

# Forensic Method

## Forensic drug screening analysis

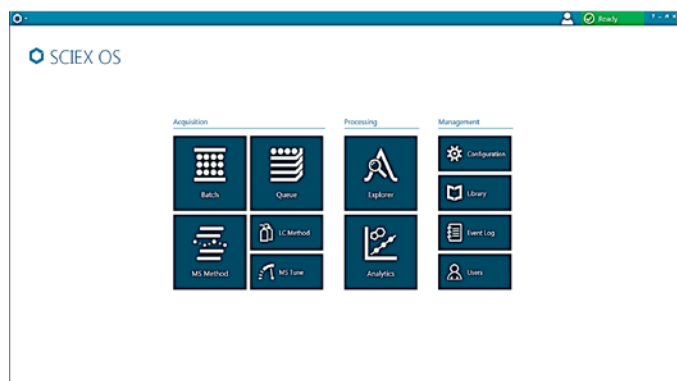
*Elevate your forensic testing with the X500R QTOF System*

Method details and access to HR-MS/MS libraries to screen for forensic drugs in urine samples using HPLC coupled with the X500R QTOF system, powered by SCIEX OS Software.



### Sample Prep

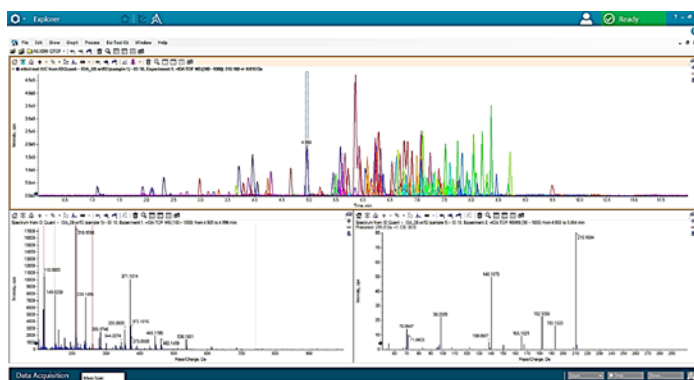
- Step 1
- Dilute urine samples 5 times with the following diluent: 90% Mobile Phase A (5mM ammonium formate in water): 10% Mobile Phase B (Methanol with 0.05% formic acid)



SCIEX OS can deliver faster method set-up

### LC Method

Column	Phenomenex Kinetex Biphenyl, 100 x 3.0 mm, 2.6 um column	
Mobile Phase A	0.1% formic acid in water	
Mobile Phase B	0.1% formic acid in methanol	
Flow rate	0.6 mL/min	
Column temperature	30°C	
Injection volume	10 µL	
Gradient profile	<b>Time (min)</b>	<b>% B</b>
	0	2
	1	2
	7	65
	7.1	100
	9	100
	9.1	2
	12	2



SCIEX OS delivers enhanced data exploration of your acquired TOF MS and TOF MS/MS data

# MS Method

**Forensic Screen\_IDA**

Method duration: 6.5 min | Total scan time: 0.41118 sec | Estimated cycles: 948

**Source and Gas Parameters**

- Ion source gas 1: 50 psi | Ion source gas 2: 50 psi
- Curtain gas: 30 psi | CAD gas: 7 psi
- Temperature: 600 °C

**Experiment** (IDA)

- Polarity: Positive V | Spray voltage: 5500 V

**TOF MS**

- TOF start mass: 100 Da | TOF stop mass: 1000 Da | Accumulation time: 0.1 sec
- Declustering potential: 80 V | DP spread: 0 V
- Collision energy: 10 V | CE spread: 0 V

**IDA Criteria** (Small molecule)

- Maximum candidate ions: 10 | Intensity threshold exceeds: 10 cps
- Dynamic background subtraction
- Exclude former candidate ions
- For: 5 sec | After: 1 occurrences

**Advanced Criteria**

**TOF MSMS**

- Presursor ion: 530 Da | TOF start mass: 40 Da | TOF stop mass: 1000 Da
- Declustering potential: 80 V | DP spread: 0 V | Accumulation time: 0.025 sec
- Collision energy: 35 V | CE spread: 15 V

Buttons: Start, Stop, Save

Suggested IDA (Information Dependent Acquisition) conditions for routine forensic drug screening as displayed in SCIEX OS

## Data Processing

Analytics window showing chromatograms and peak analysis results.

Review your results with utmost efficiency using SCIEX OS for simultaneous quantitation and MS/MS library confirmation.

## X500R High Resolution Libraries

Download the XIC List

Download a FREE Trial of the MS/MS Library

Download a free XIC compound list detailing a full list of forensic drug compounds including molecular formula and accurate mass.

Download a free trial of the forensic high resolution MS/MS library, containing 1703 compounds.

[Learn more at sciex.com/X-Forensics.](http://sciex.com/X-Forensics)

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