

Stationary Phase: **EtG/EtS**

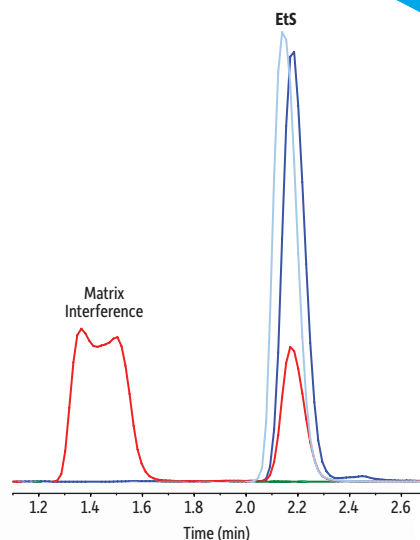
# Raptor

LC Columns

*Selectivity Accelerated*

## All Matrix Interferences Resolved

How often are matrix interferences affecting your EtG/EtS analysis? Restek's EtG/EtS solution consistently resolves analytes away from matrix interferences in a fast, 4-minute, dilute-and-shoot method.



**RESTEK**

Pure Chromatography

[www.restek.com/raptor](http://www.restek.com/raptor)

# Raptor EtG/EtS Column

- Proven performance for accurate, reliable ethyl glucuronide (EtG) and ethyl sulfate (EtS) analysis.
- Strong retention consistently resolves analytes from matrix interferences.
- Long column lifetime ensures consistent performance injection after injection.
- Fast, 4-minute, dilute-and-shoot LC-MS/MS analysis supports high sample throughput.

Switch to a Raptor EtG/EtS column when you need consistent resolution of EtG and EtS from matrix interferences and long column lifetimes.

Order yours today at [www.restek.com/raptor](http://www.restek.com/raptor)

**Part of Restek's Raptor LC column line featuring SPP core-shell silica:**

- Higher efficiency and resolution for drastically faster analysis times.
- Increased sample throughput with existing HPLC instrumentation
- Long-lasting ruggedness for dependable reproducibility.

## Column Description

**Pore Size:**

90 Å

**Particle:**

2.7 µm superficially porous particle (SPP or "core-shell" particle) silica

**Surface Area:**

130 m<sup>2</sup>/g

**End-Cap:**

Proprietary

**Carbon Load:**

Proprietary

**USP Phase Code:**

NA

**Phase Category:**

Proprietary

**Ligand Type:**

Proprietary

**Recommended Usage:**

pH Range: 2.0–8.0

Maximum Temperature: 40 °C

Maximum Pressure: 600 bar/8700 psi



**Properties:**

- Resolution of EtG and EtS from matrix interferences.
- Increased retention of EtG and EtS compared to traditional phases.

**Switch to a Raptor EtG/EtS when:**

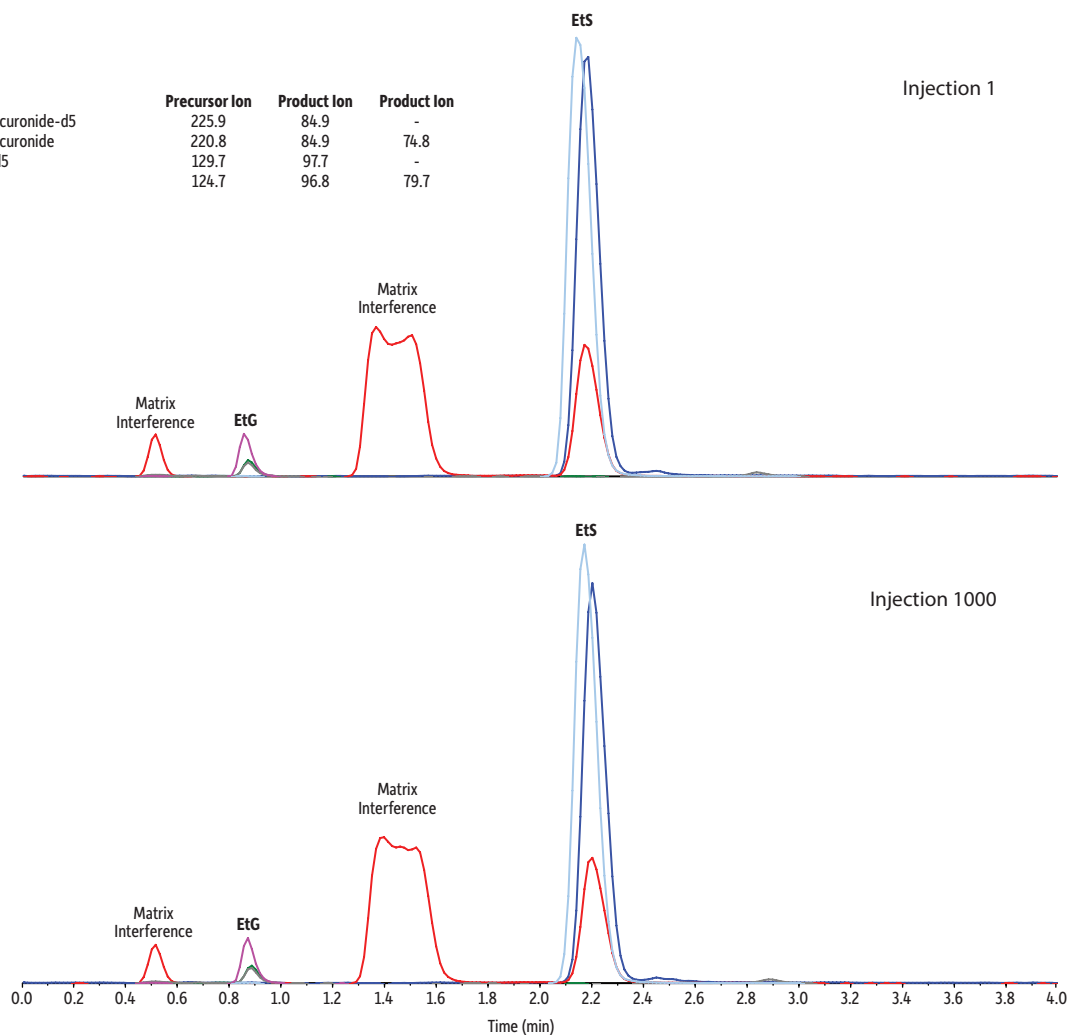
- Other columns can't resolve EtG and EtS from matrix components.
- You need high-throughput EtG/EtS analysis.
- Low-level detection limits are desired.



## Definitive Results for Alcohol Monitoring

Restek has developed a new Raptor column that significantly improves EtG and EtS analysis for alcohol monitoring programs. The Raptor EtG/EtS column consistently retains and resolves these important biomarkers from matrix interferences, providing accurate, reliable results injection after injection (Figure 1). Dependable performance, a fast 4-minute analysis, and long column lifetime make this column ideal for high-throughput labs. Paired with our quality reference standards and the optimized, verified method shown below, Restek's Raptor EtG/EtS column is part of a complete solution that will help testing labs save time and increase certainty.

**Figure 1:** Rugged Raptor EtG/EtS columns provide complete resolution and consistent results even after 1000 injections, allowing more samples to be analyzed between column changes.



LC\_CF0706

Column: Raptor EtG/EtS (cat.# 9325A12); Dimensions: 100 mm x 2.1 mm ID, Particle Size: 2.7 μm; Guard Column: UltraShield UHPLC precolumn filter, 0.2 μm frit (cat.# 25809); Temp.: 35 °C; Sample: A 500 ng/mL QC sample was prepared in urine. 50 μL of the sample was diluted with 950 μL of a working internal standard (25 ng/mL EtS-d5/100 ng/mL EtG-d5 in 0.1% formic acid in water). The sample was vortexed at 3500 rpm for 10 seconds to mix. The sample was then centrifuged at 3000 rpm for 5 minutes at 10 °C. The autosampler needle was adjusted to inject from the supernatant. Inj. Vol.: 10 μL; Mobile Phase: A: 0.1% Formic acid in water; B: 0.1% Formic acid in acetonitrile; Gradient (%B): 0.00 min (5% B), 2.50 min (35% B), 2.51 min (5% B), 4.00 (5% B); Flow: 0.5 mL/min; Detector: MS/MS; Ion Mode: ESI-; Mode: MRM; Instrument: HPLC; Notes: The following reference standards were used: ethyl-β-D-glucuronide (cat.# 34101), ethyl-β-D-glucuronide-d5 (cat.# 34102), ethyl sulfate sodium salt (cat.# 34103), ethyl sulfate-d5 sodium salt (cat.# 34104).

# Struggling with EtG/EtS matrix interferences? Here's your solution!



## Raptor EtG/EtS LC Column

- Proven performance for accurate, reliable ethyl glucuronide (EtG) and ethyl sulfate (EtS) analysis.
- Strong retention consistently resolves analytes from matrix interferences.
- Long column lifetime ensures consistent performance injection after injection.
- Fast, 4-minute, dilute-and-shoot LC-MS/MS analysis supports high sample throughput.
- Save time and increase certainty with Restek's definitive EtG/EtS method and quality reference standards.

Particle Size	ID	Length	qty.	cat.#
2.7 µm	2.1 mm	100 mm	ea.	9325A12

## UltraShield UHPLC PreColumn Filter



- Cost-effective protection for UHPLC systems.
- Reliable way to filter out particulates and extend column lifetime.
- Minimize extra column volume and maximize UHPLC sample throughput vs. guard cartridges.
- Connects easily to any column with Parker-style ports; not compatible with Waters columns.
- Leak tight to 15,000 psi (1034 bar).
- 0.5 µm or 0.2 µm stainless-steel frit in a stainless-steel body with PEEK ferrule.

Description	Porosity	qty.	cat.#
UltraShield UHPLC PreColumn Filter	0.2 µm frit	ea.	25809
	0.2 µm frit	5-pk.	25810
	0.2 µm frit	10-pk.	25811

## EtG and EtS Standards

- Alcohol metabolite biomarkers for monitoring alcohol consumption in urine samples.

Description	CAS #	Conc. in Solvent	Certified Reference Material?	Max Shelf Life on Ship Date	Min Shelf Life on Ship Date	cat.#
Ethyl-β-D-glucuronide (EtG)	17685-04-0	1000 µg/mL in methanol, 1 mL/ampul	Yes	36 months	6 months	34101 (ea.)
Ethyl-β-D-glucuronide-d5 (EtG-d5)	1135070-98-2	1000 µg/mL in methanol, 1 mL/ampul	Yes	36 months	6 months	34102 (ea.)
Ethyl sulfate sodium salt (EtS)	546-74-7	1000 µg/mL in methanol, 1 mL/ampul	Yes	36 months	6 months	34103 (ea.)
Ethyl sulfate-d5 sodium salt (EtS-d5)	1329611-05-3	1000 µg/mL in methanol, 1 mL/ampul	Yes	36 months	6 months	34104 (ea.)



Experience *Selectivity Accelerated*. Order the Raptor EtG/EtS today at [www.restek.com/raptor](http://www.restek.com/raptor)

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Lit. Cat.# CF5S2741C-UNV