

Service and technology limitations

It is important to remember that drug checking as a response to the toxic drug supply crisis is in its infancy. Incredibly sophisticated and sensitive technologies continue to be required to effectively check highly contaminated drugs that are most likely to contribute to overdose. **At this time, there is no perfect drug checking technology or model.** All have trade-offs in terms of quality of results, turnaround times, and cost.

1. Checking your drugs **cannot guarantee that a drug is safe to use**
2. Results for the sample you are having checked **may not represent the rest of the drugs you took this sample from** (this is known as **the Chocolate Chip Cookie Effect**)
3. Due to technological limitations, some **drugs may be missed**
4. Our drug checking techniques **do not identify or report non-drug fillers**. This could include non-drug fillers that may be dangerous, such as bacteria, metals, pesticides, or inorganic salts. Other non-drug fillers may not be dangerous, such as sugar or laxatives.
5. **Some human interpretation is required** by skilled laboratory technologists, meaning there could be some variation in results
6. **Checking substances instead of used equipment is preferred** because:
 - Drug equipment, like cookers, are often re-used. The mass spectrometry technologies used for Toronto's 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 current drug market monitoring, which is why we rely only on substance samples when reporting trends.
 - Fatty acids are more commonly found in samples that are taken from used equipment, most likely from oils on skin. These **fatty acids can interfere with the mass spectrometry analysis**. It may be difficult to see past them to determine which drugs are present.

Your results may not represent the rest of the drugs you took your sample from: this is known as **the Chocolate Chip Cookie Effect**. Imagine your drugs as a chocolate chip cookie. If you check a piece of the cookie that is only dough, chocolate may not be found. Mixing a powder or scratching different parts of a pill when preparing a sample can improve the representativeness of your sample.

