

Screening of Drug Paraphernalia with the Seized Drug Suite

Introduction

Monitoring substances of abuse and consumption trends serve harm reduction and risk assessment. Information can be received by user surveys or by analyzing drug paraphernalia such as syringes after consumption*. The latter is especially valuable when it comes to detecting and monitoring adulteration which is not known to the user.

Sample Preparation

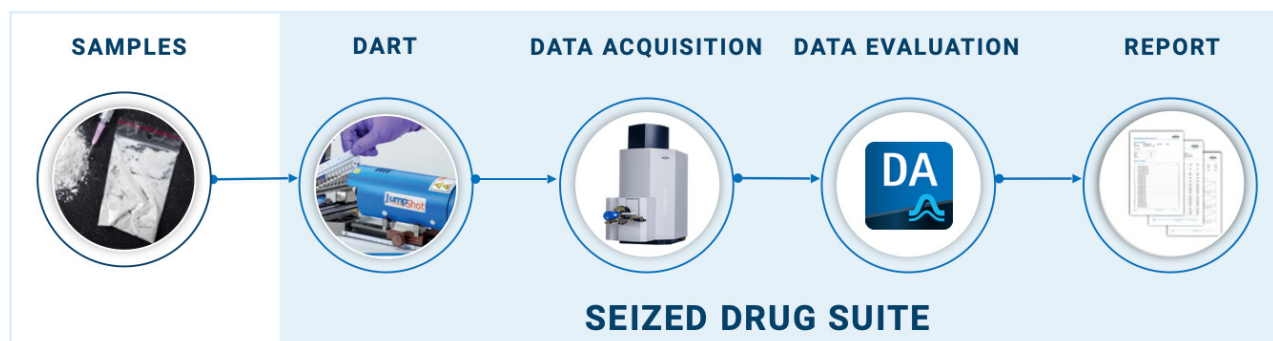
Syringes collected from harm-reduction services and drug consumption rooms were rinsed five times with 1 mL acetonitrile. This sample solution was then diluted 1:10 with acetonitrile and 3 μ L were spotted onto a

QuickStrip® for analysis with the Seized Drug Suite.

Seized Drug Suite

The Seized Drug Suite is a ready-to-use solution of hardware, software and curated methods designed for fast and reliable seized drug analysis. Using chromatography-free Direct Analysis in Real Time (DART) combined with high-resolution QTOF mass spectrometry data-dependent MS/MS acquisition and spectral library search, the Seized Drug suite enables seamless and seconds-fast detection of substances of abuse.

Workflow of the Seized Drug Suite



*ESCAPE project, EUDA
Institute of Forensic Medicine, Department of Forensic Toxicology, Freiburg, Germany

Heroin and Cocaine Most Common in Syringes

Heroin, cocaine or a combination of the two were the substances most found in the syringes. Caffeine and paracetamol were found as typical adulterants for heroin. The poppy alkaloids papaverine and noscapine as well as 6-acetylcodeine and 6-acetylmorphine (6-MAM) were also detected in various combinations and can be used to verify heroin findings.

Rapid, Reliable Drug Analysis with Minimal Solvent Use

Compared to conventional chromatography-based techniques, the Seized Drug Suite offers a significant reduction in analysis time and solvent consumption. Screening is possible in < 5 min. No false positives were observed, as confirmed by comparison with conventional LC-MS analysis. The Seized Drug Suite can be used interdependently or as a preliminary screening tool. The QTOF mass spectrometer is also compatible with both ESI and APCI modes.

Learn More:



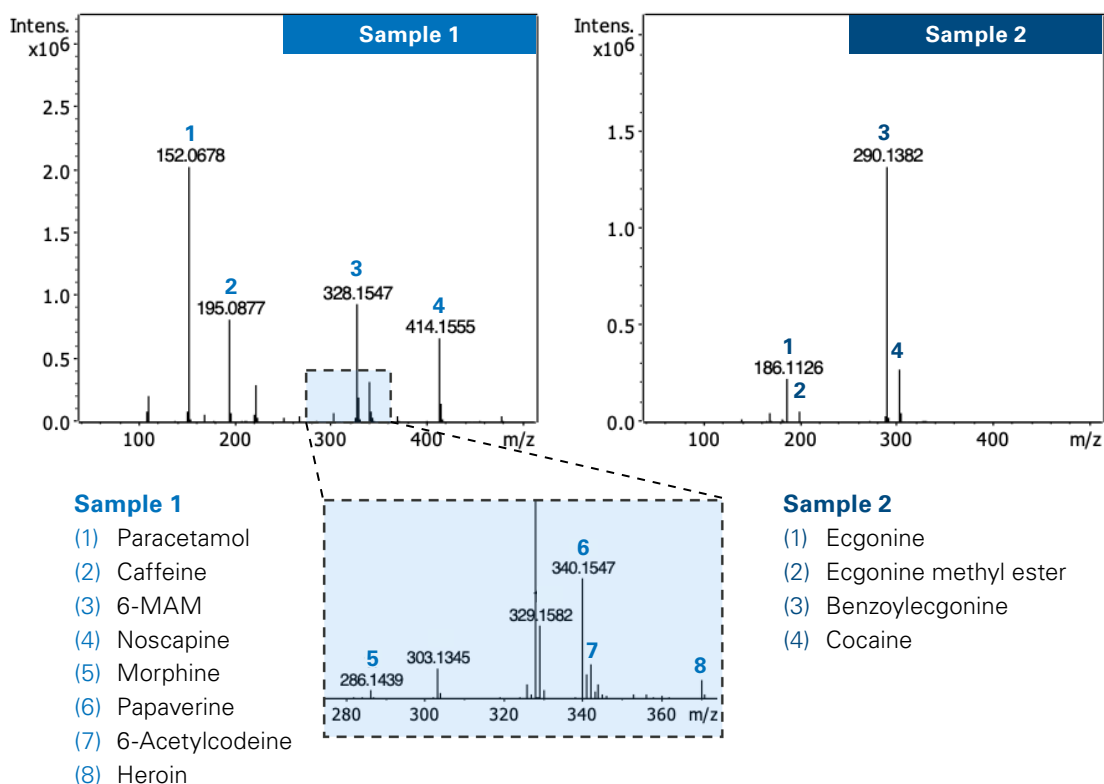
Study on authentic paper samples



A new paradigm in forensic analysis



Chromatography-free for routine screening



For Research Use Only. Not for use in clinical diagnostic procedures.

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Learn more about chromatography-free analyses:

