

How well do drug checking services identify drug market discrepancies? Triangulating drug checking, community surveys and wastewater

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Introduction: Drug checking services identify drug market discrepancies to help people make more informed choices about drug use. In this paper, we assess the utility of drug checking services to identify market discrepancies at a music festival through comparison with community surveys and wastewater analysis.

Methods: In May 2024, The Loop Australia ran a drug checking service at Earth Frequency Festival (Brisbane) which tested 230 drug (not plant material) samples from 152 people, alongside a survey of 148 festivalgoers. Two pooled portaloo samples, collected from a centralised tank, were also analysed for drug metabolites.

Results: The patron survey found that the most common drugs consumed at the festival were cannabis (55%), MDMA (44%), LSD (36%), ketamine (35%), mushrooms (33%) and cocaine (18%), with prescription stimulants (17%) and benzodiazepines (14%) also commonly reported. Drugs expected to be MDMA (46%) and ketamine (38%) were most commonly submitted for analysis. No community survey respondents reported intentional use of synthetic cathinones or novel dissociatives, however, these were detected by the drug checking services and/or in wastewater, including dimethylpentylone, MMC-type substances, 2F-2oxo PCE and tiletamine. Five samples expected to be mescaline were tested: none contained mescaline, with 2 containing the novel mescaline analogue diformylmescaline. Other unusual substances, like phenibut and kratom, were reported in the survey and detected in wastewater, but were not presented to drug checking.

Discussions and Conclusions: Novel substances were detected in drug checking and wastewater that were not expected or desired by the community. Wastewater detection largely matched drug checking detections.

Implications for Practice or Policy: Patron surveys and wastewater analysis help identify gaps in service coverage, and help corroborate drug checking detections, allowing services to better meet the needs of the communities they serve. Novel substances disguised as better-known drugs continue to emerge in Australian drug markets.

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