

ANALYSIS OF DRUGS OF ABUSE IN URINE

Agilent 6460 Triple Quadrupole LC/MS
delivers a 5-minute high-throughput
method for analysis of multiple
compounds per sample

Forensic Toxicology

Background

In forensic toxicology, LC/MS has become a preferred method for the routine quantitative and qualitative analysis of drugs of abuse, such as opioids, amphetamines, benzodiazepines, trazodone, PCP and cocaine. LC/MS requires less sample preparation, no sample derivatization, and allows for the simultaneous analysis of multiple compounds in a single run, thus enabling a fast and high throughput analysis in a cost effective manner.

The Approach

Agilent's 1290 Infinity LC and 6460 Triple Quadrupole LC/MS system enabled with Agilent Jet Stream technology delivers the ultimate in sensitivity, selectivity and speed for the analysis of drugs of abuse. This performance enhancement is leveraged by Agilent's industry proven reliability and robustness for utmost productivity and cost effectiveness.

The industry leading MassHunter software enables a simple workflow for the routine and precise quantitation of drugs of abuse. Linearity of calibration curves as well as accuracy of quality control and sample data can be quickly verified using the Batch at a Glance feature. Processed data can be viewed in a variety of user-defined customizable report formats or exported directly to a laboratory informatics management system (LIMS) in .xml or .csv format.

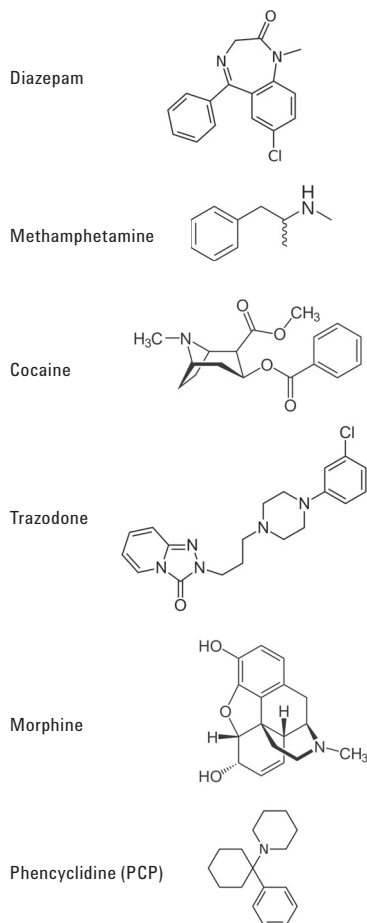


Figure 1: Examples of target compounds



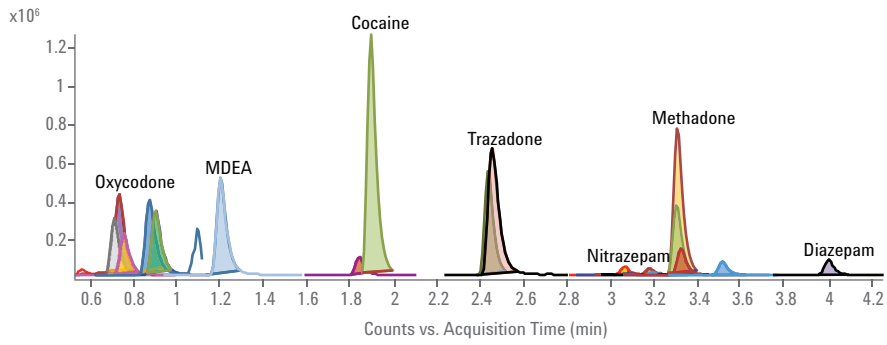


Figure 2: Sensitive and accurate detection of standard compounds extracted from urine

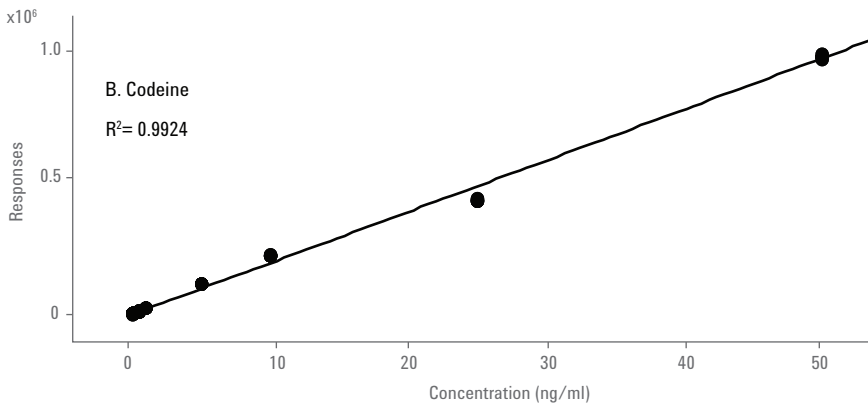
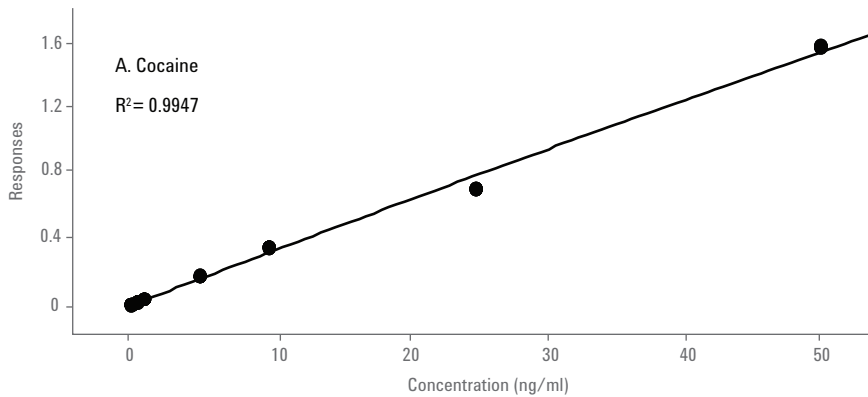


Figure 3: Excellent linearity and sensitivity allows the accurate quantification of A. cocaine and B. codeine

Key Benefits

- LC/MS enables sensitive and accurate quantitation with reduced sample preparation
- LC/MS delivers a selective, cost effective and less time-consuming method
- The Agilent 6460 Triple Quad LC/MS system with Jet Stream technology delivers sub-5 minute high-throughput method
- Agilent's Forensic Toxicology application kit provides easy method setup for up to 200 compounds
- MassHunter Quantitative Analysis Software delivers fast results and interpretation through advanced software tools

www.agilent.com/lifesciences/clinresMS

For Forensic Use.

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