The Original Biphenyl: First and Still the Best

Twenty years ago, Restek was the first to bring chromatographers the pioneering Restek Biphenyl LC column. Trailblazing a new approach to LC separations, the Restek Biphenyl LC column's exceptionally unique selectivity made it possible to achieve better separations than were possible on traditional C18 columns or other phenyl chemistries. Today, as copycat columns continue to come out, Restek remains committed to innovation, not imitation. Keep reading to learn why innovation matters and how our Biphenyl LC column can help simplify your separations and advance your science today.

Want to learn how the Biphenyl column changed chromatography?

Read the Biphenyl story at
www.restek.com/pages/biphenyl-history

20 YEARS OF BIPHENYL

Why Innovation Matters

The innovative Biphenyl (USP L11) is Restek's most popular LC stationary phase because it is particularly adept at separating compounds that are hard to resolve or that elute early on other popular phases. As a result, our rugged Biphenyl LC columns are extremely useful for fast separations—even of isobars—in challenging analyses, especially those that require a mass spectrometer (MS). The Restek Biphenyl LC column's heightened selectivity makes it a go-to choice as a starting column in method development and eliminates the need for complex mobile phases that are not well suited for MS detection.

Interested to see how Biphenyl can work in your lab?

Get in touch with an expert at **www.restek.com/contact-biphenyl**

See the Biphenyl in Action

Pain Management and Drugs of Abuse

Figure 1: The Restek Biphenyl LC column's ability to separate isobars and critical pairs in drug panels made it possible to include more compounds per panel, leading to improved accuracy for these critical assessments.

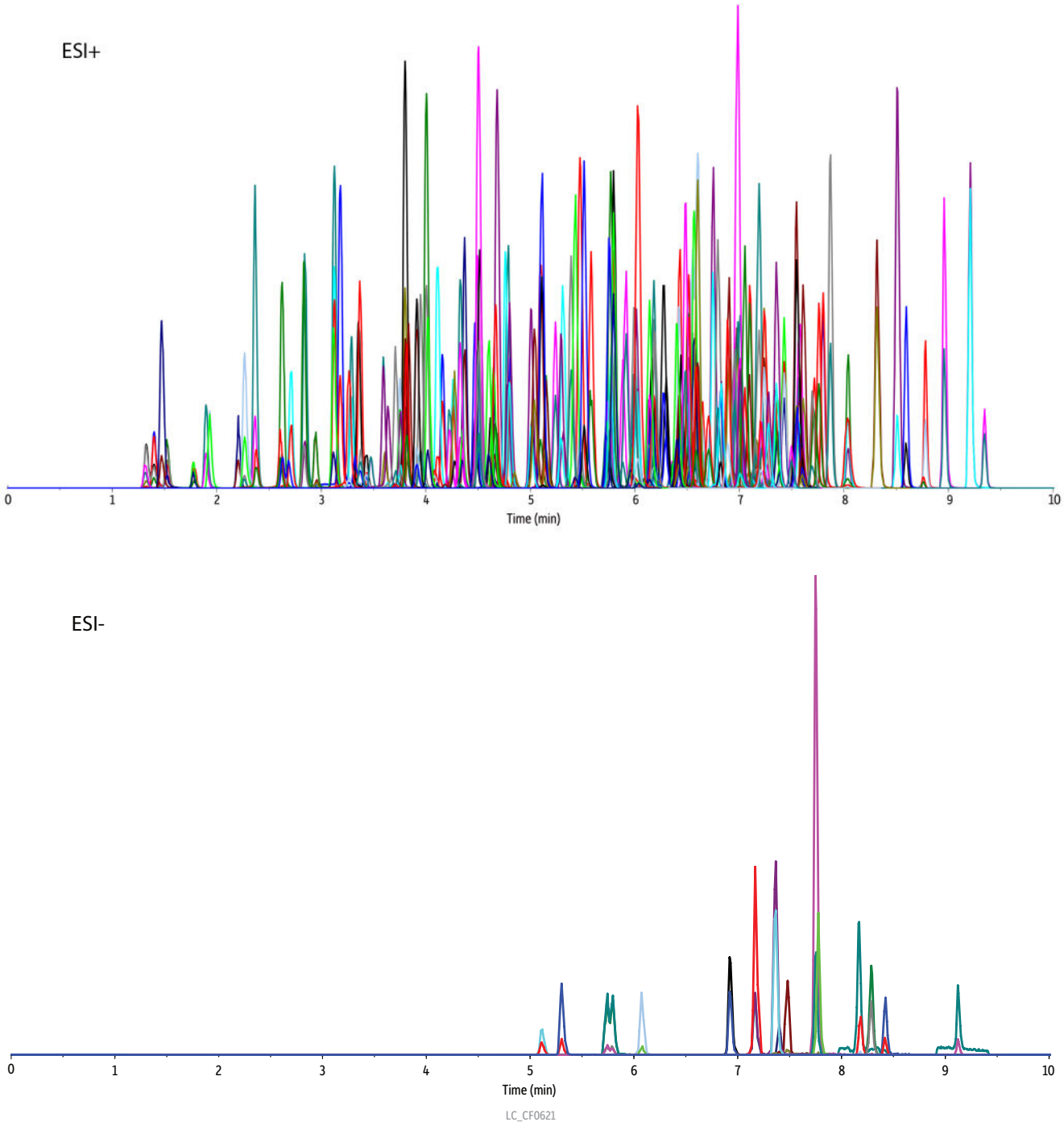


Figure 2: The unique selectivity of the Raptor Biphenyl column is well suited for this analysis of pharmaceuticals and personal care products by UHPLC.

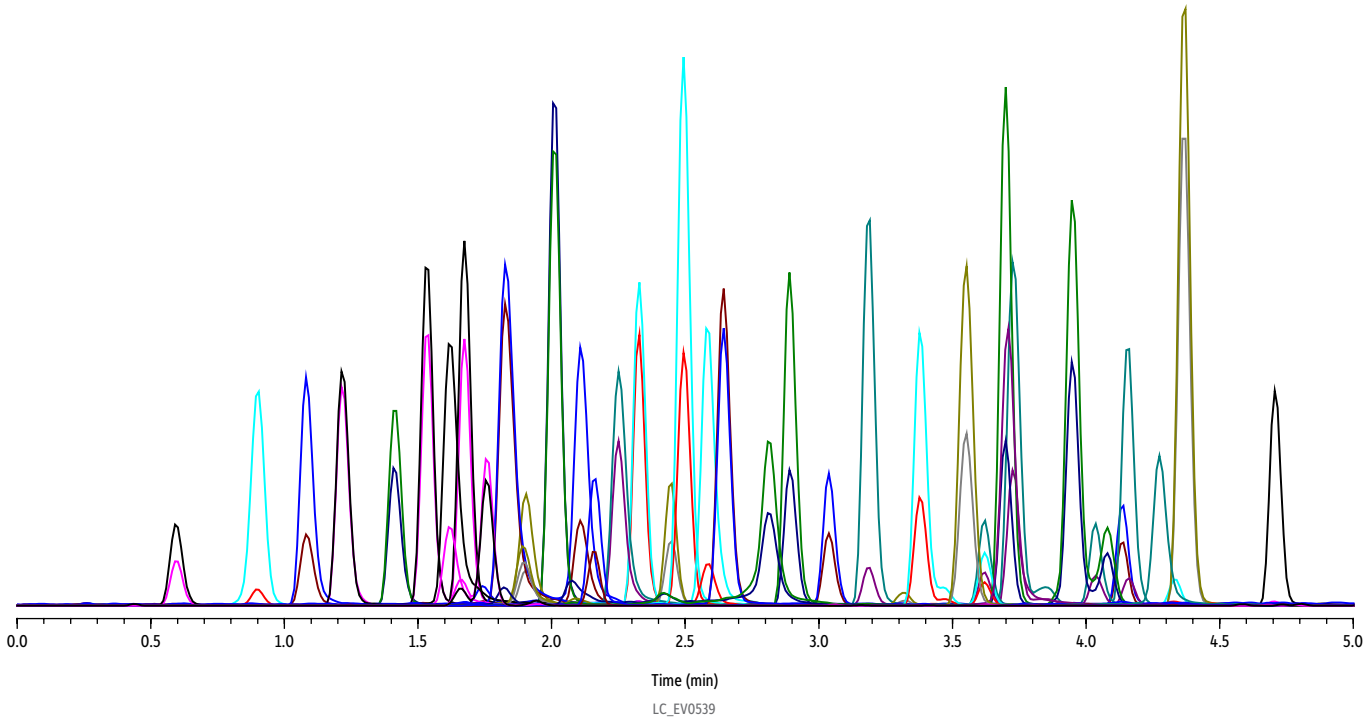
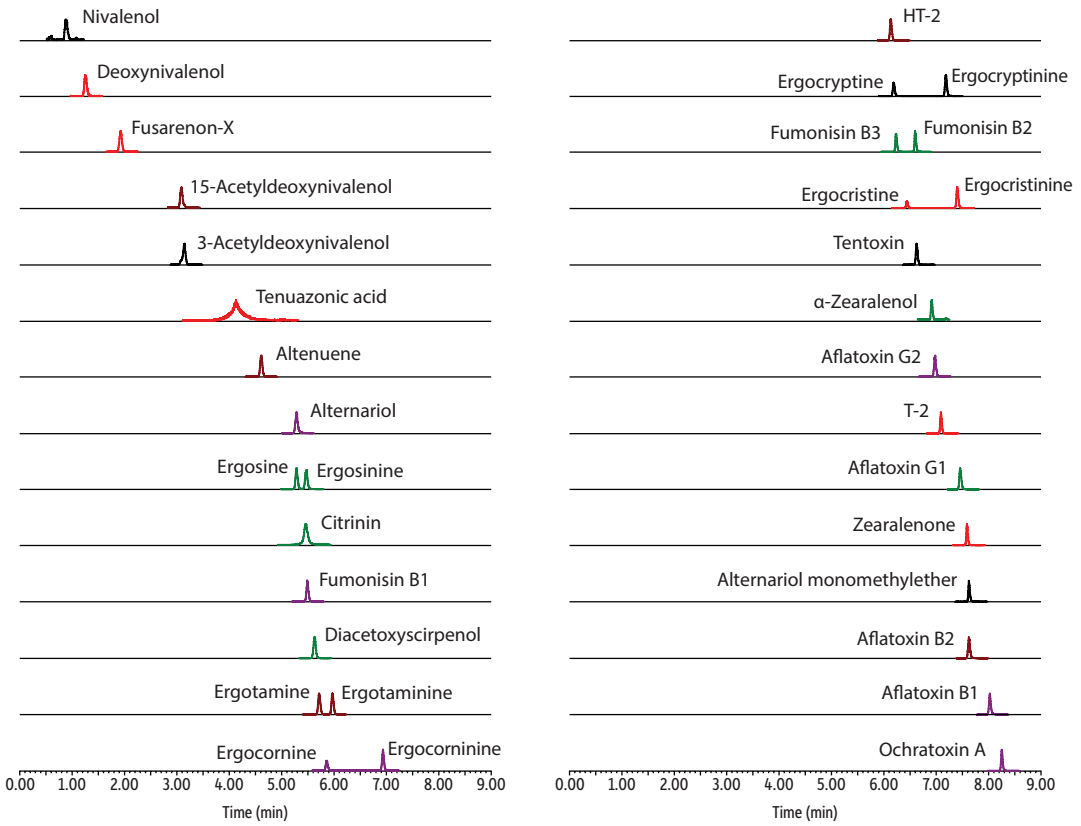


Figure 2: Excellent separation and peak shapes were achieved in this multi-mycotoxin analysis using a Raptor Inert Biphenyl LC column.



Choose the Right Biphenyl LC Column for Your Analysis

Raptor SPP Columns Premier performance columns that combine the speed of superficially porous particles (SPP or "core-shell") with time-tested Restek Biphenyl selectivity.

Force FPP Columns Long-lasting, reproducible, and fully scalable FPP (fully porous particle) columns that let you easily transfer methods across your entire lab, from trusted-but-aged HPLCs to cutting-edge UHPLCs.

Ultra Columns High-purity, type-B silica that minimizes activity and creates high-density bonding for reliable HPLC use.

Raptor LC Columns

FORCE PERFORMANCE LC COLUMNS

Raptor Biphenyl LC Columns

Length	2.1 mm cat.#	3.0 mm cat.#	4.6 mm cat.#
1.8 µm Columns			
30 mm	9309232	—	—
50 mm	9309252	930925E	—
100 mm	9309212	930921E	—
150 mm	9309262	—	—
2.7 µm Columns			
30 mm	9309A32	9309A3E	9309A35
50 mm	9309A52	9309A5E	9309A55
100 mm	9309A12	9309A1E	9309A15
150 mm	9309A62	9309A6E	9309A65
5 µm Columns			
30 mm	—	930953E	—
50 mm	9309552	930955E	9309555
100 mm	9309512	930951E	9309515
150 mm	9309562	930956E	9309565
250 mm	—	—	9309575

Raptor EXP Guard Column Cartridges

Description	Particle Size	qty.	5 x 2.1 mm cat.#	5 x 3.0 mm cat.#	5 x 4.6 mm cat.#
Raptor Biphenyl EXP Guard Column Cartridge	UHPLC	3-pk.	9309U0252	9309U0253	
Raptor Biphenyl EXP Guard Column Cartridge	2.7 µm	3-pk.	9309A0252	9309A0253	9309A0250
Raptor Biphenyl EXP Guard Column Cartridge	5 µm	3-pk.	930950252	930950253	930950250

1034 bar/15,000 psi* (UHPLC); 600 bar/8700 psi (2.7 µm); 400 bar/5800 psi (5 µm).
* For maximum lifetime, recommended maximum pressure for 1.8 µm particles is 830 bar/12,000 psi.

Raptor Inert Biphenyl HPLC Columns

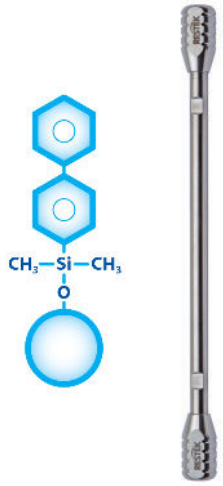
ID	Length	Particle Size	Units	Cat.#
2.1 mm	100	2.7 µm	ea.	9309A12-T
3.0 mm	100	2.7 µm	ea.	9309A1E-T
2.1 mm	50	2.7 µm	ea.	9309A52-T
3.0 mm	50	2.7 µm	ea.	9309A5E-T

Raptor Inert EXP Guard Column Cartridges

Product Name	Cat.#
Raptor Inert Biphenyl 2.7 µm EXP Guard Column Cartridge 5 x 2.1 mm, 3-pk.	9309A0252-T
Raptor Inert Biphenyl 2.7 µm EXP Guard Column Cartridge 5 x 3.0 mm, 3-pk.	9309A0253-T

Force Biphenyl LC Columns (USP L11)

ID	Length	qty.	cat.#
1.8 µm Particles Force Biphenyl LC Column			
2.1 mm	30 mm	ea.	9629232
	50 mm	ea.	9629252
	100 mm	ea.	9629212
3.0 mm	50 mm	ea.	962925E
	100 mm	ea.	962921E
3 µm Particles Force Biphenyl LC Column			
2.1 mm	30 mm	ea.	9629332
	50 mm	ea.	9629352
	100 mm	ea.	9629312
	150 mm	ea.	9629362
3.0 mm	50 mm	ea.	962935E
	100 mm	ea.	962931E
	150 mm	ea.	962936E
4.6 mm	100 mm	ea.	9629315
	150 mm	ea.	9629365
5 µm Particles Force Biphenyl LC Column			
2.1 mm	50 mm	ea.	9629552
	100 mm	ea.	9629512
	150 mm	ea.	9629562
3.0 mm	50 mm	ea.	962955E
	100 mm	ea.	962951E
	150 mm	ea.	962956E
4.6 mm	100 mm	ea.	9629515
	150 mm	ea.	9629565
	250 mm	ea.	9629575



Force EXP Guard Column Cartridges

Description	Size	qty.	cat.#
Force Biphenyl EXP Guard Column Cartridge	5 x 2.1 mm	3-pk.	962950252
	5 x 3.0 mm	3-pk.	962950253
	5 x 4.6 mm	3-pk.	962950250

Maximum cartridge pressure: 600 bar/8700 psi.
Intellectual Property: optimizetech.com/patents

Force Inert Biphenyl HPLC Columns

ID	Length	Particle Size	Units	Cat.#
2.1 mm	100	3 µm	ea.	9629312-T
3.0 mm	100	3 µm	ea.	962931E-T
2.1 mm	50	3 µm	ea.	9629352-T
3.0 mm	50	3 µm	ea.	962935E-T

Inert Guard Column Cartridges

Premium inert coating reduces nonspecific binding of chelating analytes.

Product Name	Cat.#
Force Inert Biphenyl EXP Guard Cartridge 5 x 2.1 mm, 3-pk.	962950252-T
Force Inert Biphenyl EXP Guard Cartridge 5 x 3.0 mm, 3-pk.	962950253-T

EXP Direct Connect Holder

Description	qty.	cat.#
EXP Direct Connect Holder for EXP Guard Cartridges (includes hex-head fitting & 2 ferrules)	ea.	25808

Intellectual Property: optimizetech.com/patents
Maximum holder pressure: 20,000 psi (1400 bar).

25808

UltraShield UHPLC PreColumn Filter

Description	Porosity	qty.	cat.#
UltraShield UHPLC PreColumn Filter	0.5 µm frit	ea.	24995
	0.5 µm frit	5-pk.	24996
	0.5 µm frit	10-pk.	24997
	0.2 µm frit	ea.	25809
	0.2 µm frit	5-pk.	25810
	0.2 µm frit	10-pk.	25811

24995

EXP Reusable Fittings for HPLC & UHPLC for 10-32 fittings and 1⁄16" tubing

EXP Hand-Tight Fittings

Description	qty.	cat.#
EXP Hand-Tight Fitting (nut w/ferrule)	ea.	25937
	10-pk.	25938

Intellectual Property: optimizetech.com/patents

25937

Specifications
Inlet/Outlet: Female/Male 10-32
Port Geometry: Parker ($^{1}/_{16}$ CPI)
Material: stainless steel, PEEK ferrule
Filter: 0.5 µm or 0.2 µm stainless steel
Pressure Rating: 15,000 psig (1034 bar)
Wrench Flat: $^{5}/_{16}$"

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Lit. Cat.# GNSS3457C-UNV