DiamondAnalytics™
tools for tomorrow's chemistry

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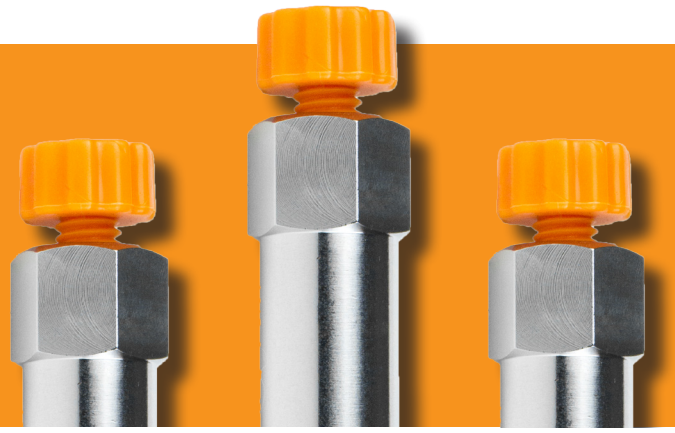
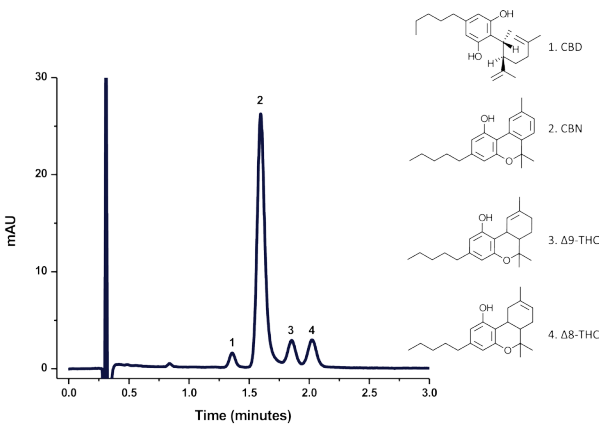
Flare Columns

High Pressure Liquid Chromatography



Breakthroughs in HPLC

Diamond Analytics High Performance Liquid Chromatography (HPLC) columns expand the existing range of analytical capabilities in separation science by providing diamond-based solutions that allow for the exploration of novel chemistries. Flare columns have unique selectivity and are pH stable. They can run at elevated temperatures. They also provide increased longevity, without compromising efficiency. Flare columns can be regenerated for repeat use—leading to a longer, more productive life and increased total cost savings.



Column Name: FLARE C18 Mixed-Mode

Column Dimension: 4.6 x 33mm 3.6 µm, 180 Å

HPLC System: Agilent 1200

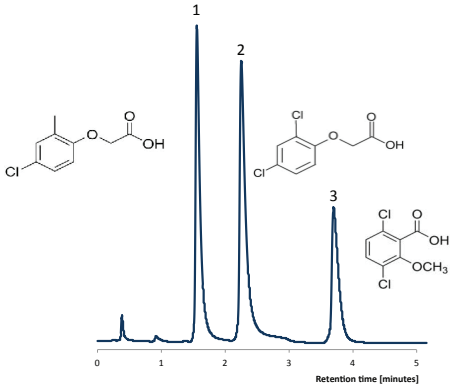
Injection Volume: 1.00 µL

Detection: UV - 280nm

Mobile Phase: 500ml Dioxane + 410ml H_20 + 5ml Acetic Acid + 5ml EDA

Temperature: 65 °C

Analytes: 1. Cannabidiol (CBD)
2. Cannabinol (CBN)
3. Δ^9-tetrahydrocannabinol (Δ^9-THC)
4. Δ^8-tetrahydrocannabinol (Δ^8-THC)



Column Name: FLARE C18 Mixed-Mode

Column Dimension: 2.1 x 50mm, 3.6 µm, 180 Å

HPLC System: Agilent 1290

Injection volume: 0.5 µL

Detection: DAD - 280nm

Mobile Phase: A: H2O + 1.5% HCOOH, pH 2
B: ACN + 1.5% HCOOH

Temperature: 60 °C

Flow rate: 0.2 mL/min

Gradient:

Time(min)	%A	%B
0	50	50
5	0	100

Sample: 1. MCPA
2. 2,4-D
3. Dicamba

Key Data Points

- Unique selectivity relative to silica
- pH stable from 1-13
- Temperature stable up to 100 °C
- Reproducible batch-to-batch and column-to-column
- High efficiencies above 100,000 N/m
- Available in a wide array of stocked column dimensions and customizable configurations
- LC-MS compatible
- Compatible with 100% aqueous to 100% organic solvents
- Manufactured using proprietary layer-by-layer processes

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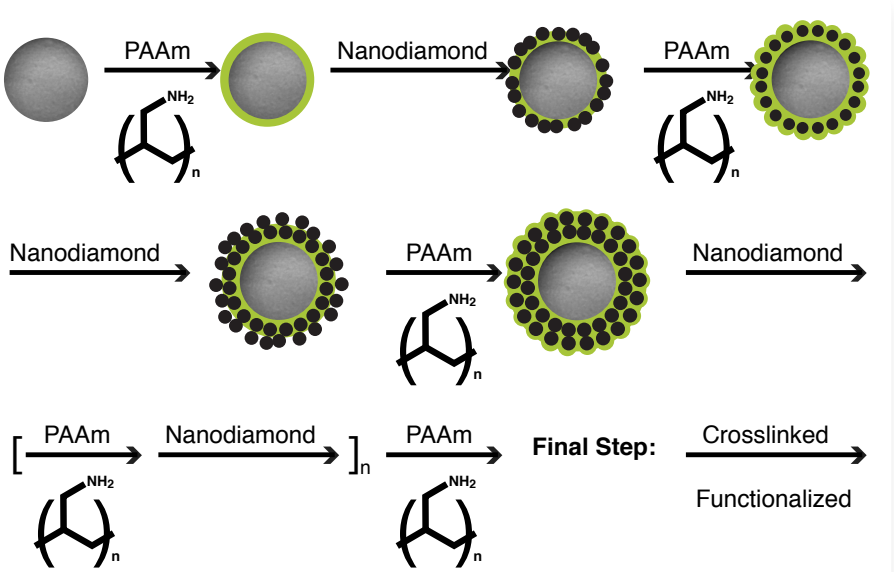
Expanding the Existing Range of Analytical Capabilities

1st Functionalized, 100% carbon support material

1st Carbon core-shell particle

1st Diamond-based column



Expanding Capabilities

Each year scientists worldwide synthesize novel chemicals and compounds that require extensive qualitative and quantitative analysis. The tools available today for analysis have limited the evolution in chemistry. Current analytical capabilities in separation science have only taken incremental steps in technology improvement. Constrained areas of analysis—including limited pH values (2-8 for silica), narrow temperature ranges (up to 60 °C for silica), and limited selectivity across a broad range of compounds—present problems for lab technicians and scientists trying to utilize current HPLC columns for new analysis. Column life and instrument downtime impede the process of developing new chemistry and increase costs. For labs to innovate, they need expanded analytical technologies to explore a greater range of chemistries and open new areas of analysis, all while providing a total cost savings.

Diamond Analytics, a US Synthetic Company, provides HPLC columns for elevated temperatures (up to 100 °C), increased longevity and novel selectivity, without compromising efficiency. Diamond Analytics Flare columns are pH stable from 1-13. Flare columns can also be regenerated for repeat use—leading to a longer, more productive life and increased total cost savings.

Connect With Us

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