

Results from 141 samples checked

October 21 – November 3, 2023

Key findings

- 14% of the expected¹ fentanyl samples⁵ were known to be **associated with an overdose**: most of these samples contained at least one high-potency opioid (an opioid that is as strong or stronger than fentanyl) and a benzodiazepine-related drug
- 50% of the expected¹ fentanyl samples⁵ **contained a benzodiazepine-related drug** – 14% of these samples contained multiple benzodiazepine-related drugs
- 25% of the expected¹ fentanyl samples⁵ **contained fluorofentanyl** (up to 2 times stronger than fentanyl)
- 13% of the expected¹ fentanyl samples⁵ **contained butyryl fentanyl/isobutyryl fentanyl**⁷ (active fentanyl-related drugs, considered to be stronger than morphine but not as strong as fentanyl). We first found butyryl fentanyl/isobutyryl fentanyl⁷ on September 18, 2020, but have not seen them regularly present in expected¹ fentanyl samples⁵ until now.
- 7% of the expected¹ fentanyl samples⁵ **contained xylazine** (veterinary tranquilizer)
- 23% of the expected¹ fentanyl samples⁵ **contained multiple high-potency opioids**, including fentanyl and fluorofentanyl
- Amount of drugs found in expected¹ fentanyl substances²:

In 12 expected¹ fentanyl substances²:

3.7% was the **average³ amount of fentanyl found**

0.9 – 5.7% was the **range⁴ of fentanyl found** in half of the substances²

In 7 expected¹ fentanyl substances²:

1.8% was the **average³ amount of bromazolam found**

1.2 – 6.0% was the **range⁴ of bromazolam found** in half of the substances²

In 3 expected¹ fentanyl substances²:

1.8% was the **average³ amount of fluorofentanyl found**

1.3 – 1.9% was the **range⁴ of fluorofentanyl found** in half of the substances²

In 1 expected¹ fentanyl substance²:

0.2% was the **average³ amount of xylazine found**

Expected fentanyl substances

- 87% (26) of the expected¹ fentanyl substances⁶ **contained fentanyl and other drugs**, including:
 - 92% (24) contained caffeine
 - 62% (16) contained at least one benzodiazepine-related drug (!):
 - 54% (14) contained bromazolam (!)
 - 12% (3) contained desalkylgidazepam (!)
 - 8% (2) contained flubromazepam (!)
 - 31% (8) contained at least one additional fentanyl-related drug (!):
 - 19% (5) contained butyryl fentanyl/isobutyryl fentanyl⁷ (!)
 - 19% (5) contained fluorofentanyl (!)
 - 8% (2) contained valeryl fentanyl (!)
 - 4% (1) contained acetyl fentanyl (!)
 - 4% (1) contained bromofentanyl (!)
 - 12% (3) contained xylazine (!)

Unexpected noteworthy drugs found in other expected substances

- 9% (7) of the remaining substances,⁶ meaning substances² that weren't expected¹ to be fentanyl, **contained an unexpected noteworthy drug**, including:
 - 31% (5) of **expected¹ cocaine substances²** contained phenacetin (!)
 - 50% (1) of **expected¹ crack cocaine substances²** contained phenacetin (!)
 - One **expected¹ bromazolam substance²** contained an unknown fentanyl-related drug (!)

Not sure what some of these drugs are? View our drug dictionary: www.drugchecking.community/drug-dictionary/

Notes

1 | Expected (drug): When a sample is submitted to be checked, the drug that sample was bought or got as is recorded. We call it the "expected drug". Knowing the expected drug helps us tailor our harm reduction advice. It also helps us understand contamination to drugs rather than combinations of drugs (e.g., fentanyl was found in a heroin sample rather than fentanyl and heroin were found together).

2 | Substances: Could be a small amount of powder, crystals, rocks, blotter, or liquid, or a crushed bit of a pill.

3 | Average amount: We arrange the amounts of a drug found as a proportion of the total fentanyl substance from smallest to largest, determine the median (i.e., the middle number), and use that number as the “average”. More information about the amounts of drugs found as a proportion of the total sample submitted can be found on [our website](#).

4 | Range: Known as the interquartile range, represents the middle 50% of the amounts of a drug found as a proportion of the total fentanyl substance. More information about the amounts of drugs found as a proportion of the total sample submitted can be found on [our website](#).

5 | Samples: Includes both substances and used drug equipment. Substances could be a small amount of powder, crystals, rocks, blotter, or liquid, or a crushed bit of a pill. Used equipment could be a used cooker or filter, or leftover liquid from a syringe.

6 | Reason for reporting only substance samples: While Toronto’s Drug Checking Service checks both substances and used equipment, drug equipment – like cookers – are often re-used. The mass spectrometry technologies used for this drug checking service are so sensitive that very trace amounts of drugs may be found. This means that when equipment is re-used, drugs from past use may present in the results for the sample that is being checked. This can interfere with up-to-date drug supply monitoring, so we’ve noted when we exclude used equipment from this report.

7 | Reporting similar drugs together: These drugs have a very similar chemical structure, and it is not currently possible for Toronto’s Drug Checking Service to differentiate between them. For this reason, we report these drugs together. For more information on these drugs, view [our drug dictionary](#).

8 | Substances that unexpectedly contain high-potency opioids or benzodiazepine-related drugs and not the expected drug: Our reports highlight unexpected noteworthy drugs found in all checked substances. When high-potency opioids or benzodiazepine-related drugs are found unexpectedly in a substance sample and the expected drug is not present, we flag it but are hesitant to consider it contamination of the expected drug. Instead, we assume there is an issue with the expected drug: the person who sold or provided the drugs accidentally mixed up their drugs, the service user accidentally mixed up their drugs, or the expected drug was recorded incorrectly during sample collection. These samples require special consideration.

(!) | Unexpected noteworthy drug: “Noteworthy drugs” are drugs that (i) are linked to overdose or other adverse effects, (ii) are highly potent or related to highly potent drugs, or (iii) may not be desired by some service users. Noteworthy drugs are flagged when they are unexpectedly found in checked samples.

[Toronto's Drug Checking Service](#) is a free and anonymous public health service that aims to reduce the harms associated with substance use and, specifically, to prevent overdose by offering people who use drugs timely and detailed information on the contents of their drugs. Beyond educating individual service users, results for all samples are collated and analyzed to perform unregulated drug market monitoring, then translated and [publicly disseminated every other week](#) to communicate unregulated drug market trends to those who cannot directly access the service, as well as to inform care for people who use drugs, advocacy, policy, and research. [Sign up](#) to receive reports, alerts, and other information on Toronto’s unregulated drug supply.

(email) hello@drugchecking.community | (X) [@drugcheckingTO](#) | (IG) [@drugchecking](#)



South Riverdale
COMMUNITY
HEALTH CENTRE

 **Toronto**
Public Health



**PARKDALE
QUEEN WEST**
Community
Health Centre



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