance.uvic.ca)

**We gratefully acknowledge our partners and funders on this project**

## Our Partners



## Our Funders

