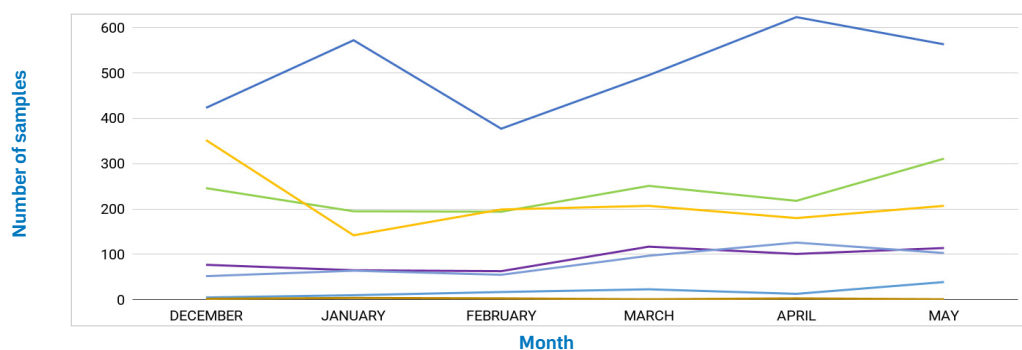


## Key Findings

- May 2021 saw the most drug samples ever checked in British Columbia (1,338). April 2021 was the previous highest volume month.
- This month we introduced a quantification model to determine concentrations of fentanyl in opioid samples across all sites. The median fentanyl concentration of opioids checked was 11.9%. See page 3 for detailed results and short methods description.
- The percentage of opioids testing positive for benzodiazepines (24%) has continued on an upward trend since August. 51% of opioid samples checked in Interior Health contained benzodiazepines. Etizolam, the predominant benzodiazepine in expected opioids, may be missed by drug checking technologies. This means that the true rate may be higher than reported here.
- Fentanyl was detected in six non-opioid drug samples: four in Vancouver Coastal and two in Interior Health regions. Among them, two samples of cocaine and one of methamphetamine contained visibly coloured fentanyl.
- Carfentanil is increasingly being detected by point-of-care and confirmatory drug checking in the Fraser and VCH regions. When carfentanil is detected, fentanyl is detected alongside it over half of the time. Fentanyl test strips may detect carfentanil if the concentration is high enough, but cannot differentiate it from regular fentanyl.
- Fentanyl analogues have been detected in samples sold as fentanyl or down: carfentanil and para-fluorofentanyl. While carfentanil is known to be highly potent, not much information is available about para-fluorofentanyl.

## Number of drug samples checked in the past 6 months



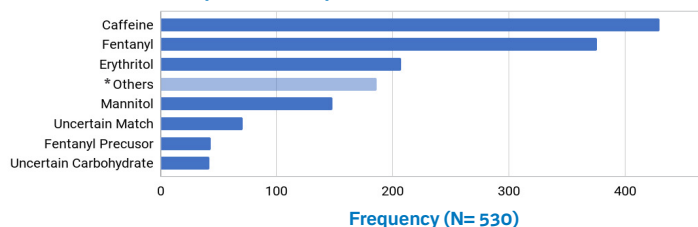
Number of samples by drug category in May

Opioid	563
Stimulant	311
Depressant	114
Psychedelic	207
Polysubstance	39
Other	1
Unknown	103

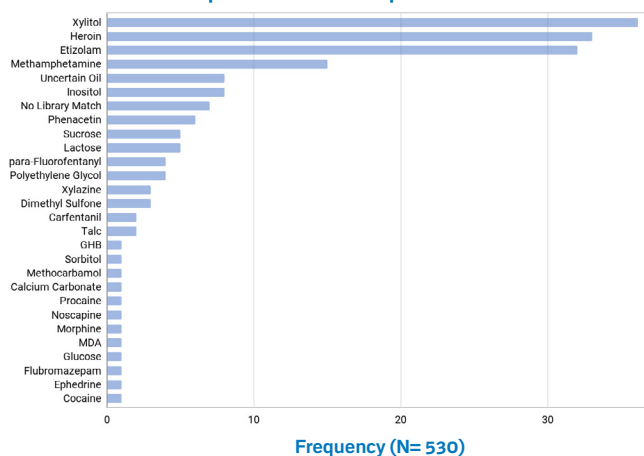
TOTAL: 1338

## Components found in drug samples in May

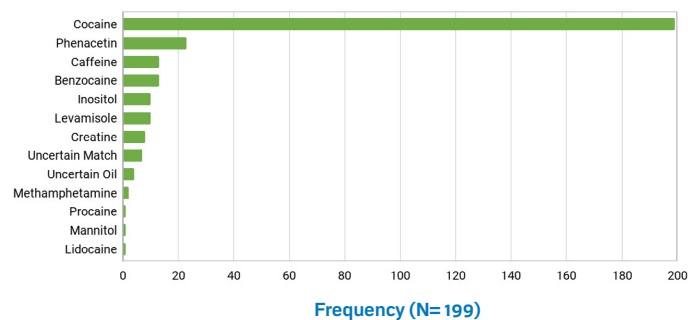
## Components in opioids



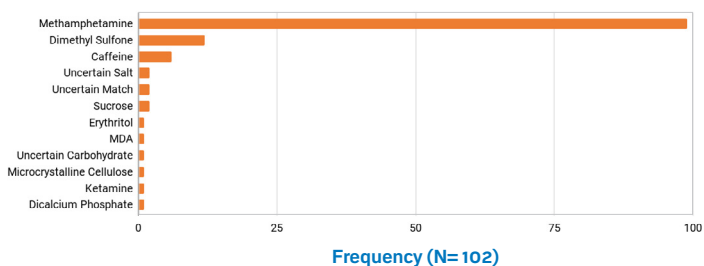
## \*Other components found in opioids



## Components in cocaine



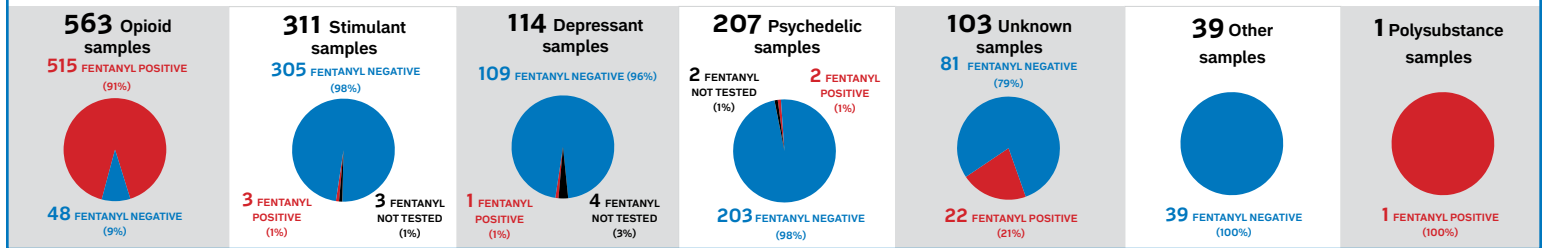
## Components in methamphetamine



May  
2021

# Drug Checking in British Columbia

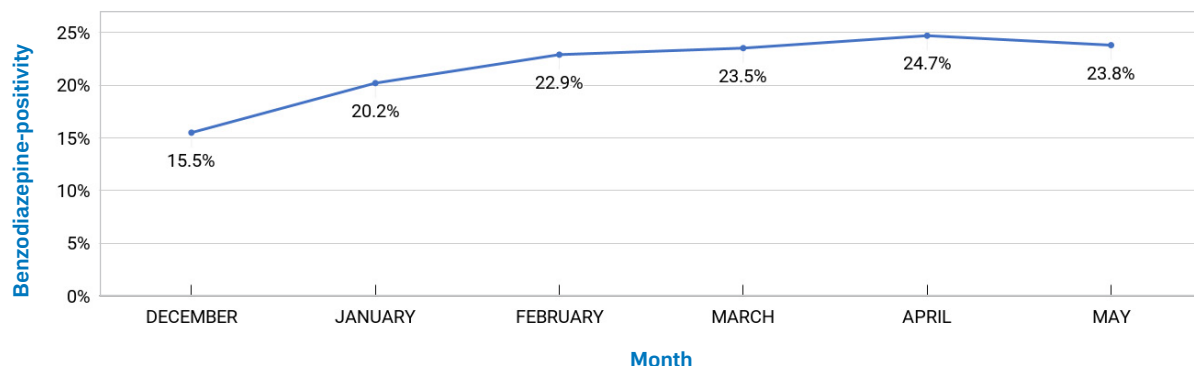
## Number of samples tested with fentanyl present



## PUBLIC HEALTH NOTIFICATIONS

Date & Location	Expected Drug	Drugs Detected	Fentanyl Strip	Benzo Strip	Area Purchased	Alert Message
21 May 2021 ASK Wellness Merritt	MDMA/Ecstasy	MDA, Caffeine, Lactose, Microcrystalline cellulose	Positive	N/A	Lower Mainland	For people without an opioid tolerance, small amounts of fentanyl can lead to opioid toxicity.
19 May 2021 Get Your Drugs Tested, Vancouver	Cocaine	Cocaine, Caffeine	Positive	N/A	Unknown	A good harm reduction tip is to be cautious when white-coloured drugs have coloured flecks. In this case, the purple flecks were caffeine and fentanyl, typical ingredients in down.
4 May 2021 Get Your Drugs Tested, Vancouver	Down/Fentanyl	Caffeine, Fentanyl, Xylazine	Positive	Positive	Unknown	Xylazine is a veterinary tranquilizer that may complicate overdoses and is linked to skin lesions and ulcers after injecting. A sample containing three different depressants poses a high risk for overdose.

## Percentage of opioids testing positive for benzodiazepines in the past 6 months



During the month of May, **23.8%** of expected opioid samples tested positive for benzodiazepines using test strips in our partner sites around BC (**134 samples of 563 checked**). Opioid samples are tested for benzodiazepine-positivity using BTNX test strips. The results presented above are presumptive and tentative until confirmed by a laboratory.

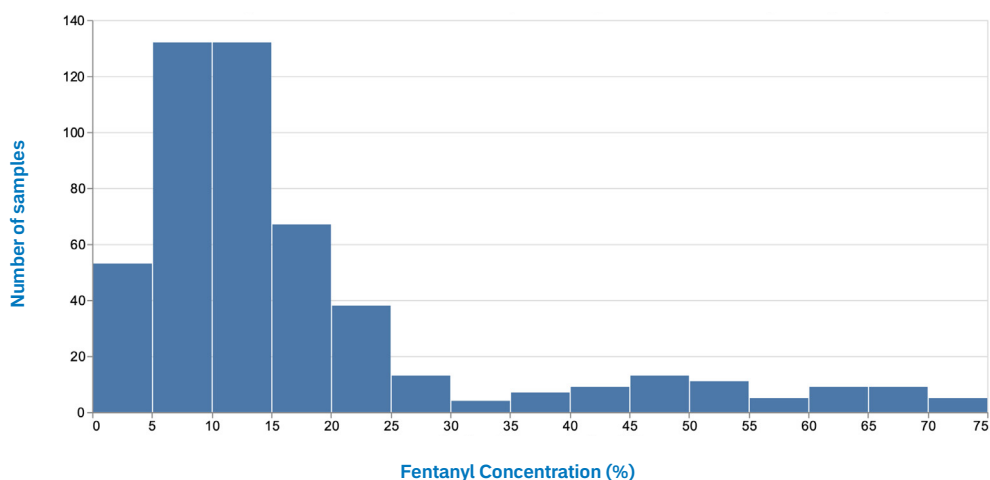
## Fentanyl Quantification

Starting May 2021, the BCCSU Drug Checking Project will include two visualizations of fentanyl quantification data in the monthly public health reports. The visualizations highlight the range in the concentration of fentanyl in unregulated opioids.

The charts below summarize fentanyl concentrations of fentanyl-positive opioid samples brought for drug checking in British Columbia. Fentanyl concentrations were determined using FTIR and a calibrated fentanyl quantification model (Tobias et al., 2021; Tobias & Ti, 2021). Technicians at point-of-care may provide an estimated fentanyl quantification, generally an approximate range of fentanyl percentage in a mixture, but these results were calculated separately (post hoc) using the model for the purpose of this report.

If you have any questions about the results, please email us at [drugchecking@bccsu.ubc.ca](mailto:drugchecking@bccsu.ubc.ca).

### Fentanyl Concentration of Opioid Drug Checking Samples in BC, May 2021 (n=507)

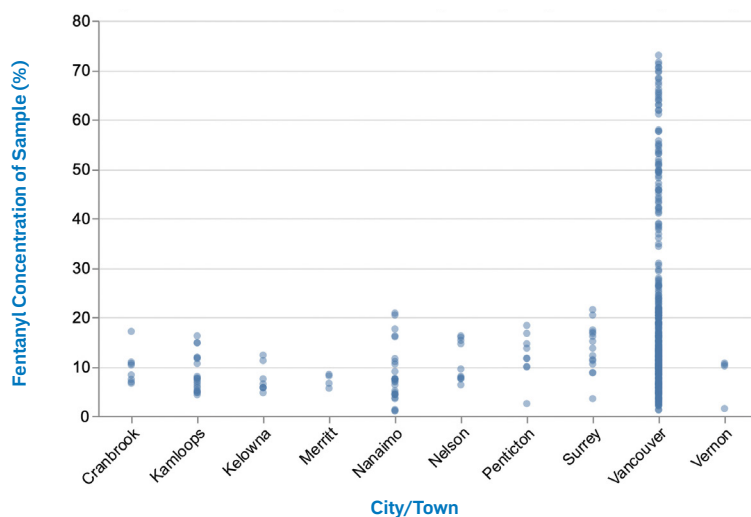


While half of all samples fall between 5% and 15% fentanyl, over a third of samples are above 15% fentanyl-by-weight, and concentrations can approach 80% of the mixture. **The median fentanyl concentration of all samples was 11.9%.** When purchasing fentanyl from an unregulated drug supply, it is often impossible to know what the fentanyl concentration of the drugs is. Drug checking can help, but point-of-care quantification results are provided in a range since it's hard to be precise with the available technologies. For example, a technician might say, "This sample contains caffeine, mannitol, and between 5% and 10% fentanyl."

Drug supplies vary by location in the province. While samples from smaller communities appear to be more consistent, it is important to remember that this is a small number of drugs checked in each location. Note that these locations include only those participating in the BCCSU Drug Checking Project that provide data from FTIR spectroscopy. These numbers may not represent the broader supply or the supply in other settings.

The results presented here are fentanyl, not fentanyl analogues like carfentanil. Carfentanil is a potent opioid that is often present below the detection limit of the spectrometer and is therefore missed by point-of-care drug checking technologies. Your drug checking technician can explain the limitations in detail when you get your drugs checked, but always take additional harm reduction precautions, like using at an OPS if available, because potent opioids may be presented and go undetected.

### Fentanyl Concentration of Opioid Samples by City/Town, May 2021 (n=507)



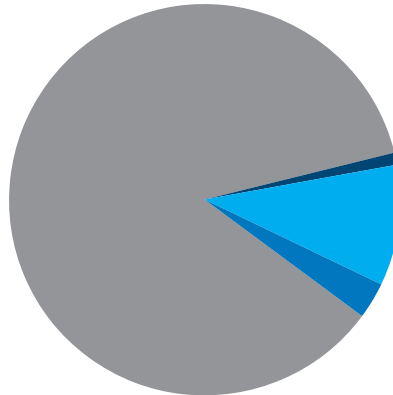
May  
2021

# Drug Checking in British Columbia

## Number of samples tested by region:

Total #: 1,338

1149: Vancouver Coastal  
Health region (86%)



19: Fraser Health region (1%)

135: Interior Health region (10%)

35: Vancouver Island  
Health Region (3%)

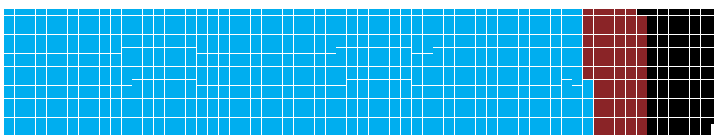
## Number of samples that matched expectation

using FTIR/test strip drug checking

<p>EXPECTED DRUG: <b>Depressant</b> 114 Samples Tested</p> <p>Matched: 86 Did not match: 28</p>	<p>EXPECTED DRUG: <b>Psychedelic</b> 207 Samples Tested</p> <p>Matched: 178 Did not match: 22 Match not determined: 7</p>	<p>EXPECTED DRUG: <b>Stimulant</b> 311 Samples Tested</p> <p>Matched: 308 Did not match: 3</p>	<p>EXPECTED DRUG: <b>Other</b> 39 Samples Tested</p> <p>Matched: 22 Did not match: 1 Match not determined: 16</p>
<p>EXPECTED DRUG: <b>Unknown</b> 103 Samples Tested</p> <p>Match not determined: 103</p>	<p>EXPECTED DRUG: <b>Opioid</b> 563 Samples Tested</p> <p>Matched: 492 Did not match: 58 Match not determined: 13</p>		<p>EXPECTED DRUG: <b>Polysubstance</b> 1 Sample Tested</p> <p>Matched: 1</p>

## Total

1,338 Samples Tested



Matched: 1,087  
Did not match: 112  
Match not determined: 139

Please note that the presence of the expected substance does not imply purity, as samples frequently contain adulterating cutting agents

**Depressant may include:**  
benzodiazepines, etizolam,  
GHB, hypnotics

**Opioid may include:**  
"down," heroin, fentanyl,  
pharmaceutical opioids

**Polysubstance includes:**  
cross-category mixtures

**Psychedelic may include:**  
MDMA and related,  
2C-family, tryptamines,  
ketamine, LSD

**Stimulant may include:**  
methamphetamine,  
"speed," cocaine and crack  
cocaine, cathinones

**Unknown includes:**  
samples where the individual  
was unable to identify an  
expected substance - this  
includes found samples.

May  
2021

# Drug Checking in British Columbia

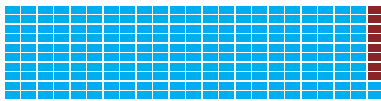
## Number of opioid samples that matched expectation

using FTIR/test strip drug checking

EXPECTED DRUG:

**Fentanyl**

230 Samples Tested



Matched: 222

Did not match: 8

EXPECTED DRUG:

**Heroin**

49 Samples Tested



Matched: 27

Did not match: 22

EXPECTED DRUG:

**Fentanyl and Heroin**

12 Samples Tested



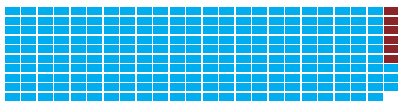
Matched: 1

Did not match: 11

EXPECTED DRUG:

**Down**

239 Samples Tested



Matched: 233

Did not match: 6

EXPECTED DRUG:

**Other Opioid**

1 Sample Tested



Did not match: 1

EXPECTED DRUG:

**Pharmaceutical**

30 Samples Tested



Matched: 7

Did not match: 11

Match not determined: 12

EXPECTED DRUG:

**Opium**

2 Samples Tested

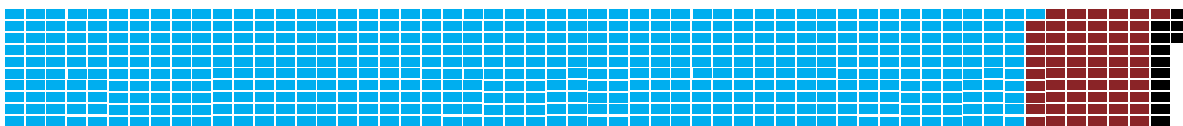


Did not match: 1

Match not determined: 1

### Total

563 Samples Tested



Matched: 490

Did not match: 60

Match not determined: 12

Please note that the presence of the expected substance does not imply purity, as samples frequently contain adulterating cutting agents.  
'Down' can refer to any opioid drug present in any amount.

Data represented here are collected from our partner sites across the province. Drug samples are tested using the Fourier Transform Infrared (FTIR) spectrometer in combination with fentanyl test strips and benzodiazepine test strips.

There is 5% fentanyl detection limit on the FTIR spectrometer (McCrae, 2019), and a drug check on any given sample consists of both the FTIR and BTNX fentanyl immunoassay test strip testing done in combination. When applicable, BTNX benzodiazepine immunoassay test strips are also used.

BCCSU gratefully acknowledges the contributions of the following partners:

