

Results from samples checked by Toronto's drug checking service

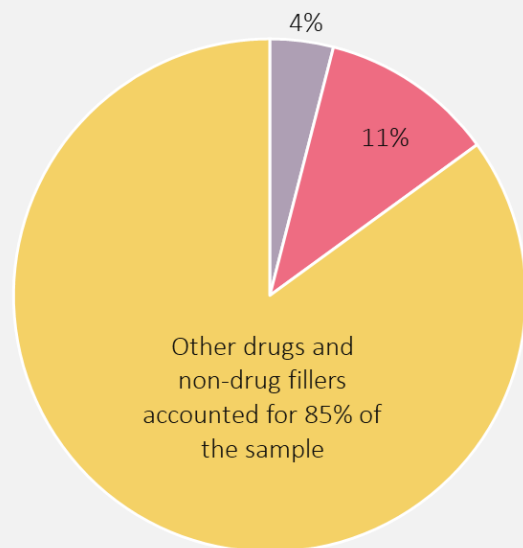
August 27 – September 9, 2022

Key findings

- 127 samples were checked: 82% were substances¹ and 18% were used equipment²
- 66% of the samples checked were expected³ to be fentanyl, MDMA, or cocaine
- 8% of the expected³ fentanyl samples checked were known to be associated with an overdose
- 40% of the expected³ fentanyl samples checked contained benzodiazepine-related drug(s) and/or xylazine. Of those:
 - 10% contained benzodiazepine-related drug(s) and xylazine
 - 76% contained benzodiazepine-related drug(s) (but no xylazine)
 - 14% contained xylazine (but no benzodiazepine-related drug(s))
- 17% of the expected³ fentanyl samples checked contained fluorofentanyl, considered to be similarly potent to fentanyl, alongside fentanyl
- 9% of the expected³ fentanyl samples checked contained carfentanil
- 9% of the expected³ fentanyl samples checked contained at least one nitazene opioid

In an average fentanyl substance:

- Fentanyl accounted for 4% of the sample (n=27)
- Caffeine accounted for 11% of the sample (n=26)



Toronto's drug checking service reports the amount of fentanyl, carfentanil, etizolam, caffeine, and cocaine found in expected opioid powder substances.⁵

Expected fentanyl substances

- 82% (27) of expected³ fentanyl substances checked⁴ **contained fentanyl and other drugs**, including:
 - 100% (27) contained caffeine
 - 15% (4) contained fluorofentanyl (!)
 - 11% (3) contained a benzodiazepine-related drug (!):

- 7% (2) contained flubromazolam (!)
- 4% (1) contained etizolam (!)
- 11% (3) contained xylazine (!)
- 7% (2) contained despropionyl fentanyl (4-ANPP) (!)
- 7% (2) contained metonitazene (!)
- 7% (2) contained phenacetin (!)

Unexpected noteworthy drugs found in other expected substances

- 20% (14) of the remaining substances checked,⁴ meaning substances that weren't expected³ to be fentanyl, **contained an unexpected noteworthy drug**, including:
 - 14% (2) of **expected³ cocaine substances** contained phenacetin (!)
 - 71% (5) of **expected³ heroin substances** contained fentanyl (!)
 - 50% (1) of **expected³ benzodiazepine substances** contained fentanyl (!)
 - 50% (1) of **expected³ crack cocaine substances** contained phenacetin (!)
 - 50% (1) of **expected³ dimethyltryptamine (DMT) substances** contained benzocaine (!)
 - 100% (1) of **expected³ oxycodone (OxyContin) substances** contained bromazolam (benzodiazepine-related) (!)
 - Two **expected³ MDMA substances that did not contain MDMA⁷** contained at least one nitazene opioid (!)
 - One **expected³ benzodiazepine substance** contained isotonitazene/protonitazene⁶ (!), phenacetin (!), and xylazine (!)

Notes

1 | Substances: Two types of samples are accepted by Toronto's drug checking service: substances and used drug equipment. Substances could be a small amount of powder, crystals, or rocks, a crushed bit of a pill, blotter, or a small amount of liquid.

2 | Used equipment: Two types of samples are accepted by Toronto's drug checking service: substances and used drug equipment. Used equipment could be a used cooker or filter, or leftover liquid from a syringe.

3 | 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).

4 | 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.

5 | Average amount of drugs found: Toronto’s drug checking service can report the amount 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. Every other week, we include the average (median) amount of fentanyl, cocaine, carfentanil, etizolam, and caffeine found in expected fentanyl substances in our report. More information is available on [our website](#).

6 | 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.

7 | 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.

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