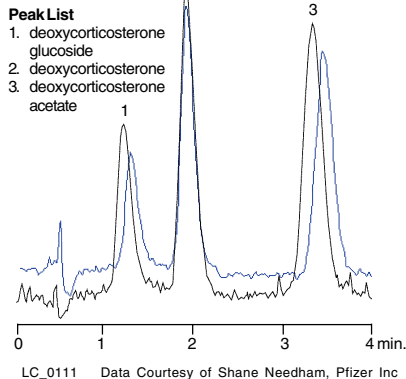


## Allure™ C18 high carbon load phase is ideal for LC/MS applications

The sensitivity of LC/MS analyses is strongly affected by the percentage of organic content in the mobile phase. High organic content can greatly increase LC/MS signal-to-noise ratio. However, most commercial C18 phases contain only 10 to 15% carbon load so that less organic must be used in the mobile phase to retain solutes. The Allure™ C18 phase has a 27% carbon load, which results in increased retention and increased LC/MS sensitivity, even with high organic mobile phases. In the LC/MS analysis of steroids, the Allure™ C18 column shows a 26 % increase in sensitivity when compared to a conventional C18 phase (Figure 2).

**Figure 2**  
Allure™ C18 Columns Show a 26% Increase in LC/MS Sensitivity for Slightly Polar Steroids Compared to Conventional C18

<b>Column:</b>		
Catalog #:	9164552	<b>Allure™ C18</b>
Dimensions:	50 x 2.1mm	<b>H<sub>2</sub>O:MeOH (33:67)</b>
Particle size:	5µm	<b>4191.1 cps</b>
Pore size:	60Å	
<b>Conditions:</b>		
Scan range:	320-520amu	<b>Conventional C18</b>
Flow rate:	0.4mL/min.	<b>H<sub>2</sub>O:MeOH (40:60)</b>
LC/MS Interface:	Positive ion	<b>3324.0 cps</b>
	ESI-TOF	
Voltage:	3800V	
Nozzle temp.:	160V	
Nozzle volt.:	190V	



# Allure™ C18 HPLC Columns

## Maximum Retention and Peak Symmetry

Restek's Allure™ C18 column is designed using a simple yet unique bonding chemistry that offers improved resistance to hydrolysis and superior batch-to-batch reproducibility. The high carbon load phase exhibits maximum retention characteristics, making it ideal for liquid chromatography/mass spectrometry (LC/MS) applications. The phase is bonded onto a highly base-deactivated Type B silica, resulting in improved peak symmetry, even for basic analytes. The Allure™ C18 column can be used to analyze a wide range of compounds, from steroids and antibiotics to explosives (Figure 1).

## Features & Benefits

Feature	Benefit
Highly base-deactivated silica.	Excellent peak symmetry for basic compounds.
Unique bonding technology resists hydrolysis of bonded phase.	More consistent retention times and longer column lifetime.
Excellent batch-to-batch consistency.	Reproducible analyses.
High carbon load phase.	Improved LC/MS sensitivity and HPLC resolution.

**Figure 1**

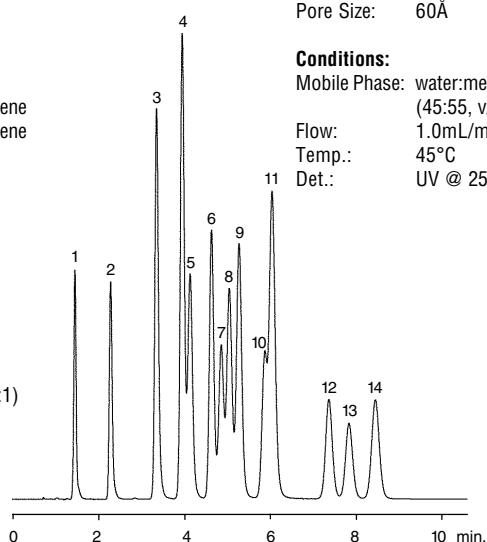
Allure™ C18 separates all US EPA Method 8330 explosives in under 10 minutes.

- Peak List:**
1. HMX
  2. RDX
  3. 1,3,5-trinitrobenzene
  4. 1,3-dinitrobenzene
  5. tetryl
  6. nitrobenzene
  7. 4-amino-2,6-dinitrotoluene
  8. 2-amino-4,6-dinitrotoluene
  9. trinitrotoluene
  10. 2,6-dinitrotoluene
  11. 2,4-dinitrotoluene
  12. 2-nitrotoluene
  13. 4-nitrotoluene
  14. 3-nitrotoluene

**Sample:**  
Inj.: 5µL  
Conc.: 50µg/mL  
Solvent: water:methanol (1:1)

**Column:** Allure™ C18  
Dimensions: 150 x 4.0mm  
Particle Size: 5µm  
Pore Size: 60Å

**Conditions:**  
Mobile Phase: water:methanol (45:55, v/v)  
Flow: 1.0mL/min.  
Temp.: 45°C  
Det.: UV @ 254nm



LC\_0065

# FAST FACTS

At-a-Glance  
Product  
Information  
from Restek

**Restek is your free  
technical literature source!**

**Application Notes:**

(#59511A) Improved HPLC  
Analysis of Analgesics

(#59512) The Ultra IBD Column Allows  
HPLC Separation of Polar and Non-Polar  
Analytes from the Same Sample

(#59510) HPLC Stationary Phase Selection  
for the Analysis of Steroids

(#59118A) Allure™ PFP Propyl HPLC  
Column Provides Improved LC/MS  
Analyses of Basic Compounds

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**Lit. Cat. # 59613B**

## Commonly Asked Questions

• **How is the Allure™ C18 column different from other C18 columns?**

The Allure™ C18 column has a much higher carbon load, which increases retention of non-polar compounds and improves LC/MS sensitivity. The unique bonding chemistry produces a high ligand density, which resists hydrolysis. These design benefits result in more consistent retention times and longer lifetimes.

• **What are the particle and pore sizes of the silica used for the Allure™ C18 phase?**

The Allure™ C18 is made from a 5µm, spherical Type B silica with a 60 Angstrom pore size.

• **What are the pH and temperature limits for the Allure™ C18 phase?**

The Allure™ C18 phase can be used from pH 2.5 to pH 7.5, and at temperatures up to 80°C.

• **How does Restek ensure phase reproducibility and column quality?**

A minimum of three lots of material are produced and verified for consistency using several analytical techniques. In addition, each lot of material must meet stringent chromatographic reproducibility requirements before release, and each column is individually tested before shipment.

• **Are guard cartridges available for the Allure™ C18 columns?**

Restek's unique Trident™ guard cartridge system is available for the Allure™ C18 column. The integral leak-free design of the Trident™ system contains a cap frit that can be replaced easily without disturbing the packed bed. The guard cartridge, packed with the Allure™ C18 phase can be replaced easily. A stand-alone guard column is also available.

### ■ Allure™ C18 5µm Columns

Column Length	1.0mm ID cat.#	2.1mm ID cat.#	3.2mm ID cat.#	4.6mm ID cat.#
30mm	9164531	9164532	9164533	9164535
50mm	9164551	9164552	9164553	9164555
100mm	9164511	9164512	9164513	9164515
150mm	9164561	9164562	9164563	9164565
200mm	9164521	9164522	9164523	9164525
250mm	9164571	9164572	9164573	9164575

### ■ Allure™ C18 5µm Columns with Trident™ Inlet

Column Length	2.1mm ID cat.#	3.2mm ID cat.#	4.6mm ID cat.#
30mm	9164532-700	9164533-700	9164535-700
50mm	9164552-700	9164553-700	9164555-700
100mm	9164512-700	9164513-700	9164515-700
150mm	9164562-700	9164563-700	9164565-700
200mm	9164522-700	9164523-700	9164525-700
250mm	9164572-700	9164573-700	9164575-700

### ■ Allure™ C18 Guard Cartridges

Dimensions	cat.#	qty.
10 x 2.1mm	916450212	3
10 x 4.0mm	916450210	3
20 x 4.0mm	916450220	2