

Rapid and Accurate LC-MS/MS Analysis of Nicotine and Related Compounds in Urine Using Raptor™ Biphenyl LC Columns and MS-Friendly Mobile Phases

A rapid, accurate, and reproducible method was developed for high-throughput testing of nicotine, cotinine, *trans*-3'-hydroxycotinine, nor nicotine, norcotinine, and anabasine in urine. Data show that a fast and highly efficient analysis of these basic compounds can be achieved with the Raptor™ Biphenyl column using standard, low pH, reversed-phase LC-MS mobile phases which are compatible with a variety of LC-MS instrumentation.



Rxi®-5Sil MS Columns: Assured Performance for Forensic Applications

Rxi®-5Sil MS columns produce excellent results for a number of forensic applications. The versatile selectivity separates a wide variety of compounds, which lets you keep analyzing samples instead of changing columns between methods. (PDF - 1751kB)



Raptor™ Biphenyl LC Columns Brochure

Raptor™ LC columns combine the speed of superficially porous particles (i.e., SPP or "core-shell") with the resolution of highly selective USLC® technology. Featuring Restek's most popular LC stationary phase, the rugged Raptor™ Biphenyl is extremely useful for fast separations in bioanalytical testing applications like drug and metabolite analyses, especially those that require a mass spectrometer (MS). (PDF - 5848kB)



Dissecting Raptor™ LC Columns: A closer look at a new species

When we engineered our superficially porous particle (SPP or "core-shell") Raptor™ LC columns, we developed the bonding chemistries that are best suited to both the SPP construction and our highly selective USLC® phases. But we didn't stop here. Take a closer look at a new species as we dissect the upgraded hardware and new, proprietary packing techniques behind Raptor™ LC columns and Raptor™ EXP® guard columns. (PDF - 1987kB)

Fast, Robust LC-MS/MS Method for Quantification of Multiple Therapeutic Drug Classes Using an Ultra Biphenyl Column

Therapeutic drug monitoring requires streamlined, cost-effective testing procedures. This article details a fast, robust LC-MS/MS method for the quantification of 29 therapeutic drugs and metabolites in urine from several classes including opiates, benzodiazepines, tricyclic antidepressants, and anticonvulsants. Good linearity, accuracy, and precision results were obtained for most analytes in a fast, 5.5-minute analysis.



New Rtx®-BAC Plus 1 and Rtx®-BAC Plus 2 Columns: Advanced Technology for Fast, Reliable Measurement of Alcohol in Blood

New Rtx®-BAC Plus columns outperform other blood alcohol column pairs and ensure baseline separation of all critical compounds. These columns provide definitive data in a fast, 2-minute analysis, so you can be certain of your results and maximize sample throughput. (PDF - 940kB)



Fast, Definitive Data for Blood Alcohol Testing

New Rtx®-BAC Plus 1 and Rtx®-BAC Plus 2 columns provide definitive results quickly, so you can maximize sample throughput. These columns baseline separate all critical blood alcohol compounds, including ethanol, methanol, acetone, tert-butanol, acetaldehyde, isopropanol, and n-propanol, in less than 2 minutes. (PDF - 522kB)

USLC® Columns Put the Right Tools in Your LC Method Development Toolbox

Column selectivity has the most significant influence on chromatographic peak separation, or resolution, so choosing the right column can greatly speed up HPLC and UHPLC method development. In this article, we discuss column choice and identify a set of just 4 stationary phases—Restek's USLC® column

set—that encompasses the widest range of reversed phase selectivity available today.



Restek Ultra Biphenyl Columns: Next Generation Phenyl Columns are the Best Choice for Pain Panel Analyses

The aromatic retention of Ultra Biphenyl columns for pharmaceutical and drug-like compounds makes them ideal for pain panel analyses, such as the AB SCIEX Cliquid® pain method, as well as clinical methods for NSAIDs, THC and metabolites, synthetic cannabinoids, steroids, hormones, and sulfonamides in milk. (PDF - 566kB)

4.5 Minute Analysis of Benzodiazepines in Urine and Whole Blood Using LC/MS/MS and an Ultra Biphenyl Column

Sample throughput for benzodiazepines in urine and whole blood can be increased by adopting this dilute-and-shoot LC/MS/MS method which uses an Ultra Biphenyl HPLC column. Partial validation data are presented in this application note.

LC/MS/MS Analysis of Metabolites of Synthetic Cannabinoids JWH-018 and JWH-073 in Urine

This application note details a fast extraction and analysis method for a wide range of metabolites of synthetic cannabinoids JWH-018 and JWH-073 in urine. Quantitative results are reported for carboxylated and mono-hydroxylated metabolites, including positional isomers.



Bipheryl: Leading Resolution in LC for Clinical and Forensic Applications

Versatile Bipheryl columns provide excellent retention of both polar and nonpolar compounds, resulting in improved resolution of benzodiazepines, cannabinoids, and other key target compounds for clinical or forensic applications. (PDF - 633kB)

Fast Screening of Recalled Tylenol® for Tribromoanisole and Related Adulterants Using QuEChERS and GC-TOFMS

Screening methods for consumer product adulteration cases, such as the recent Tylenol recall, can benefit from fast QuEChERS-based sample preparation and sensitive, full mass-range GC/TOF-MS.

Sensitive GC/MS Analysis for Drugs of Abuse

An Rxi®-5ms column will resolve acidic/neutral or free basic drugs under one set of conditions. There is no interference from column bleed — not even at 330°C. This is one of the first published applications for our new family of Rxi® columns.

Reduce Downtime and Cost of Materials with Rugged Rxi®-5Sil MS GC Columns

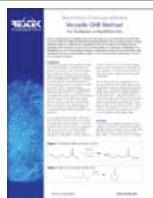
New Rxi®-5Sil MS columns produce consistent results for amphetamine—even after 400 injections of derivatizing reagent—resulting in less time and money spent on column maintenance and replacement.

5 Minute Analysis of Vitamin D in Serum by LC/MS/MS

Conventional techniques for vitamin D analysis often lack adequate sensitivity, specificity, and speed. This LC/MS/MS assay results in highly symmetric peaks that elute in just 5 minutes.

Fast Screening and Confirmation of Gamma-Hydroxybutyrate (GHB) in Urine

The headspace (HS) analysis of gamma-hydroxybutyrate (GHB) described here reduces contamination and eliminates time-consuming derivatization. Confirmation testing using an Rtx®-5MS column, provides definitive results in less than 7 minutes.



Versatile GHB Method For Headspace or Liquid Injection

The headspace (HS) analysis of gamma-hydroxybutyrate (GHB) described here reduces contamination and eliminates time-consuming derivatization. Confirmation testing using an Rtx®-5MS column, provides definitive results in less than 7 minutes. (PDF - 210kB)

Reliably Confirm Cannabinoids by GC-MS

Screening for evidence of marijuana use is typically done using an immunoassay method to detect derivatives in urine, but confirmation of positive results requires GC-MS. Here we describe a GC-MS method, using an Rxi®-5ms column, that resolves all major cannabinoid metabolites to baseline and exhibits very low bleed, even at 300 °C. We also prolonged column life by baking at 340 °C to remove derivatization by-products.

Rapid Analysis of Steroid Hormones by GC/MS

GC/MS analysis of urinary steroid hormones is a demanding application, and the Rxi®-1ms column meets the requirements for low bleed and inertness better than any column we have tested. We analyzed a variety of derivatized steroid sex hormones in less than 25 minutes, with excellent resolution and symmetric peaks. At 300°C or above, bleed from the Rxi®-1ms column was negligible.

GC Inlet Liner Deactivations for Basic Drug Analysis

Basic drugs can interact with active sites on the surface of the inlet liner, reducing responses. The combination of a base-deactivated liner and a base-deactivated Rtx®-5Amine column ensures the greatest responses in analyses for these compounds.



Thermal Desorption: A Practical Applications Guide: III. Defence and Forensic

Thermal desorption is used extensively for forensic science. This 16-page publication from Markes International Ltd. presents several key applications including drugs, arson accelerants, trace explosives, shotgun propellant, and inks. (PDF - 665kB)



Fast, Accurate Analysis of Synthetic Cannabinoids and Metabolites in Human Urine by LC-MS/MS

Determination of cannabinoids and their metabolites is increasingly in demand at many forensic toxicology laboratories, but developing accurate, rugged LC-MS/MS methods is quite challenging. For example, synthetic cannabinoids JWH-018 and JWH-073 and their metabolites cannot be distinguished by MS/MS alone due to the presence of multiple positional isomers with identical molecular weights and very similar fragmentation patterns. These analytes must be chromatographically separated for accurate reporting. Using a Raptor™ Biphenyl LC column and simple dilute-and-shoot methodology, we separated these key cannabinoids and their metabolites in urine with analysis times of less than 7 minutes. (PDF - 837kB)

Show entries

First Previous **1** Next Last