



BRITISH COLUMBIA  
CENTRE ON  
**SUBSTANCE USE**

*Networking researchers, educators & care providers*

## *Drug Checking*

# **A Supplemental Report on British Columbia's Unregulated Drug Supply Amidst Dual Public Health Emergencies**

Results from British Columbia's Community Drug Checking Service  
January 2020 – October 2020



## Land Acknowledgement

The BC Centre on Substance Use would like to respectfully acknowledge that the land on which we work is the unceded ancestral homelands of the xwmekwey'em (Musqueam), Skwxwú7mesh (Squamish), and sel'ílweta| (Tseil-Waututh) Nations.

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## Contact

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## Purpose of the Report

The purpose of this report is to provide an update on the trends and related information in British Columbia's (BC) unregulated drug supply in the context of dual public health emergencies — the ongoing overdose crisis and the novel coronavirus (COVID-19) pandemic. This report is a supplement to another report titled, “A report on British Columbia’s Unregulated Drug Supply: Results from British Columbia’s Community Drug Checking Service, June 2018 – December 2019.” The present report highlights key findings from a snapshot of point-of-care drug checking results operating in select supervised consumption sites (SCS), overdose prevention sites (OPS), and other health authority sanctioned sites in BC from January 2020 to October 2020. The point-of-care results presented in this report are collected from drug checking services that use Fourier-transform infrared (FTIR) spectroscopy, fentanyl test strips, and benzodiazepine test strips, and do not include results from drug checking services that use other technologies. The report presents trends in drug checking utilization, expected drugs checked, benzodiazepine adulteration in expected opioid samples and non-opioid drug samples, and cuts and buffs in expected opioid samples. Herein, non-opioid drug samples refer to expected stimulants, psychedelics, depressants, and unknown samples.

## Summary of Key Findings

Between January 1, 2020, and October 31, 2020, 6,742 drug samples were checked with the FTIR, fentanyl test strips, and benzodiazepine test strips at point-of-care sites. The frequency of drugs checked over time varied depending on service and staff availability and the site's geographic location. Additionally, disruption in services in March 2020 and April 2020 caused by the COVID-19 public health emergency resulted in limited drug checking services in BC. Of the total drug samples checked, 3,179 (47%) were expected opioid samples. Of the non-opioid samples, 1,337 (20%) were expected psychedelic samples, 1,323 (20%) were expected stimulant samples, 375 (6%) were expected depressant samples, and 528 (8%) were expected polysubstance, unknown, or other drug samples.

Expected opioid samples may include heroin, fentanyl, prescription opioids, and “down.” “Down” refers to any opioid drug present in any amount. Expected stimulant samples may include methamphetamine and other amphetamines, cocaine and crack cocaine, cathinones, and “speed”. “Speed” refers to any stimulant drug present in any amount. Expected psychedelic samples may include MDMA and related compounds, ketamine and related compounds, LSD, tryptamines, and 2C-family drugs. Expected depressant samples may include benzodiazepines, etizolam, GHB, and hypnotics, while expected polysubstance samples are any cross-category mixtures.

Of 3,179 expected opioid samples checked with the FTIR and benzodiazepine test strips, 304 (10%) were found to be adulterated with benzodiazepines. Of 3,188 expected non-opioid and non-depressant drug samples checked, 55 (2%) found to be adulterated with benzodiazepines: 6 (11%) were expected psychedelic samples, 5 (9%) were expected stimulant samples, and 1 (2%) was expected polysubstance sample.

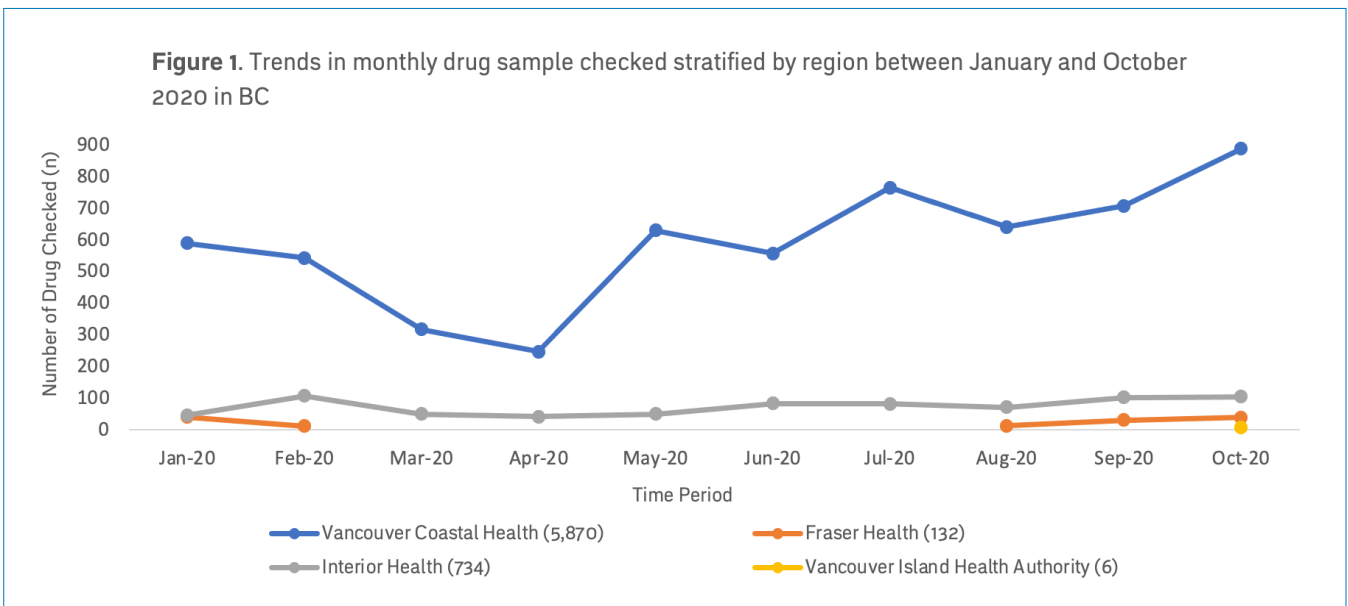
Fentanyl was found in 89% of expected opioid samples, 38% of expected polysubstance, unknown, and other samples, 3% of expected stimulant samples, 1.6% of expected depressant samples, and 0.4% of expected psychedelic samples. It is worth noting that of fentanyl positive stimulant samples, 17 (53%) were methamphetamine samples, and 8 (25%) were cocaine samples. Other than opioids found in expected opioid samples, caffeine (77%), mannitol (33%), and erythritol (26%) were the most commonly found substances.

## Drug Checking Utilization

Between January 1, 2020, and October 31, 2020, a total of 6,742 drug samples were checked with FTIR, fentanyl test strips, and benzodiazepine test strips at select SCS, OPS, and health authority sanctioned sites across BC. The data in this report do not include drug samples tested using fentanyl test strips or benzodiazepine test strips alone.

Overall, the majority of drug samples were checked within the Vancouver Coastal Health (VCH) region, where 87% (5,870) of drugs were checked during this period. Of note, Get Your Drugs Tested (GYDT) checked over 75% of drug samples in this region during this period. In contrast, there were 132 (2%) drug samples checked within the Fraser Health (FH) region. A total of 734 (11%) drug samples were checked within the Interior Health (IH) region, and a total of 6 (<1%) drug samples were checked within the Vancouver Island Health Authority (VIHA) region. As noted previously, the point-of-care results presented in this report are collected from drug checking services that use Fourier-transform infrared (FTIR) spectroscopy, fentanyl test strips, and benzodiazepine test strips, and do not include results from drug checking services that use other technologies.

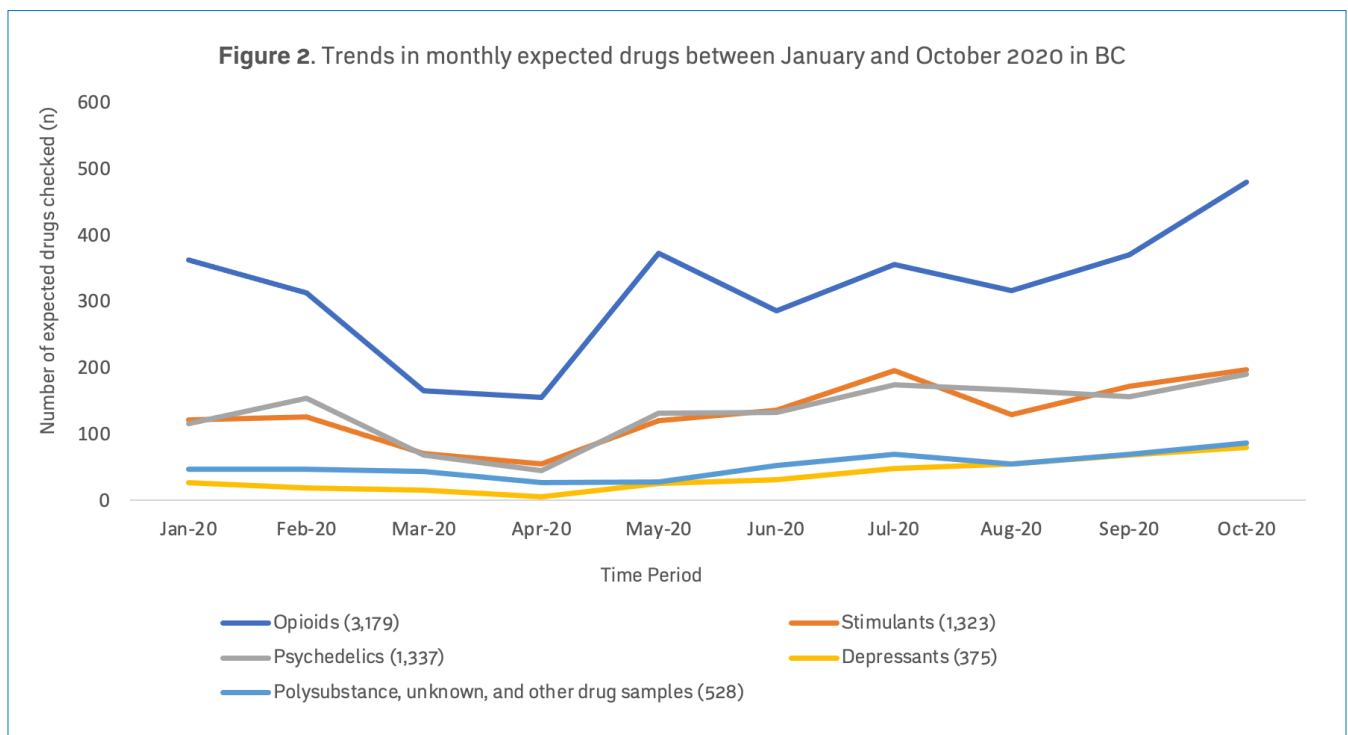
Of note, disruption in services in March and April 2020 caused by COVID-19 public health emergency resulted in limited drug checking services in BC. As shown in Figure 1, the monthly total of drug checked per region decreased between March 2020 and April 2020 in VCH and IH region, where there were no drug checking services offered in FH region between March 2020 and August 2020. As for the VIHA region, in collaboration with the Canadian Mental Health Association (CMHA) in Nanaimo, we began to implement drug checking services in October 2020. It is also noteworthy that the frequency of drugs checked over time varied depending on service and staff availability, as well as the site's geographic location.



## Drug Samples Checked

Between January 1, 2020, and October 31, 2020, 6,742 drug samples were checked with the FTIR, fentanyl test strips and benzodiazepine test strips at point-of-care sites. The frequency of drugs checked over time varied depending on service and staff availability. For example, the number of drugs checked between March 2020 and April 2020 declined as a result of the suspension of services due to COVID-19.

Of the 6,742 drug samples checked, 3,179 (47%) were expected opioid samples. Of the non-opioid samples, 1,337 (20%) were expected psychedelic samples, 1,323 (20%) were expected stimulant samples, 375 (6%) were expected depressant samples, and 528 (8%) were expected polysubstance, unknown, or other drug samples. 'Unknown' drugs were defined as all samples in which the individual could not identify the expected substance. In contrast, 'other' drug samples referred to the different types of drugs that do not belong in any of our established drug categories.

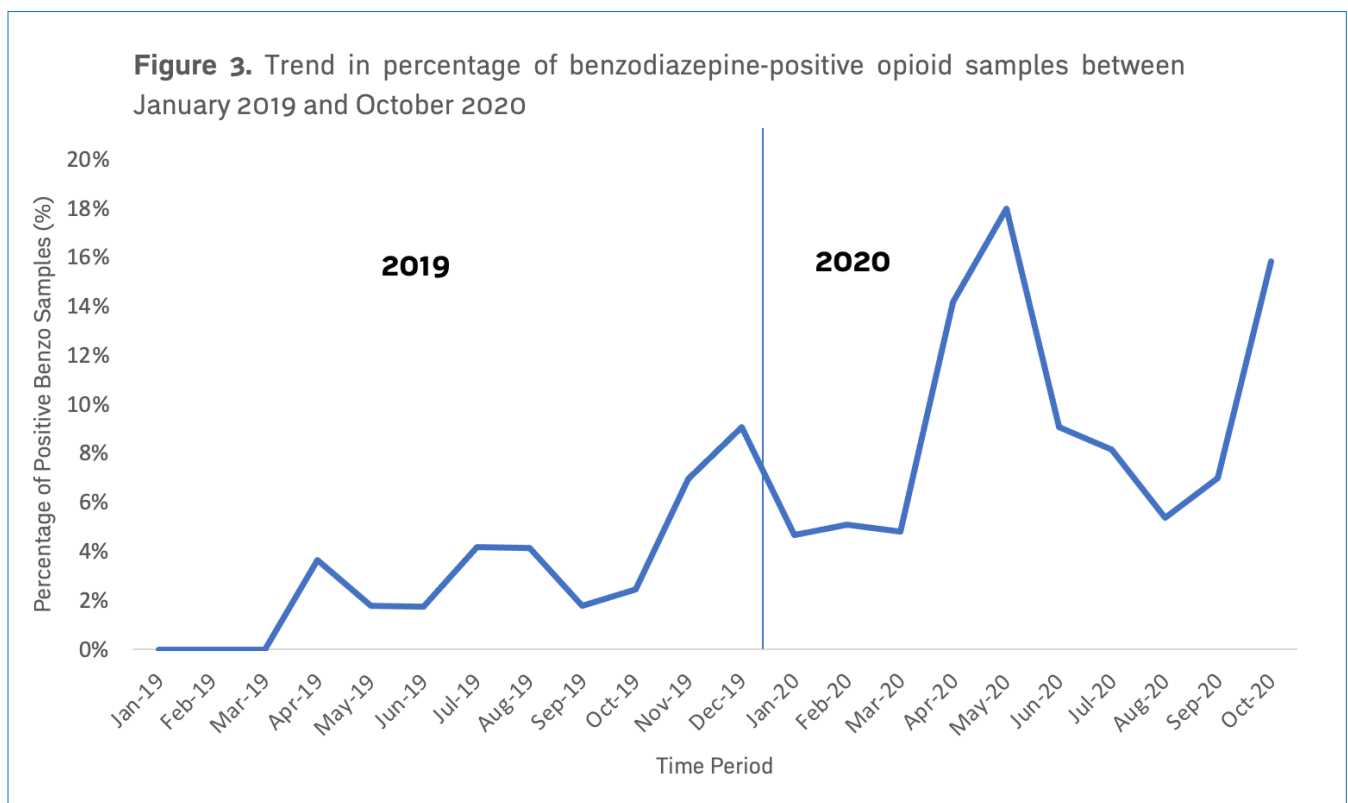


## Benzodiazepine Adulteration

### *Benzodiazepine Adulteration in Expected Opioid Samples*

Figure 3 shows an increasing trend of benzodiazepine adulteration in expected opioid samples between January 2019 and October 2020. Between January 1, 2020, and October 31, 2020, a total of 3,179 opioid drug samples were checked with the FTIR, fentanyl test strips, and benzodiazepine test strips at point-of-care sites. Of which, 304 (10%) opioid drug samples were found to be adulterated with benzodiazepines using the FTIR or benzodiazepine test strips.<sup>1</sup>

Figure 3 also shows an increasing trend in the percentage of benzodiazepine-positive opioid samples after the start of the COVID-19 public health emergency and a brief suspension of services from a low of 5% between January 2020 and March 2020 to a peak of 18% in May 2020. While it is increasing overall, there seems to be a fluctuation in the trend. Therefore, further monitoring is warranted. Additionally, it should be noted that service provision in terms of site location changed, which could have contributed to differing trends. Specifically, one drug checking site (i.e., Get Your Drugs Tested) was added in January 2020 and some sites curtailed services.





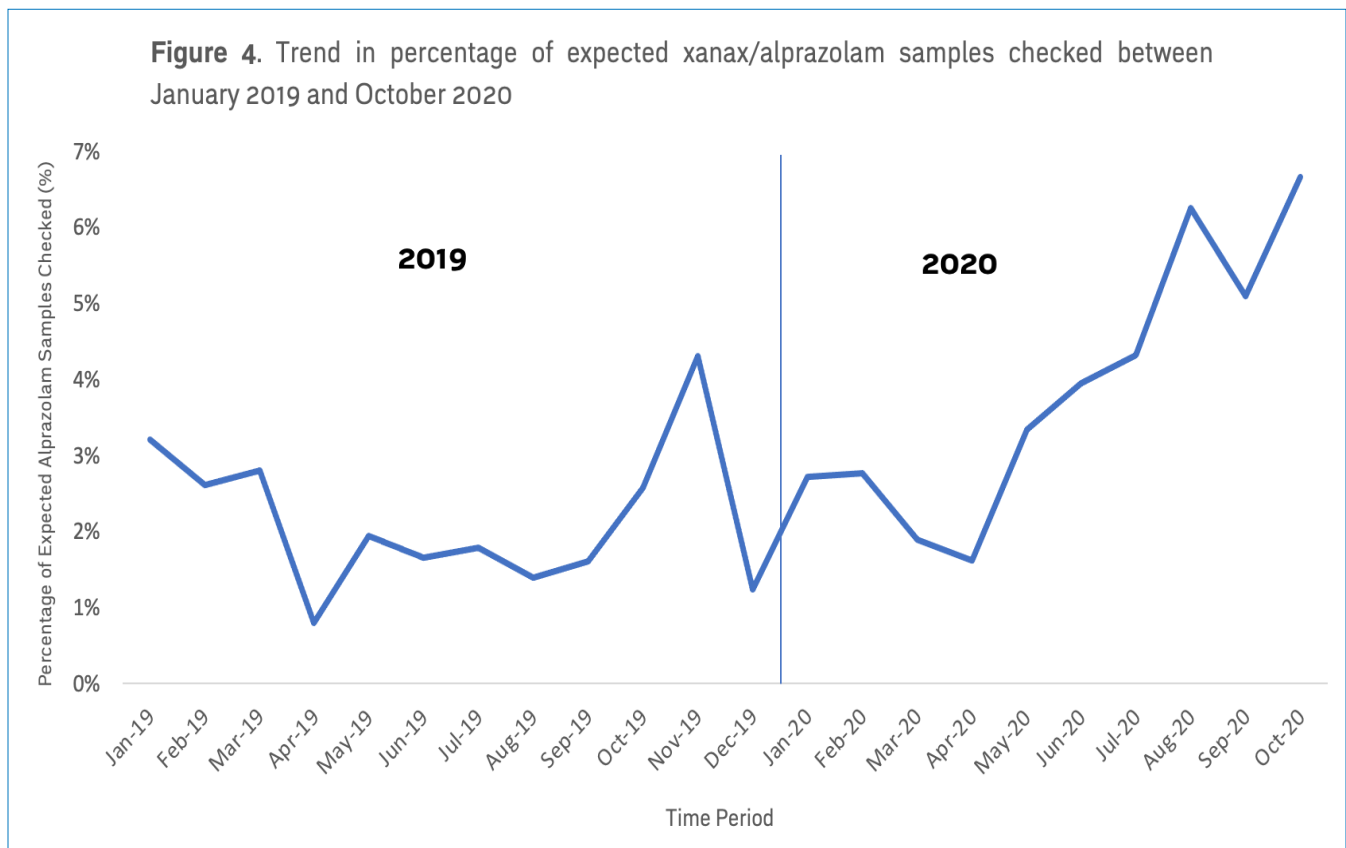
## Benzodiazepine Adulteration in Non-Opioid Drug Samples

In this report, the non-opioid expected drug samples referred to expected stimulants, psychedelics, depressants, or unknown samples, all of which are based on individuals' expectations of their drugs at point-of-care drug checking (i.e., what the drug was purchased as).

Between January 1, 2020, and October 31, 2020, a total of 3,188 expected non-opioids and non-depressant drug samples were checked with the FTIR, fentanyl test strips, and benzodiazepine test strips at point-of-care sites. Of 3,188 expected non-opioid and non-depressant drug samples checked, 55 (2%) found to be adulterated with benzodiazepines: 6 (11%) were expected psychedelic samples, 5 (9%) were expected stimulant samples, and 1 (2%) was expected polysubstance sample.

### Increase in Expected Xanax/Alprazolam Samples Checked

The majority (72%) of benzodiazepine-positive non-opioid drug samples were expected to be alprazolam samples. Figure 4 shows an increasing trend in expected alprazolam samples presented at point-of-care drug checking over time. A peak of 7% is observed in October 2020, and a low of 1% is observed in April 2019. While it is increasing overall, there seems to be a fluctuation in the trend. Further monitoring is warranted.

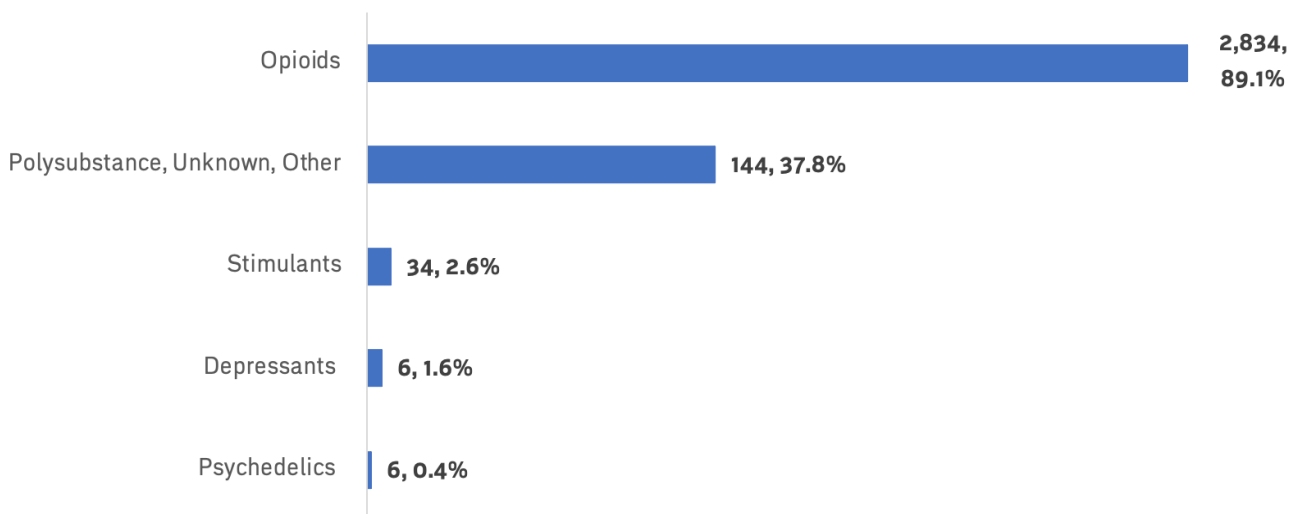


## Fentanyl Adulteration

Between January 1, 2020, and October 31, 2020, 6,742 expected drug samples were checked with the FTIR, fentanyl test strips, and benzodiazepine test strips. Of all expected drugs checked, 3,078 (46%) tested positive for fentanyl or fentanyl analogues using the FTIR or fentanyl test strips. Fentanyl was found in 89% of expected opioid samples, 38% of expected polysubstance, unknown, and other samples, 3% of expected stimulant samples, 1.6% of expected depressant samples, and 0.4% of expected psychedelic samples.

While fentanyl positivity in opioid samples did not change, there seems to be a slight increase in fentanyl adulteration in other samples compared to the previous year. The results of fentanyl adulteration of expected non-opioid drug samples from June 2018 to December 2019 compared to numbers presented in this report from January 2020 to October 2020 are as follows: stimulants (19 vs. 32), depressants (7 vs. 6), psychedelics (0 vs. 6), and polysubstance, unknown and other drug samples (51 vs. 200). However, it is worth noting that the changes in fentanyl adulteration in non-opioid samples could result from an overall increase in drug checking numbers and not merely a specific change in the drug supply. Further monitoring is warranted.

**Figure 5.** Percentage of all fentanyl-positive samples stratified by expected drug between January 2020 and October 2020 (n=3,078)

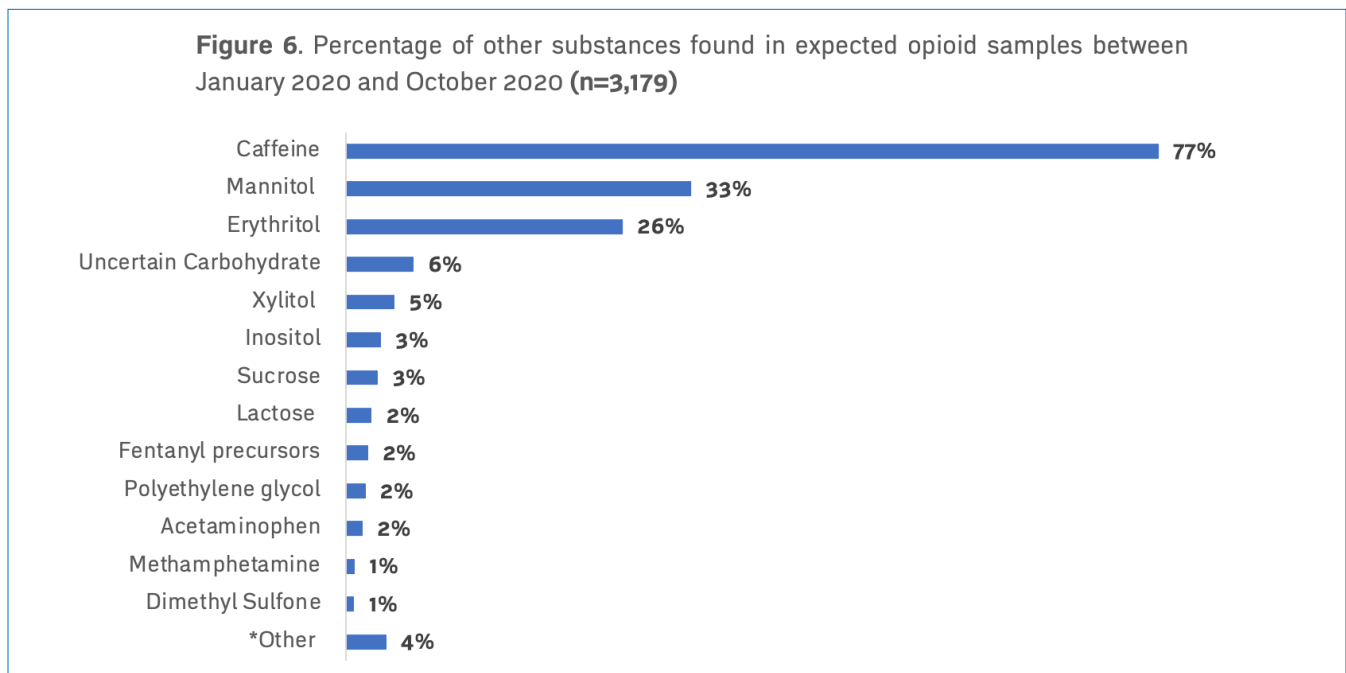


## Other Substances Found in Drug Samples

### Other Substances Found in Expected Opioid Samples

Figure 6 shows other common substances found in expected opioid samples using FTIR between January 2020 and October 2020. Of 3,179 expected opioids checked, the three most commonly found substances other than opioids were caffeine (2449, 77%), mannitol (1,039, 33%), and erythritol (833, 26%).

Of note, etizolam was found in 18 expected opioid samples using FTIR. Six synthetic cannabinoids were also found in expected opioid samples, ACHMINACA (1) and AMB-FUBINACA (5).



**\*Other** included: 6-monoacetylmorphine (8); ACHMINACA (1); AMB-FUBINACA (5); Ascorbic acid (14); Benzocaine (3); Benzoquinone (1); Calcium carbonate (3); Cellulose (3); Cocaine (8); Diphenhydramine (6); Etizolam (18); Phenacetin (13); Noscapine (9); MDMA (6)

### Other Substances Found in Expected Non-Opioid Samples

Of 3,563 expected non-opioid samples checked between January 2020 and October 2020 using FTIR, the three most commonly found substances other than stimulants, psychedelics, or depressants were caffeine (214, 6%), lactose (60, 2%), and mannitol (39, 1%).

Of note, a novel synthetic cannabinoid, 4-cyano CUMYL-BUTINACA, was found in an unknown sample. Etizolam was also found in an expected cocaine sample.

## Limitations

The majority of the drug samples in this report were collected in select urban settings and thus might not represent BC's entire drug supply. While drug checking can help reduce risk by providing information about what substances are in a drug sample, it does not guarantee that the drug is safe to use. Point-of-care technologies such as the FTIR, fentanyl test strips, and benzodiazepine test strips may occasionally miss fentanyl, fentanyl analogues, novel psychoactive benzodiazepines, or other dangerous adulterants. Test strips can only test for compounds within the sample provided; that particular compound may still be present in the remainder of the drug batch. Therefore, the results of a checked sample may not represent the rest of the drugs that the sample was taken from; this is known as the "chocolate chip cookie effect". In addition, these technologies cannot detect new or rare substances that do not exist in the reference libraries. Thus, individuals only receive point-of-care results that may only provide partial knowledge of the content of the drugs checked. However, these disclaimers are provided to all individuals accessing the service. Point-of-care drug checking services also lack access to advanced technologies that can potentially off-set point-of-care technological limitations. The number of samples also decreased when the COVID-19 public health emergency was declared. However, these data do indicate that there are changes in sample results after drug checking services resumed.

## Disclaimer

Benzodiazepine adulteration of opioids poses additional harms for people who use drugs. Many participants have reported symptoms such as memory loss, blackouts, and overdose after consuming benzodiazepine-adulterated opioids. Benzodiazepines are depressants and therefore increase the likelihood of overdose by suppressing breathing.<sup>2</sup> The effects of benzodiazepines are further compounded when mixed with potent fentanyl analogues.<sup>3</sup> It is always recommended to administer naloxone in the event of an overdose, but sedation, drowsiness, and memory loss may persist for hours after naloxone is administered. Of note, naloxone will reverse the effects of opioids, but will be ineffective against the effects of benzodiazepines.<sup>3</sup>

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