

Results from 185 samples checked

October 22 – November 4, 2022

Key findings

- In 39 expected¹ fentanyl substances²:

5.0% was the average³ amount of fentanyl found	2.0 – 8.0% was the range⁴ of fentanyl found in half of the substances ²
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- 7% of the expected¹ fentanyl samples⁵ were known to be **associated with an overdose**: all contained fentanyl, usually in combination with benzodiazepine-related drugs (which are also central nervous system and respiratory depressants)
- 58% of the expected¹ fentanyl samples⁵ **contained benzodiazepine-related drug(s) and/or xylazine**. Of those:
 - 15% contained benzodiazepine-related drug(s) and xylazine
 - 75% contained benzodiazepine-related drug(s) (but no xylazine) – most commonly bromazolam, which is a high-potency, short-acting benzodiazepine-related drug, similar to alprazolam (Xanax)
 - 10% contained xylazine (but no benzodiazepine-related drug(s))
- 14% of the expected¹ fentanyl samples⁵ **contained at least one nitazene opioid** (up to 20 times stronger than fentanyl)
- 7% of the expected¹ fentanyl samples⁵ **contained carfentanil** (up to 100 times stronger than fentanyl)
- We identified a “new” benzodiazepine-related drug in expected fentanyl samples: desalkylgidazepam – unfortunately, we know little about its potency or the duration of its effects at this time

Expected fentanyl substances

- 82% (40) of expected¹ fentanyl substances⁶ **contained fentanyl and other drugs**, including:
 - 90% (36) contained caffeine
 - 53% (21) contained at least one benzodiazepine-related drug (!):
 - 30% (12) contained bromazolam (!)
 - 18% (7) contained flubromazepam (!)

- 10% (4) contained deschloroetizolam (!)
- 8% (3) contained etizolam (!)
- 3% (1) contained desalkylgidazepam (!)
- 20% (8) contained xylazine (!)
- 18% (7) contained a nitazene opioid (!):
 - 13% (5) contained isotonitazene/protonitazene⁷ (!)
 - 5% (2) contained metonitazine (!)
- 8% (3) contained fluorofentanyl (!)
- 5% (2) contained carfentanil (!)
- 5% (2) contained despropionyl fentanyl (4-ANPP) (!)
- 3% (1) contained acetyl fentanyl (!)

Unexpected noteworthy drugs found in other expected substances

- 21% (23) of the remaining substances,⁶ meaning substances² that weren't expected¹ to be fentanyl, contained an unexpected noteworthy drug, including:
 - 28% (15) of **expected¹ cocaine substances²** contained phenacetin (!)
 - 7% (4) of **expected¹ cocaine substances²** contained levamisole (!)
 - 67% (2) of **expected¹ heroin substances²** contained phenacetin (!)
 - 33% (1) of **expected¹ heroin substances²** contained bromazolam (benzodiazepine-related) (!)
 - 33% (1) of **expected¹ heroin substances²** contained fentanyl (!)
 - 100% (1) of **expected¹ carfentanil substances²** contained fentanyl (!)
 - One **expected¹ crack cocaine substance² that did not contain cocaine⁸** contained fentanyl (!)

Not sure what some of these drugs are? View our drug dictionary: www.drugchecking.cdpe.org/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 cocaine sample rather than fentanyl and cocaine 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 amount of fentanyl found in expected fentanyl substances in ascending or descending order, determine the median (i.e., the middle number), and use that number as the "average". More information about the amounts of fentanyl, cocaine, carfentanil, etizolam, and caffeine found as a proportion of the total sample submitted for expected opioid, cocaine, crack cocaine, and some other powder substance samples can be found on [our website](#).

4 | Range: Represents the amount of fentanyl found in 50% of the expected fentanyl substances checked. More information about the amounts of fentanyl, cocaine, carfentanil, etizolam, and caffeine found as a proportion of the total sample submitted for expected opioid, cocaine, crack cocaine, and some other powder substance samples 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 | Isotonitazene/protonitazene: Because isotonitazene and protonitazene have a very similar chemical structure, it is not currently possible for Toronto’s Drug Checking Service to differentiate between the two. For this reason, we report the two drugs together.

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 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 combined, analyzed, and publicly disseminated every other week to communicate drug market trends and 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.

(e) drugchecking@cdpe.org | (t) [@drugpolicyctr](https://twitter.com/drugpolicyctr) | (f) facebook.com/centreondrugpolicyevaluation

