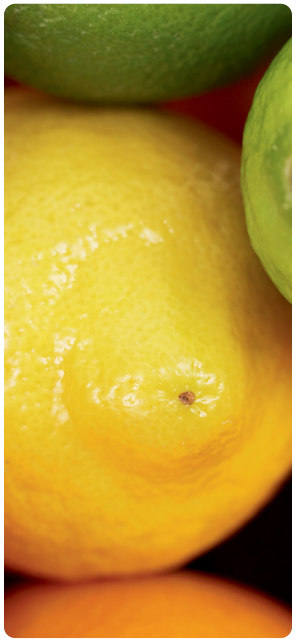
Introducing two new reversed-phase HPLC columns from Agilent!

High performance.

Higher value.

Our measure is your success.






New Agilent TC-C18(2) and HC-C18(2) Columns and Guard Cartridges

Day-to-day reproducibility, outstanding performance and long-life reliability.

Whatever your lab is analyzing, every method requires reproducibility, performance and reliability. New Agilent TC-C18(2) and HC-C18(2) columns and guard cartridges deliver on all counts. They give you the separation capabilities and consistency you're looking for—and at a very attractive price.

Developed specifically to meet the requirements of labs that must deliver consistently high quality and affordable product release testing, these reversed phase columns deliver superior peak shape over a wide range of sample types, operating conditions and mobile phases.

A perfect choice for labs like yours.

Agilent's TC-C18(2) and HC-C18(2) reversed-phase columns and guard cartridges are the right choice for practically any routine analysis. They can be used successfully with almost every sample type, in a variety of matrices. The high-surface area, silica-based materials accommodate a wide pH range and all commonly used mobile phases. As an added benefit, they offer improved performance for basic compounds.

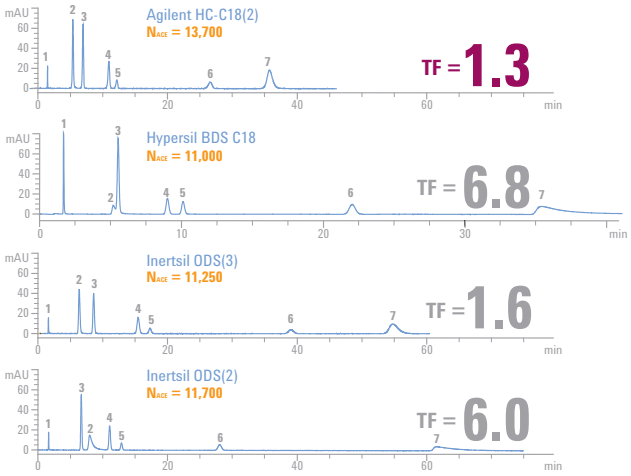
These versatile new columns simplify both analysis and methods development for complex samples found in traditional medicines, natural products, food and environmental testing. They deliver superior qualitative and quantitative performance in diverse applications such as:

- Environmental analysis
- Food quality control
- Pharmaceutical QA/QC
- Hydrocarbon processing
- Fine chemical manufacturing
- Traditional medicine

Industry-leading quality.

With a 40-year history of success, Agilent has earned a worldwide reputation for reliability and uptime under the most demanding operating conditions. TC-C18(2) and HC-C18(2) columns and guard cartridges are manufactured in the U.S. under the most stringent Agilent QA/QC requirements, including rigorous validation of every batch of material as well as systematic testing of finished columns. In fact, the Agilent TC-C18(2) column ships with every new Agilent 1120 Compact LC to ensure your system will continue to operate at peak productivity and optimum performance.

Superior peak shape, lowest tailing factor



Compounds

Acid/Base/Neutral Test Mix

1. Uracil
2. Propranolol
3. Butyl Paraben
4. Dipropyl Paraben
5. Naproxen
6. Acenapthalene
7. Amitriptyline

LC Conditions

Column:	4.6 x 150 mm, 5 µm
Mobile Phase:	A: 20 mM KH_2PO_4/K_2HPO_4, pH 7
	B: Methanol
	35% A/65% B
Temperature:	23°C, 1.0 mL/min
Detector:	240 nm
Injection:	2 µL of 0.1 mg/mL sample

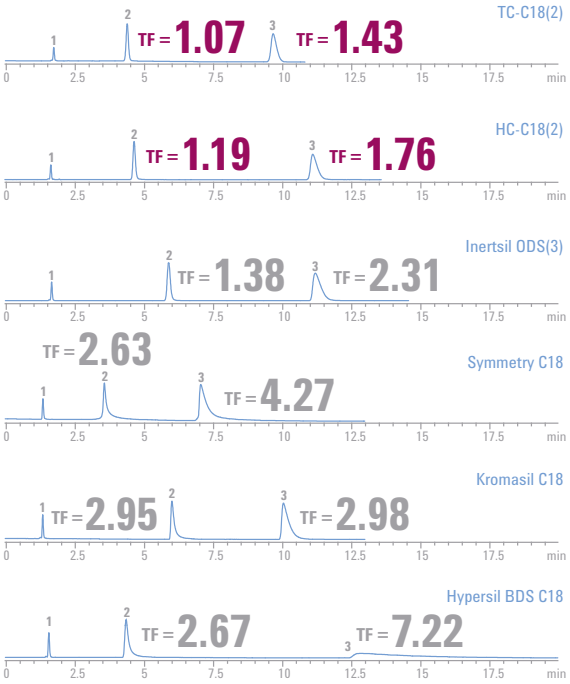
New Agilent 1120 Compact LC.

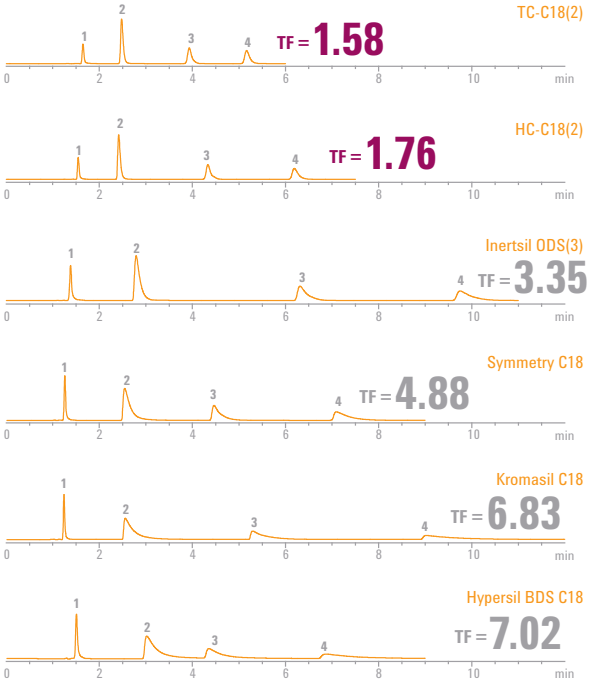
Easy to use. Easy to own. If you are looking for an affordable, high quality solution that optimizes performance and uptime while minimizing complexity, be sure to look at Agilent's new 1120 Compact LC. Available in your choice of integrated, "all-in-one" configurations, this robust new system gives you the proven quality and reliability you expect from the industry leader.

To learn more about Agilent Compact LC Columns and Guard Cartridges, contact your local Agilent product representative or visit **www.agilent.com/chem/TCHCColumns**

Compare the Agilent HC(2) and TC(2) columns with what you're using now. The choice is clear.

Superior peak shape—at pH 3 or pH 7





Low pH (pH 3). *Both TC-C18(2) and HC-C18(2) columns perform better than the competition for peak shape of bases. Excellent performance is obtained using both C18 columns with salicylic acid.*

Compounds

1. Uracil
2. Salicylic Acid
3. Dextromethorphan

LC Conditions

Column:	4.6 x 150 mm, 5 µm
Mobile Phase:	25 mM NaH_2PO_4 pH 3/Acetonitrile (75/25)
Flow Rate:	1 mL/min
Temperature:	40˚C
Detector:	230 nm
Injection:	1 µL of a 0.3 mg/nL sample

Strong Base (amitriptyline) at pH 7. *Amitriptyline is typically used to compare column performance. When tested with Acetonitrile at pH 7, some peak tailing will result; however, the best highly endcapped products minimize this tailing.*

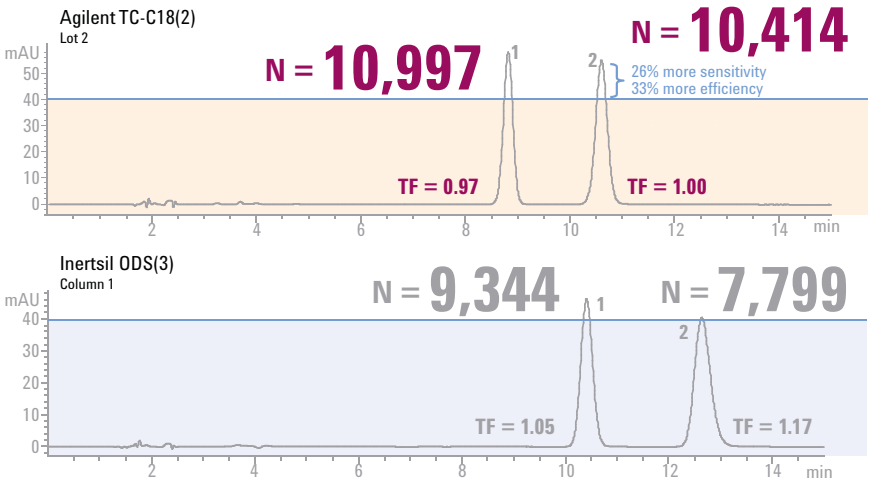
Compounds

1. Uracil
2. Nortriptyline
3. Doxepin
4. Amitriptyline

LC Conditions

Column:	4.6 x 150 mm, 5 µm
Mobile Phase:	50 mM KH_2PO_4 /K_2HPO_4 pH 7/Acetonitrile (40/60)
Flow Rate:	1 mL/min
Temperature:	30˚C
Detector:	254 nm
Injection:	1 µL of a 0.2 mg/nL sample

Higher efficiency, sharper peaks for improved sensitivity and lower detection limits



Improved Sensitivity and Efficiency with Agilent TC-C18(2). *Greater efficiency means sharper peaks, better sensitivity and lower detection limits for most analytes. In the comparison above, the Agilent column's greater column efficiency (N) and reduced tailing factor provide a sensitivity increase of up to 26%.*

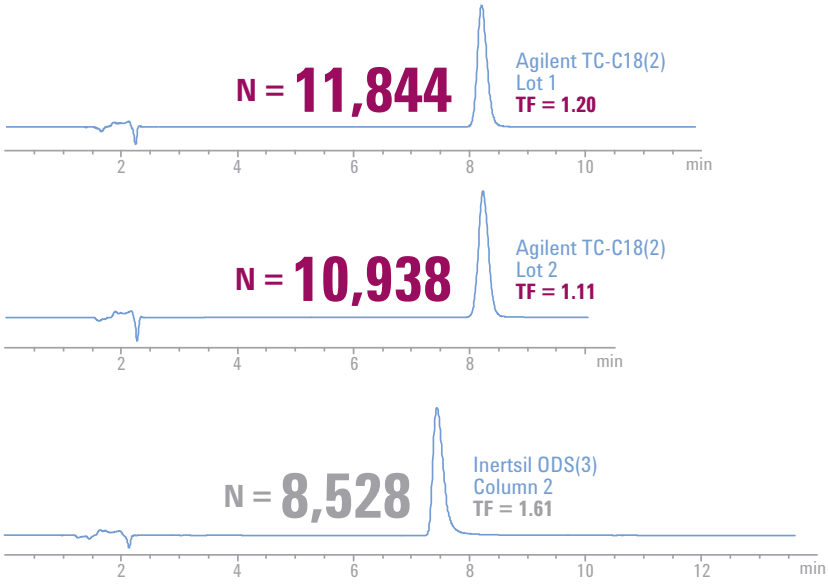
Compounds

1. Caffeine
2. Ranitidine

LC Conditions

Column:	4.6 x 150 mm, 5 µm
Mobile Phase:	8 mM KH_2PO_4 pH 7 (adjusted with KOH)/ Acetonitrile (90/10)
Flow Rate:	1 mL/min
Temperature:	30°C
Detector:	214 nm
Injection:	5 µL

Higher efficiency, lower tailing—plus consistent lot-to-lot performance



Excellent peak shape with a strongly basic compound. *Berberine, often a compound of interest in goldenseal extract, can be difficult to analyze with good peak shape. In this comparison of TC-C18(2) vs. Inertsil ODS(3), the TC-C18 column had superior tailing factors and efficiency to the Inertsil column. Note that the two lots of the TC-C18(2) column also deliver consistent retention time and peak shape performance.*

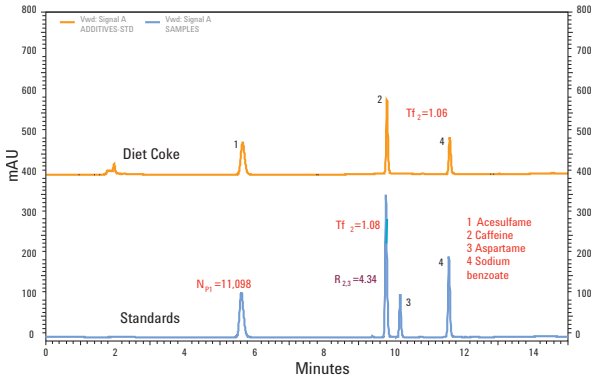
Compounds

Berberine

LC Conditions

Column:	4.6 x 150 mm, 5 µm
Mobile Phase:	8 mM KH_2PO_4 pH 7 (adjusted with KOH)/ Acetonitrile (70/30)
Flow Rate:	1 mL/min
Temperature:	30°C
Detector:	265 nm
Injection:	5 µL

Separation of sweetening agents, preservatives and caffeine in Diet Coke on TC-C18(2)



Compounds

1. Acesulfame
2. Caffeine
3. Aspartame
4. Sodium benzoate

LC Conditions

Column:	TC-C18(2), 4.6 x 150 mm, 5 µm
Mobile Phase:	A: 20mM KH_2PO_4, pH 3
	B: Acetonitrile
Gradient:	0-5 min, 8% B; 5-13 min, 8%-90% B
Flow Rate:	1 mL/min
Temperature:	Ambient
Detector:	214 nm
Injection:	5 µL

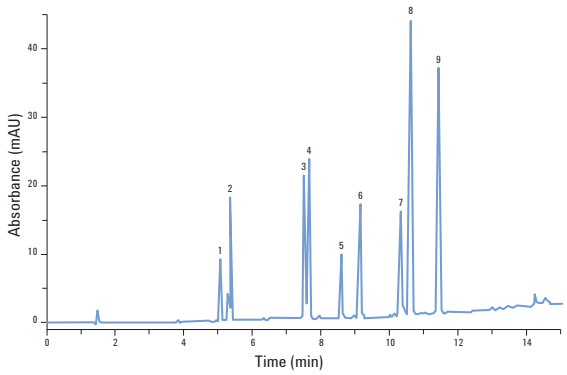
Excellent injection-to-injection reproducibility (Additives in Diet Coke)

	Acesulfame	Caffeine	Aspartame	Sodium Benzoate
Peak Area Average*	7.333 x 10^6	11.380 x 10^6	3.055 x 10^6	6.700 x 10^6
SD*	0.018	0.0527	0.0222	0.0064
RSD	**0.24%**	**0.46%**	**0.73%**	**0.10%**

** Multiply each by 10^6 for actual value.*

Excellent injection-to-injection reproducibility is obtained using the new Agilent 1120 Compact LC and the TC-C18(2) column. Both the column and the LC deliver reliable day-to-day results.

Analysis of herbicides in drinking water



LC Conditions

Column:	HC-C18(2), 4.6 x 150 mm, 5 µm
Mobile Phase:	A: Water
	B: Acetonitrile
Gradient:	10-90% B in 5 min
Flow Rate:	1.5 mL/min
Temperature:	40˚C
Detector:	225 nm
Injection:	5 µL

Peak	Compound	% RSD Retention Time	% RSD Areas
1	Metamitron	0.07	0.19
2	Chloridazon	0.07	0.17
3	Cyanazine	0.05	0.10
4	Simazine	0.05	0.12
5	Prometryn	0.06	0.39
6	Diuron	0.02	0.34
7	Propazine	0.02	0.16
8	Terbuthylazine	0.02	0.33
9	Chlortoluran	0.04	0.26

It's easy to select the right columns and guard cartridges for your application.

Agilent TC-C18(2) is the ideal choice for complex natural product extract samples, traditional medicines and environmental samples or any sample where you need to analyze mixtures of polar and non-polar compounds, including strong basic compounds.

- Lower carbon load—12%
- Ideal for polar compounds and gradient separations that start at low % organic or cover a wide organic range
- Good choice for samples dissolved in water, or mostly water
- Use with most common mobile phases, including formic acid, acetic acid, trifluoroacetic acid (TFA) and phosphate buffers with acetonitrile and methanol as the organic modifiers
- Excellent performance from pH 2-8

Agilent HC-C18(2) is a more retentive C18 with a higher carbon load. An excellent value alternative to other high carbon load columns, it also provides superior peak shape for basic compounds.

- Higher carbon load—17%—provides greater retention for moderately polar and non-polar compounds
- Ideal for non-polar compounds and separations that start at mid-level % organic (at least greater than 10% organic)
- Good choice for industrial samples or samples dissolved in organic/mostly organic solvents
- Stable over a very wide pH range, pH 2-9, for maximum flexibility

Specifications

Column	Carbon Load	Pore Size	Surface Area	Particle Size	Temperature Limit	pH Range	Endcapped
TC-C18 (2)	12%	170 Å	290 m^2/g	5 µm	60˚C	2-8	Yes
HC-C18 (2)	17%	170 Å	290 m^2/g	5 µm	60˚C	2-9	Yes

Ordering Guide

Column/Description	Size (mm)	Particle Size	Part Number
Agilent HC-C18(2)	4.6 x 250	5 µm	588905-902
Agilent HC-C18(2)	4.6 x 150	5 µm	588915-902
Agilent TC-C18(2)	4.6 x 250	5 µm	588925-902
Agilent TC-C18(2)	4.6 x 150	5 µm	588935-902
Agilent HC-C18(2) guards, 2/pk	4.6 x 12.5	5 µm	520518-904
Agilent TC-C18(2) guards, 2/pk	4.6 x 12.5	5 µm	520518-905
Guard Hardware Kit*			820888-901

**This kit can also be used with ZORBAX HPLC columns and guard cartridges.*

Request these application notes!

The following application notes feature the Agilent 1120 Compact LC and Agilent TC-C18(2) and HC-C18(2) columns. Download them at www.agilent.com/chem/TCHCColumns, or ask your local product representative.

5989-7455EN
Analysis of herbicides in drinking water using the Agilent 1120 Compact LC

5989-7456EN
Analysis of antioxidants in chewing gum using the Agilent 1120 Compact LC

5989-7457EN
Development and validation of a method for simultaneous determination of paracetamol, diclofenac and ibuprofen using the Agilent 1120 Compact LC

5989-7458EN
Analysis of ginseng and American ginseng using the Agilent 1120 Compact LC

See the difference for yourself.

Try Agilent's new TC-C18(2) and HC-C18(2) reversed-phase columns and guard cartridges in your lab today, and step up to better performance and better value, too.

For more information, contact your local Agilent product representative or visit www.agilent.com/chem/TCHCColumns.

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