664 compounds = **Forensic toxicology screening**

Various matrices

1 injection for rapid screening
Single injection for screening 664 forensic toxicology compounds in 10 minutes

How do you screen for unknown compounds in complex matrices?

This single injection method for screening and identifying 664 compounds using the SCIEX X500R QTOF System is ideal for the routine forensic testing laboratory. Detect and discover a comprehensive panel for both familiar and novel psychoactive substances in your forensic samples with the X500R. Minimize your risks by testing both whole blood and urine samples by High Resolution Mass Spectrometry (HRMS) to deliver accurate and comprehensive screening results from your forensic samples.

- **Flexible hardware and software solutions**
  Both high-specificity, targeted quantitation as well as non-targeted screening from a single sample is enabled on the X500R System with this 664 method. Non-targeted data obtained on the X500R can also be retrospectively mined for additional analytes in SCIEX OS Software that may have been missed initial screens, hugely important with the constant emergence of new synthetic drugs.

- **Install and run**
  This comprehensive method has been optimized for the X500R QTOF System, designed to reduce complexities associated with accurate mass workflows. Screening for 664 compounds in a single injection, this method includes all parameters needed: retention times, HR-MS and HR-MS/MS information you need to deliver defensible results.

- **Efficient all-in-one workflow**
  Improve your laboratory throughput by implementing this method with a runtime of just 10 minutes per sample. Your laboratory will be able to run more samples, deliver accurate data quickly, and increase the potential for additional assays.

“This broad-based drug screening method offers a good balance between chromatographic separation and analysis time. The ten minute runtime allows for increased workflow, and overall analysis efficiency. The mass acquisition is designed to acquire analytes of interest in a semi-non-targeted fashion, allowing for high specificity in tracing fragment ions back to precursor ions, as well as the potential for more comprehensive retrospective data analysis for determination of analytes not within the current scope of data processing.”

Dr Alex Krotulski
The Center for Forensic Science Research & Education
Assay Components

**Sample prep**

Easy, Quick. The SCIEX protocol lists in detail all the steps required for blood and urine sample preparation for the 664 compound screen.

**Liquid Chromatography**

All of the detailed and verified LC conditions are provided to get you up and running quickly, including column selection, gradient conditions and flow rates.

**Mass spectrometer**

Employing the X500R QTOF System, this accurate mass methodology enables a powerful and unique user experience for confident data generation.

**SCIEX OS software**

SCIEX OS Software is the foundation for spectral detection, compound identification, and library screening. All made easy with intuitive software.

**Application support**

Dedicated application specialists are always ready to help and provide support. SCIEX Now™ and SCIEX University™ addresses your unique questions and self-paced learning.

### Method conditions

<table>
<thead>
<tr>
<th>Method conditions</th>
<th></th>
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<tbody>
<tr>
<td>Compounds for screening</td>
<td>664</td>
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<tr>
<td>Scan mode</td>
<td>HR-MS/MS</td>
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<tr>
<td>Polarity</td>
<td>Positive</td>
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<tr>
<td>Operating system</td>
<td>SCIEX OS</td>
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<tr>
<td>Instrument</td>
<td>X500R QTOF System</td>
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<tr>
<td>Injection volume</td>
<td>10 μL</td>
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<tr>
<td>Sample matrices</td>
<td>Whole blood urine</td>
</tr>
<tr>
<td>HR-MS/MS runtime</td>
<td>10 mins</td>
</tr>
<tr>
<td>LC separation column</td>
<td>Phenomenex Kinetex® 2.6 μm phenyl-hexyl 50 x 4.6 mm</td>
</tr>
</tbody>
</table>
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