

Epic HPLC and UHPLC Columns

The Epic® line is our latest range of LC columns, based on high density monomerically bonded phases produced through a proprietary bonding process. Epic HPLC and UHPLC columns are compatible with a wide range of organic modifiers and buffers and stable over a wide pH range. All Epic products use an ultra-high purity metal free silica and undergo strict quality control testing. For flexibility, we offer a wide range of column sizes as well being fully scalable from analytical to preparative dimensions.

An extensive range of column chemistries are available, providing a broad range of selectivities to enhance method development. The Epic line offers reversed-phase C18 columns and shorter alkyl chain chemistries for general purpose separations. The groundbreaking AQ phase from ES Industries (AquaSep) which offers improved polar compound retention under RP conditions, has been further refined in the Epic Polar column and extensive selectivity options (e.g. phenyl-hexyl, naphthyl, biphenyl, fluorooctyl (FO), HILIC, and cyano) provide analysts with a method development tool kit ready to tackle any separation. As the first to commercialize fluorinated stationary phases, the continued development yielded Epic PFP LB and FO LB; truly unique low bleed stationary phases capable of performing many challenging separations.

Many of the commercially available HILIC stationary phases are

converted normal phase columns which yield poor methods, poor separations and lack durability. Our line of HILIC columns, including the new Epic HILIC POH, are specifically designed for HILIC chromatography to achieve high performance separations, yield rugged methods and deliver long column lifetimes.

Whatever your separation need, we have a chemistry or dimension to fill it.



Features and Benefits

- Ultra-high purity silica for improved peak shape, especially for basic compounds
- Extensive range of stationary phase chemistries with innovative bonding chemistry to enhance method development
- High density bonding produces columns with better pH stability, increased sample loading and better lot-to-lot reproducibility
- Extended pH stability across commonly used mobile phase buffers
- Microbore to preparative dimensions available to allow flexibility and full scalability

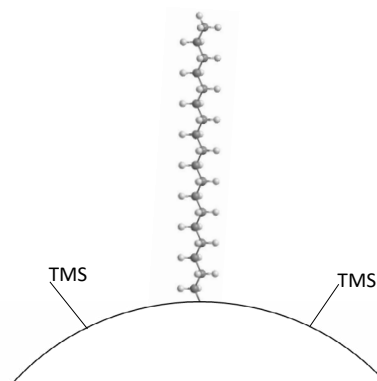
Material Characteristics

Brand	Phase*	Particle Size (µm)	Pore Size (Å)	Carbon %	End Cap	pH Range	USP Code
Epic	C18	1.8, 3, 5, 10	120	18	Yes	1-10	L1
Epic	C18 MS	1.8, 3, 5, 10	120	22	No	1-10	L1
Epic	C18 Cannabinoid	3	120	18	No	1-10	L1
Epic	C8	1.8, 3, 5, 10	120	10	Yes	1-10	L7
Epic	Polar	1.8, 3, 5, 10	120	18	No	1-10	L1
Epic	Amine HD	1.8, 3, 5, 10	120	–	No	1-10	L8
Epic	Cyano	1.8, 3, 5, 10	120	–	No	1-10	L10
Epic	C4 SD	1.8, 3, 5, 10	120	12	Yes	1-10	L26
Epic	Silica	1.8, 3, 5, 10	120	–	No	1-10	L3
Epic	HILIC Silica	1.8, 3, 5, 10	120	–	No	1-10	–
Epic	HILIC POH	1.8, 3, 5, 10	120	–	No	1-10	–
Epic	Diol	1.8, 3, 5, 10	120	–	No	1-10	L20
Epic	HILIC FL	1.8, 3, 5, 10	120	–	No	1-10	–
Epic	HILIC RP	1.8, 3, 5, 10	120	–	No	1-10	–
Epic	HILIC PI	1.8, 3, 5, 10	120	–	Yes	1-10	–
Epic	Naphthyl	1.8, 3, 5, 10	120	25	Yes	1-10	–
Epic	PFP LB	1.8, 3, 5, 10	120	–	Yes	1-10	L43
Epic	FO LB	1.8, 3, 5, 10	120	–	Yes	1-10	–
Epic	Phenyl	1.8, 3, 5, 10	120	16	Yes	1-10	L11
Epic	Diphenyl	1.8, 3, 5, 10	120	20	Yes	1-10	L11
Epic	Biphenyl	1.8, 3, 5, 10	120	25	Yes	1-10	L11
Epic	Phenyl-hexyl	1.8, 3, 5, 10	120	18	Yes	1-10	L11

*Preparative columns of these phases are also available.
Please enquire for more details at LCA.TechSupport@perkinelmer.com

Epic C18

Epic C18 is a highly inert phase due to its superior base deactivation. As a result of the high-density bonding levels ($> 4 \mu\text{mol}/\text{m}^2$), Epic C18 demonstrates superior peak shapes for the most demanding applications. This phase provides exceptional peak shape and selectivity over a wide range of compounds and pH and is the workhorse HPLC and UHPLC phase for RP small molecule analysis. It can be used with basic, neutral and acidic analytes.

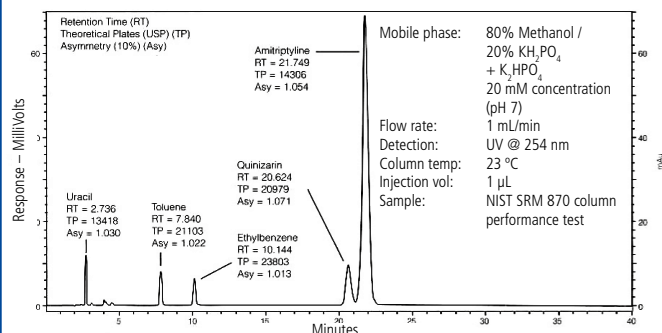


Phase	Length (mm)	ID (mm)	Particle Size (μm)	Part No.
Epic C18	50	2.1	1.8	512A91-EC18
Epic C18	50	2.1	3	112191-EC18
Epic C18	50	2.1	5	112291-EC18
Epic C18	50	3.0	1.8	513A91-EC18
Epic C18	50	4.6	3	115191-EC18
Epic C18	50	4.6	5	115291-EC18
Epic C18	75	4.6	3	195191-EC18
Epic C18	100	2.1	1.8	522A91-EC18
Epic C18	100	2.1	3	122191-EC18
Epic C18	100	2.1	5	122291-EC18
Epic C18	100	3.0	1.8	523A91-EC18
Epic C18	100	3.0	3	123191-EC18
Epic C18	100	4.6	3	125191-EC18
Epic C18	100	4.6	5	125291-EC18
Epic C18	125	4.6	5	105291-EC18
Epic C18	150	2.1	1.8	532A91-EC18
Epic C18	150	2.1	3	132191-EC18
Epic C18	150	2.1	5	132291-EC18
Epic C18	150	3.0	1.8	533A91-EC18
Epic C18	150	3.0	3	133191-EC18
Epic C18	150	3.9	5	13e291-EC18
Epic C18	150	4.0	3	134191-EC18
Epic C18	150	4.0	5	134291-EC18
Epic C18	150	4.6	3	135191-EC18
Epic C18	150	4.6	5	135291-EC18

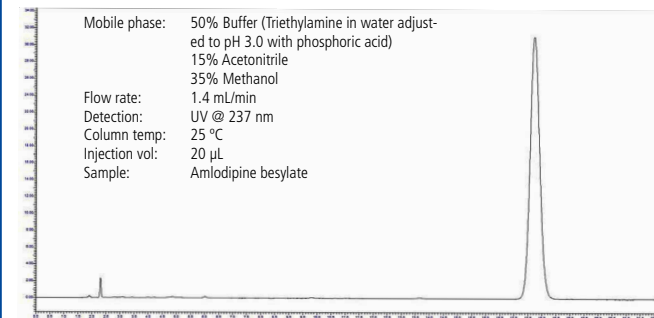
Phase	Length (mm)	ID (mm)	Particle Size (μm)	Part No.
Epic C18	200	4.6	5	145291-EC18
Epic C18	200	5.0	5	146291-EC18
Epic C18	250	4.0	10	154391-EC18
Epic C18	250	4.0	5	154291-EC18
Epic C18	250	4.6	10	155391-EC18
Epic C18	250	4.6	3	155191-EC18
Epic C18	250	4.6	5	155291-EC18
Epic C18	300	3.9	10	16e391-EC18
Epic C18	300	4.0	10	164391-EC18
Epic C18	300	4.0	5	164291-EC18
Epic C18	300	4.6	3	165191-EC18
Epic C18	300	4.6	5	165291-EC18
Epic C18 Prep	50	30	10	11N391-EC18
Epic C18 Prep	50	50	5	11F291-EC18
Epic C18 Prep	100	20	5	128291-EC18
Epic C18 Prep	150	10	5	137291-EC18
Epic C18 Prep	250	10	5	157291-EC18
Epic C18 Prep	250	20	5	158291-EC18
Epic C18 Prep	250	30	10	15N391-EC18
Epic C18 Prep	250	30	5	15N291-EC18
Epic C18 Analytical Guard Cartridges (Pkg. 5)	10	3	5	500101-EC18
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	ES500100

Other column dimensions and guard cartridges are available.
Please enquire for more details at LCA.TechSupport@perkinelmer.com

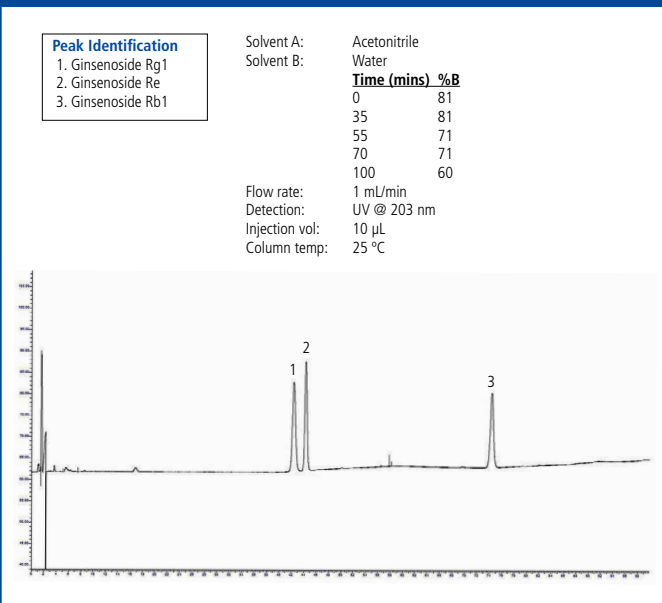
HPLC analysis of NIST SRM 870 column performance test using Epic C18, 250 x 4.6 mm, 5 µm.



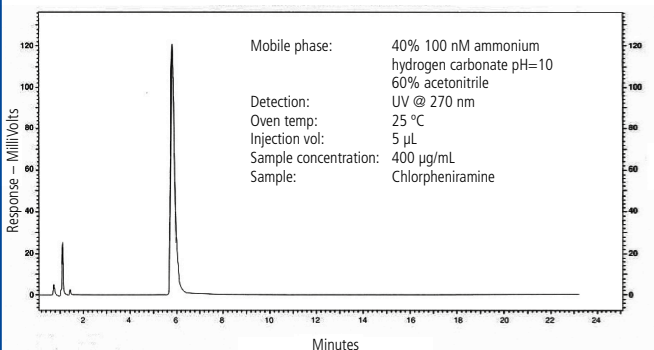
HPLC analysis of amlodipine besylate using Epic C18, 250 x 4.6 mm, 5 µm.



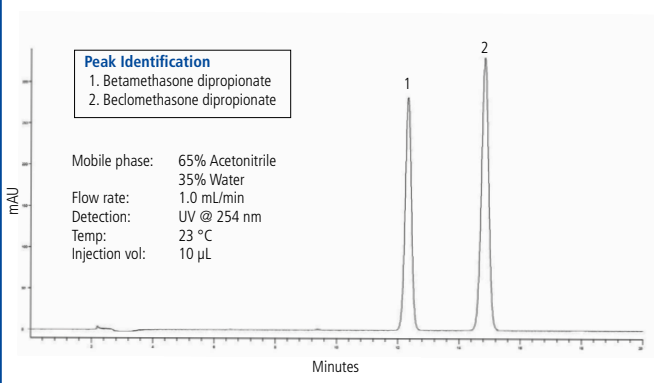
HPLC analysis of ginsenosides (Rg1, Re and Rb1) using Epic C18



HPLC analysis of chlorpheniramine antihistamine at pH 10 using Epic C18, 150 x 4.6 mm, 5 µm.

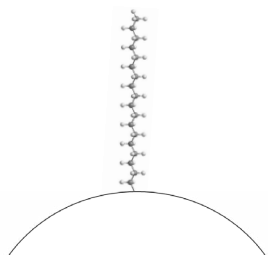


HPLC analysis of betamethasone dipropionate using Epic C18, 250 x 4.6 mm, 5 µm.



Epic C18 MS

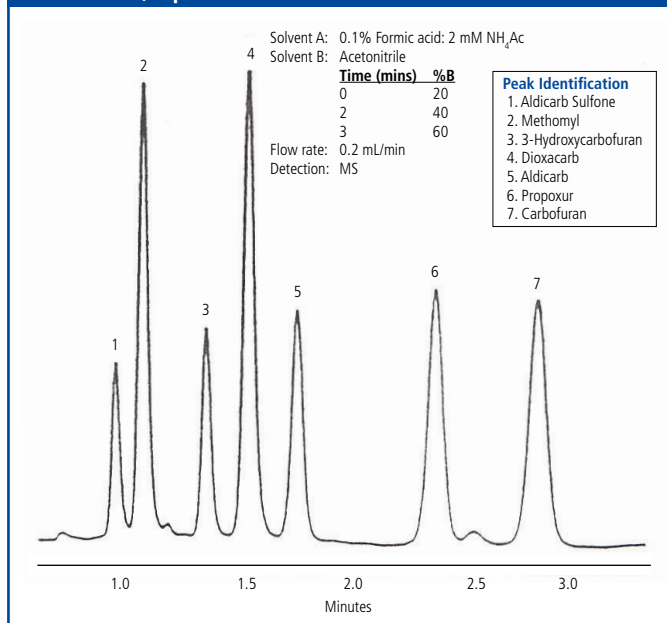
Epic C18 MS is specifically engineered for the demands of LC-MS and is a product of high bonding density, allowing maximum stationary phase interaction and providing a platform for flexible mobile phase compositions. It provides superior retention even at high organic levels. Many LC-MS applications rely on high level of organic modifier in the mobile phase, particularly for high performance trace analysis requiring high sensitivity and low-level detection; Epic C18 MS is ideally suited for these mobile phase conditions. This phase is compatible with all LC-MS mobile phases and buffer systems.



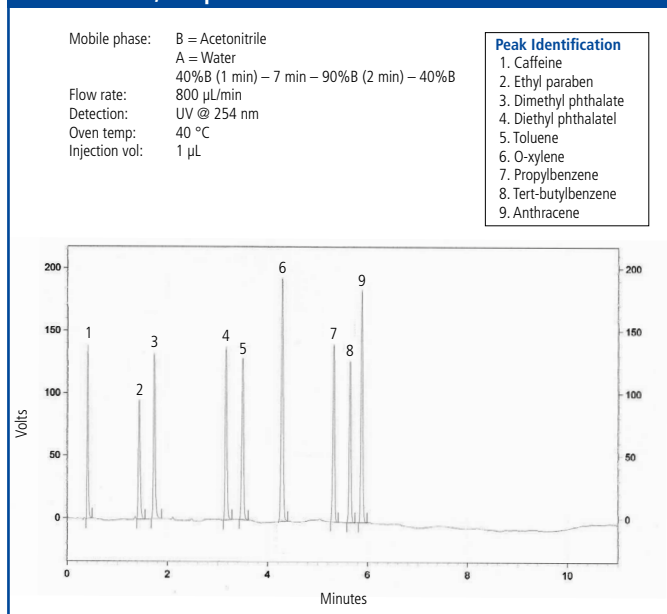
Phase	Length (mm)	ID (mm)	Particle Size (µm)	Part No.
Epic C18 MS	50	2.1	1.8	512A91-EC18-MS
Epic C18 MS	50	2.1	3	112191-EC18-MS
Epic C18 MS	50	2.1	5	112291-EC18-MS
Epic C18 MS	50	4.6	3	115191-EC18-MS
Epic C18 MS	50	4.6	5	115291-EC18-MS
Epic C18 MS	100	2.1	1.8	522A91-EC18-MS
Epic C18 MS	100	2.1	3	122191-EC18-MS
Epic C18 MS	100	2.1	5	122291-EC18-MS
Epic C18 MS	100	3.0	1.8	523A91-EC18-MS
Epic C18 MS	100	4.6	3	125191-EC18-MS
Epic C18 MS	100	4.6	5	125291-EC18-MS
Epic C18 MS	150	2.1	3	132191-EC18-MS
Epic C18 MS	150	2.1	5	132291-EC18-MS
Epic C18 MS	150	4.0	5	134291-EC18-MS
Epic C18 MS	150	4.6	3	135191-EC18-MS
Epic C18 MS	150	4.6	5	135291-EC18-MS
Epic C18 MS	250	4.6	10	155391-EC18-MS
Epic C18 MS	250	4.6	5	155291-EC18-MS
Epic C18 MS Prep	250	20	5	158291-EC18-MS
Epic C18 MS Prep	250	30	5	15N291-EC18-MS
Epic C18 MS Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-EC18-MS
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	ES500100

Other column dimensions and guard cartridges are available.
Please enquire for more details at LCA.TechSupport@perkinelmer.com

HPLC analysis of N-methyl carbamates using Epic C18 MS, 50 x 2.1 mm, 5 µm.

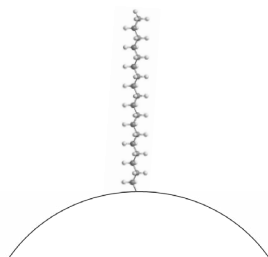


HPLC analysis of various compounds using Epic C18 MS, 100 x 2.1 mm, 1.8 µm.



Epic C18 Cannabinoid

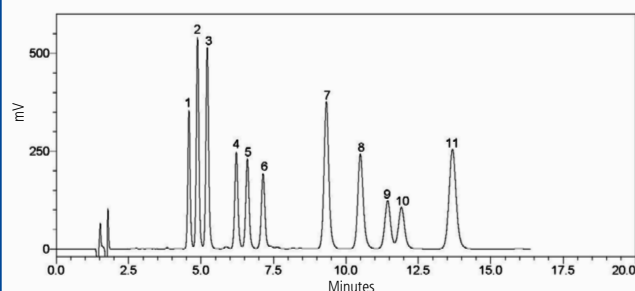
The Epic C18 Cannabinoid phase has been validated for the analysis of cannabinoids. The superior performance of Epic C18 Cannabinoid is a product of high-density bonding which is one of the most important factors in producing a robust stationary phase and robust HPLC column.



The LC-UV method shown demonstrates the Epic C18 Cannabinoid fully resolving 11 major and most frequently observed minor cannabinoids. All compounds are resolved in a fast 9-minute analysis, making this method suitable for high-throughput cannabis testing labs. In addition, this analysis uses a simple isocratic mobile phase which is more easily transferable between instruments and laboratories, compared to more complex methods that incorporate atypical mobile phase gradients or additives.

Phase	Length (mm)	ID (mm)	Particle Size (µm)	Part No.
Epic C18 Cannabinoid	150	4.6	3	1351X1-EC18-CANNA

HPLC analysis of 11 major and most frequently observed cannabinoids using Epic C18 Cannabinoid, 150 x 4.6 mm, 3 µm.



Mobile phase: 80% Acetonitrile / 20% Water
0.1% Formic acid
10 mM Ammonium formate

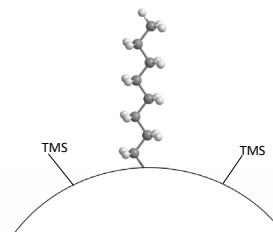
Flow rate: 1.0 mL/min
Detection: UV @ 230 nm
Oven temp: 35 °C

Peak Identification

1. Cannabivarin (CBDV)
2. Cannabidiolic acid (CBDA)
3. Cannabigerolic acid (CBGA)
4. Cannabigerol (CBG)
5. Cannabidiol (CBD)
6. Tetrahydrocannabivarin (THCV)
7. Cannabinol (CBN)
8. Tetrahydrocannabinolic acid (THCA)
9. Δ9-Tetrahydrocannabinol (Δ9-THC)
10. Δ8-Tetrahydrocannabinol (Δ8-THC)
11. Cannabichromene (CBC)

Epic C8

Epic C8 is a highly base deactivated phase that produces a highly inert phase. As a result of the high-density bonding levels (> 4µmol/m²), Epic C8 demonstrates superior peak shapes for the most demanding applications over a wide pH range. The C8 phase is less hydrophobic than the C18



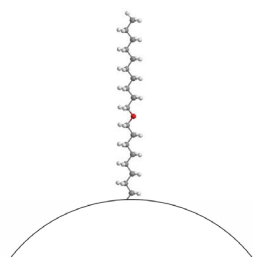
phase and is, therefore, useful for separations which require less retention. It can be particularly useful for more hydrophobic compounds, both charged and neutral (e.g. lipids and steroids).

Phase	Length (mm)	ID (mm)	Particle Size (µm)	Part No.
Epic C8	50	2.1	1.8	512A91-EC8
Epic C8	50	2.1	3	112191-EC8
Epic C8	50	2.1	5	112291-EC8
Epic C8	50	3.0	3	113191-EC8
Epic C8	50	4.6	5	115291-EC8
Epic C8	100	2.1	1.8	522A91-EC8
Epic C8	100	2.1	3	122191-EC8
Epic C8	100	2.1	5	122291-EC8
Epic C8	100	4.0	5	124291-EC8
Epic C8	100	4.6	3	125191-EC8
Epic C8	100	4.6	5	125291-EC8
Epic C8	125	4.0	5	104291-EC8
Epic C8	125	4.6	5	105291-EC8
Epic C8	150	2.1	3	132191-EC8
Epic C8	150	2.1	5	132291-EC8
Epic C8	150	4.6	3	135191-EC8
Epic C8	150	4.6	5	135291-EC8
Epic C8	250	4.0	5	154291-EC8
Epic C8	250	4.6	10	155391-EC8
Epic C8	250	4.6	5	155291-EC8
Epic C8	300	4.6	5	165291-EC8
Epic C8 Prep	250	20	5	158291-EC8
Epic C8 Prep	250	30	5	15N291-EC8
Epic C8 Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-EC8
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	ES500100

Other column dimensions and guard cartridges are available.
Please enquire for more details at LCA.TechSupport@perkinelmer.com

Epic Polar

Epic Polar is a high density C18 packing specifically engineered for the retention of polar analytes and allows full interaction with the bonded hydrocarbon phase, even in 100% aqueous mobile phases. Under these highly aqueous conditions, our novel proprietary bonding chemistry allows the bonded chains to remain fully extended in the mobile phase. Epic Polar can retain highly water-soluble compounds such as small organic acids, water-soluble vitamins, purines and pyrimidines, catecholamines and other polar compounds.



Phase	Length (mm)	ID (mm)	Particle Size (µm)	Part No.
Epic Polar	50	2.1	1.8	512A91-EPO
Epic Polar	50	2.1	3	112191-EPO
Epic Polar	50	2.1	5	112291-EPO
Epic Polar	50	4.6	3	115191-EPO
Epic Polar	50	4.6	5	115291-EPO
Epic Polar	100	2.1	1.8	522A91-EPO
Epic Polar	100	2.1	3	122191-EPO
Epic Polar	100	2.1	5	122291-EPO
Epic Polar	100	3.0	1.8	523A91-EPO
Epic Polar	100	3.0	3	123191-EPO
Epic Polar	100	4.6	3	125191-EPO
Epic Polar	150	2.1	1.8	532A91-EPO
Epic Polar	150	2.1	3	132191-EPO
Epic Polar	150	2.1	5	132291-EPO
Epic Polar	150	3.0	3	133191-EPO
Epic Polar	150	4.6	3	135191-EPO
Epic Polar	150	4.6	5	135291-EPO
Epic Polar	200	4.6	3	145191-EPO
Epic Polar	250	2.1	5	152291-EPO
Epic Polar	250	4.0	5	154291-EPO
Epic Polar	250	4.6	10	155391-EPO
Epic Polar	250	4.6	3	155191-EPO
Epic Polar	250	4.6	5	155291-EPO
Epic Polar	300	3.9	10	16e391-EPO
Epic Polar	300	4.0	5	164291-EPO
Epic Polar Prep	250	10	5	157291-EPO
Epic Polar Prep	250	20	10	158391-EPO
Epic Polar Prep	250	20	5	158291-EPO
Epic Polar Prep	250	30	5	15N291-EPO
Epic Polar Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-EPO
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	E5500100

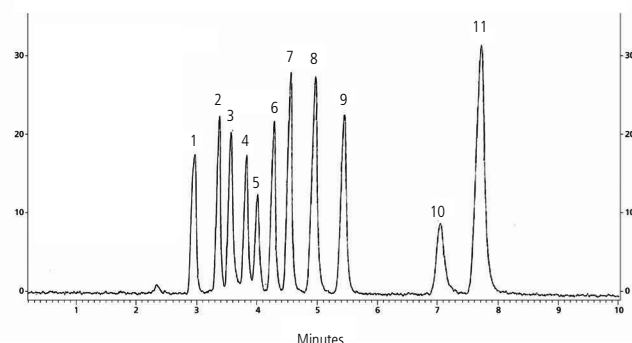
Other column dimensions and guard cartridges are available.
Please enquire for more details at LCA.TechSupport@perkinelmer.com

HPLC analysis of low molecular weight polar organic acids using Epic Polar, 250 x 4.6 mm, 5 µm.

Peak Identification

1. Glucuronic acid	500 µg/mL
2. Tartaric acid	167 µg/mL
3. Formic acid	333 µg/mL
4. Malic acid	250 µg/mL
5. Shikimic acid	6.7 µg/mL
6. Lactic acid	666 µg/mL
7. Acetic acid	656 µg/mL
8. Citric Acid	420 µg/mL
9. Succinic acid	833 µg/mL
10. Fumaric acid	3 µg/mL
11. Propionic acid	1600 µg/mL

Mobile phase: 50 mM H₃PO₄
Flow rate: 1.0 mL/min
Injection vol: 5 µL
Detection: UV @ 210 nm

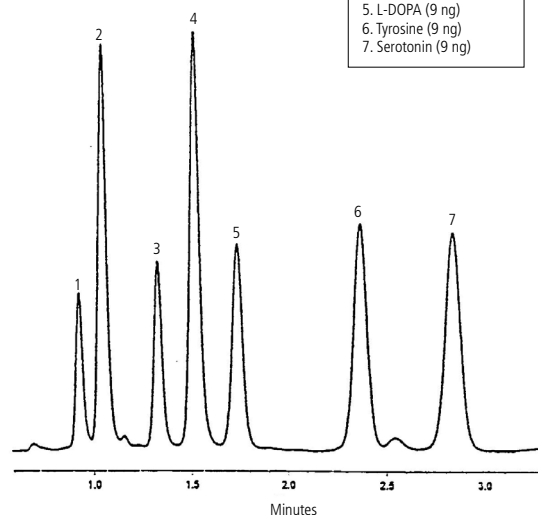


HPLC analysis of catecholamines and related compounds using Epic Polar, 100 x 4.6 mm, 3 µm.

Mobile phase: 93% 50 mM phosphoric acid / 7% methanol
Flow rate: 1.3 mL/min
Injection vol: 5 µL
Detection: UV @ 225 nm

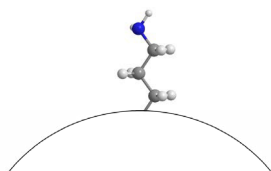
Peak Identification

1. Norepinephrine (8 ng)
2. Epinephrine (20ng)
3. 3-Hydroxylamine (8 ng)
4. Metanephrine (19 ng)
5. L-DOPA (9 ng)
6. Tyrosine (9 ng)
7. Serotonin (9 ng)



Epic Amine HD

Epic Amine HD (high density) is a polymeric amino phase bonded to silica. Applications include HILIC, weak acids, and sugars. The Epic bonding technology produces columns of superior performance and durability. These performance characteristics result from the high bonding density found in the Epic bonding process.

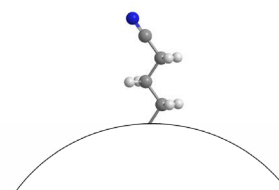


Phase	Length (mm)	ID (mm)	Particle Size (μm)	Part No.
Epic Amine HD	50	2.1	1.8	512A91-E-A/HD
Epic Amine HD	100	2.1	1.8	522A91-E-A/HD
Epic Amine HD	100	4.6	5	125291-E-A/HD
Epic Amine HD	150	2.1	1.8	532A91-E-A/HD
Epic Amine HD	150	4.6	5	135291-E-A/HD
Epic Amine HD	250	4.0	5	154291-E-A/HD
Epic Amine HD	250	4.6	5	155291-E-A/HD
Epic Amine HD	300	3.9	10	16e391-E-A/HD
Epic Amine HD	300	4.6	5	165291-E-A/HD
Epic Amine HD Prep	100	20	5	128291-E-A/HD
Epic Amine HD Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-E-A/HD
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	E5500100

Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

Epic Cyano

The Epic Cyano phase is a less hydrophobic phase than the alkyl C8 and C18 phases and provides excellent stability and reproducibility (lot-to-lot). The cyano functionality offers increased dipole interactions for alternative selectivity. It is suitable for RP (e.g. higher molecular weight compounds) and NP applications.

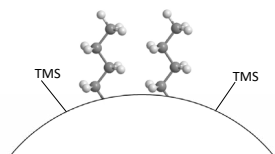


Phase	Length (mm)	ID (mm)	Particle Size (μm)	Part No.
Epic Cyano	50	2.1	1.8	512A91-ECN
Epic Cyano	50	4.6	5	115291-ECN
Epic Cyano	100	2.1	1.8	522A91-ECN
Epic Cyano	250	4.6	5	155291-ECN
Epic Cyano Prep	250	10	5	157291-ECN
Epic Cyano Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-ECN
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	E5500100

Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

Epic C4 SD

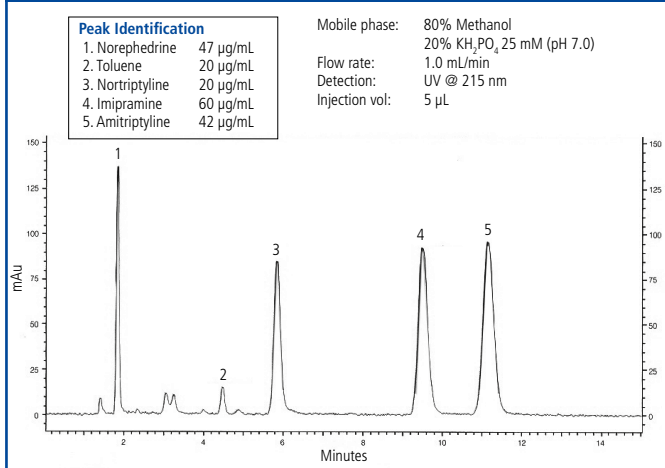
Epic C4 SD is a highly base deactivated high carbon super dense (SD) phase that is produced via a multiple step process. The first step involves the high density bonding of monomeric C4 reagent. The second step utilizes a proprietary multiple endcapping bonding process that produces highly base deactivated columns. The Epic C4 SD product, as a result of our special bonding treatment, is highly hydrophobic and exceptionally inert for the analysis of both acids and bases. The unique chemical structure provides for stable retention under high aqueous conditions, without exhibiting phase collapse. Epic C4 SD is the least hydrophobic of the alkyl phases (C18 and C8) and is useful for lipophilic molecules and applications which require less retention.



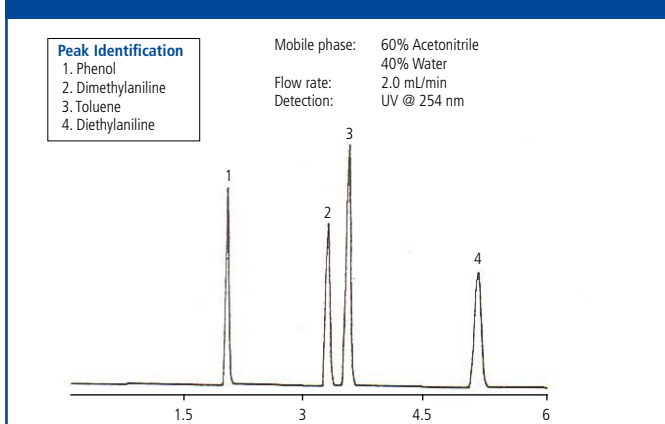
Phase	Length (mm)	ID (mm)	Particle Size (µm)	Part No.
Epic C4 SD	50	2.1	3	112191-EC4-SD
Epic C4 SD	50	2.1	5	112291-EC4-SD
Epic C4 SD	50	4.6	5	115291-EC4-SD
Epic C4 SD	100	2.1	3	122191-EC4-SD
Epic C4 SD	100	2.1	5	122291-EC4-SD
Epic C4 SD	100	3.0	3	123191-EC4-SD
Epic C4 SD	100	4.6	3	125191-EC4-SD
Epic C4 SD	125	2.1	3	102191-EC4-SD
Epic C4 SD	150	2.1	3	132191-EC4-SD
Epic C4 SD	150	2.1	5	132291-EC4-SD
Epic C4 SD	150	4.0	5	134291-EC4-SD
Epic C4 SD	150	4.6	3	135191-EC4-SD
Epic C4 SD	150	4.6	5	135291-EC4-SD
Epic C4 SD	250	4.6	5	155291-EC4-SD
Epic C4 SD Prep	250	20	5	158291-EC4-SD
Epic C4 SD Prep	250	30	10	15N391-EC4-SD
Epic C4 SD Prep	250	30	5	15N291-EC4-SD
Epic C4 SD Prep	250	50	10	15F391-EC4-SD
Epic C4 SD Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-EC4-SD
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	E5500100

Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

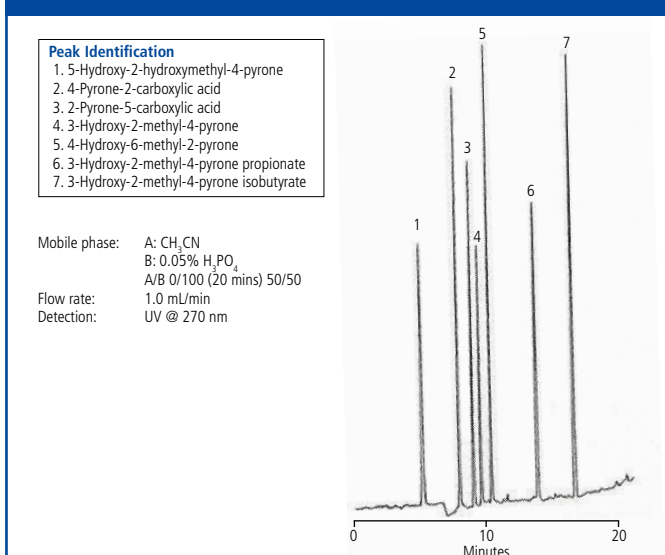
HPLC base deactivation test of tricyclic antidepressants using Epic C4 SD, 150 x 4.6 mm, 5 µm.



HPLC analysis of anilines using Epic C4 SD, 250 x 4.6 mm, 5 µm.

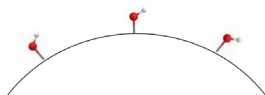


HPLC analysis of pyrones using Epic C4 SD, 150 x 4.6 mm, 5 µm.



Epic Silica

Epic Silica is the backbone for the Epic bonded product range and is a 120 Angstrom high purity metal free synthetic silica. The Epic Silica is the only Epic column designed for use in normal phase chromatography. The Epic Silica Prep columns are very effective in preparative chromatography as normal phase organic solvents are more easily removed than reversed phase solvents.

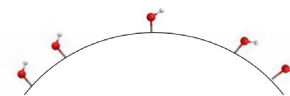


Phase	Length (mm)	ID (mm)	Particle Size (µm)	Part No.
Epic Silica	50	2.1	3	112191-ESI
Epic Silica	50	3.0	3	113191-ESI
Epic Silica	50	4.6	5	115291-ESI
Epic Silica	100	4.6	3	125191-ESI
Epic Silica	150	2.1	3	132191-ESI
Epic Silica	150	4.6	5	135291-ESI
Epic Silica	250	4.6	3	155191-ESI
Epic Silica	250	4.6	5	155291-ESI
Epic Silica Prep	50	50	5	11F291-ESI
Epic Silica Prep	250	10	5	157291-ESI
Epic Silica Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-ESI
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	E5500100

Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

Epic HILIC Silica

Epic HILIC Silica is based on ultrapure silica rigorously sized to produce highly efficient columns. Epic HILIC silica is pretreated to yield uniform distribution of silanol sites essential for reproducible HILIC chromatography. Epic HILIC silica is useful for the separation of polar bases which can ion exchange with silanols enabling the retention of these polar bases.

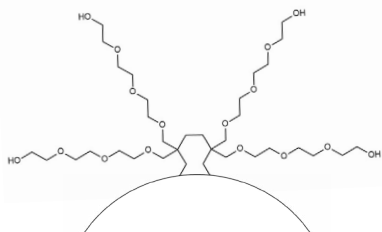


Phase	Length (mm)	ID (mm)	Particle Size (µm)	Part No.
Epic HILIC Silica	100	3.0	3	123191-EHIC-SI
Epic HILIC Silica	100	3.0	5	123291-EHIC-SI
Epic HILIC Silica	100	4.6	3	125191-EHIC-SI
Epic HILIC Silica	150	3.0	1.8	533A91-EHIC-SI
Epic HILIC Silica	150	3.0	3	133191-EHIC-SI
Epic HILIC Silica	150	3.0	5	133291-EHIC-SI
Epic HILIC Silica	150	4.6	3	135191-EHIC-SI
Epic HILIC Silica	150	4.6	5	135291-EHIC-SI
Epic HILIC Silica	250	4.6	5	155291-EHIC-SI
Epic HILIC Silica Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-EHIC-SI
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	E5500100

Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

Epic HILIC POH

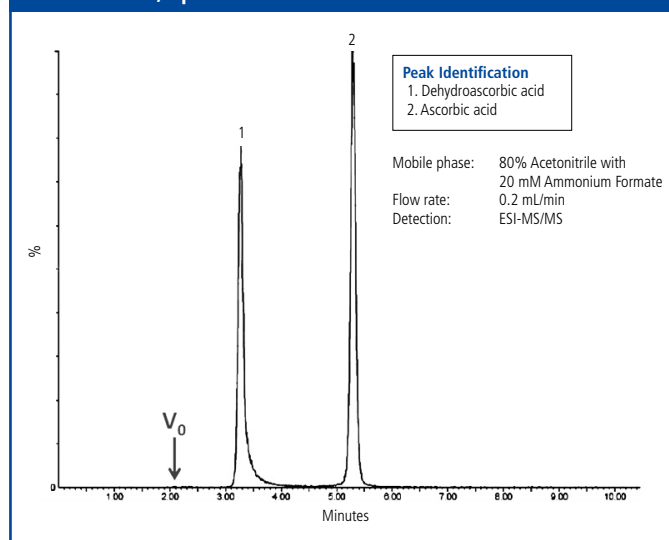
Epic HILIC POH (POH for polyhydroxylated) is a new stationary phase for HILIC chromatography. It is composed of a polyhydroxylated polymer coated and bound to silica.



This polymer coating enhances the behavior of the stationary phase under HILIC operating conditions. This composition provides hydroxyl levels that are well above conventional hydroxyl and diol type stationary phases.

An example of the separation and retention of two highly polar compounds (dehydroascorbic acid and ascorbic acid) performed on Epic HILIC POH is shown. Measurement of dehydroascorbic acid and ascorbic acid is important in understanding the transport of ascorbic acid in human body fluids, as dehydroascorbic acid is the oxidation product of ascorbic acid. The Epic HILIC POH provides the most retention and separation of polar dehydroascorbic acid and ascorbic acid of any of the Epic HILIC phases.

HPLC analysis of highly polar compounds – dehydroascorbic acid (DHAA) and ascorbic acid (AA) using Epic HILIC POH, 150 x 2.1 mm, 3 μ m.



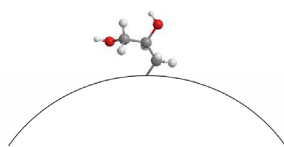
Phase	Length (mm)	ID (mm)	Particle Size (μ m)	Part No.
Epic HILIC POH	100	2.1	1.8	522A91-EHIC-POH
Epic HILIC POH	100	3.0	3	123191-EHIC-POH
Epic HILIC POH	100	3.0	5	123291-EHIC-POH
Epic HILIC POH	100	4.6	3	125191-EHIC-POH
Epic HILIC POH	150	2.1	1.8	532A91-EHIC-POH
Epic HILIC POH	150	2.1	3	132191-EHIC-POH
Epic HILIC POH	150	3.0	3	133191-EHIC-POH
Epic HILIC POH	150	3.0	5	133291-EHIC-POH
Epic HILIC POH	150	4.6	3	135191-EHIC-POH
Epic HILIC POH	150	4.6	5	135291-EHIC-POH
Epic HILIC POH	250	4.6	5	155291-EHIC-POH
Epic HILIC POH Prep	250	10	5	157291-EHIC-POH
Epic HILIC POH Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-EHIC-POH
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	ES500100

Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

Epic Diol

Epic Diol can be used for either reversed phase chromatography or normal phase chromatography. Epic Diol is less polar than silica and is highly water wettable. In addition, Epic Diol in many cases produces superior peak shape performance when compared to unbonded silica columns.

Epic Diol columns have been specifically developed for high performance chromatography. The combination of tight particle size control and our proprietary high-density bonding technology deliver superior performance for reversed phase or normal phase chromatography.

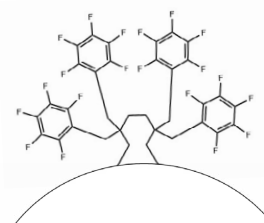


Phase	Length (mm)	ID (mm)	Particle Size (µm)	Part No.
Epic Diol	50	3.0	3	113191-ED
Epic Diol	50	4.6	3	115191-ED
Epic Diol	150	3.0	3	133191-ED
Epic Diol	150	4.6	5	135291-ED
Epic Diol	250	2.1	5	152291-ED
Epic Diol	250	4.6	5	155291-ED
Epic Diol Prep	150	20	5	138291-ED
Epic Diol Prep	150	30	5	13N291-ED
Epic Diol Prep	250	10	5	157291-ED
Epic Diol Prep	250	20	5	158291-ED
Epic Diol Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-ED
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	E5500100

Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

Epic HILIC FL

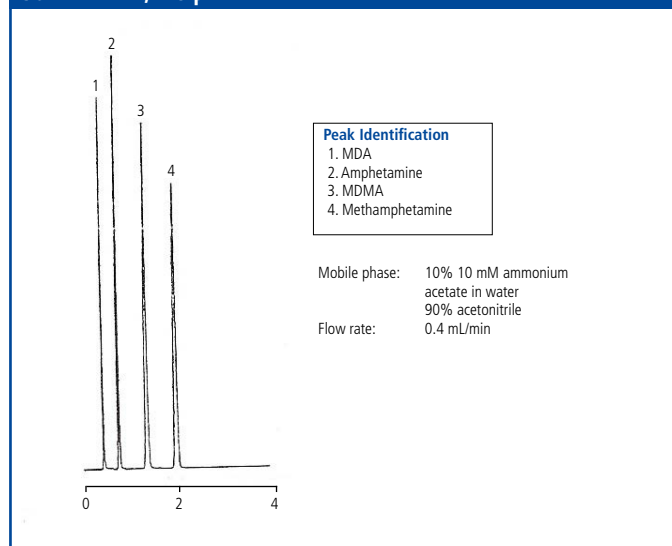
Epic HILIC FL is useful for retention and separation of polar and non-polar compounds that are not retained or separated on conventional reversed phase columns. It consists of a fluorinated based stationary phase bound to silica. This composition provides for excellent retention and peak shape for polar halogenated, polar amines and polar aromatic compounds. Epic HILIC FL is specifically designed for HILIC chromatography and can achieve high performance separations, yield rugged methods and deliver long column lifetimes.



Phase	Length (mm)	ID (mm)	Particle Size (µm)	Part No.
Epic HILIC FL	50	2.1	1.8	512A91-EHIC-FL
Epic HILIC FL	50	2.1	3	112191-EHIC-FL
Epic HILIC FL	100	2.1	1.8	522A91-EHIC-FL
Epic HILIC FL	100	4.6	5	125291-EHIC-FL
Epic HILIC FL	150	2.1	3	132191-EHIC-FL
Epic HILIC FL Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-EHIC-FL
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	E5500100

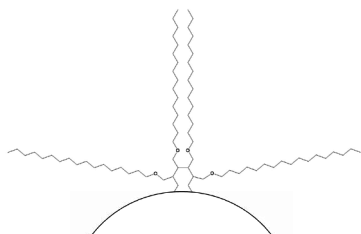
Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

HPLC analysis of amphetamines using Epic HILIC FL, 50 x 2.1 mm, 1.8 µm.



Epic HILIC RP

Epic HILIC RP is a new stationary phase for a combination of HILIC and reverse phase chromatography. It is an excellent choice for samples containing polar and hydrophobic analytes.

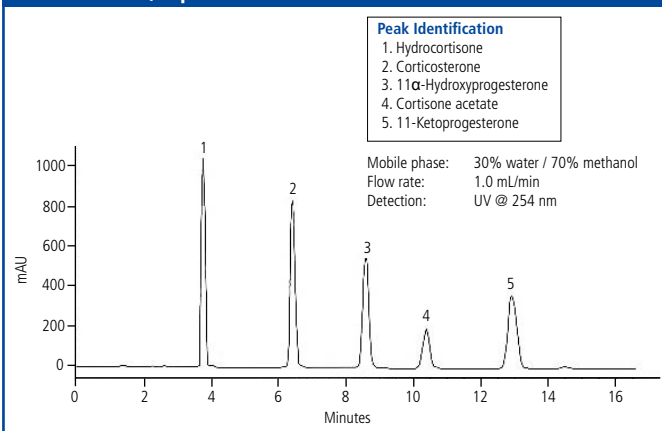


Epic HILIC RP is a combination of a polyhydroxylated polymer coated and bound to silica and C18 groups also bound to silica. This composition provides hydroxyl levels that are well above conventional hydroxyl and diol type stationary phases. Many of the commercial stationary phases used for HILIC chromatography are converted normal phase columns. These normal phase columns yield poor methods, poor separations and lack durability. Epic HILIC RP is specifically designed for HILIC chromatography and can achieve high performance separations, yield rugged methods and deliver long column lifetimes.

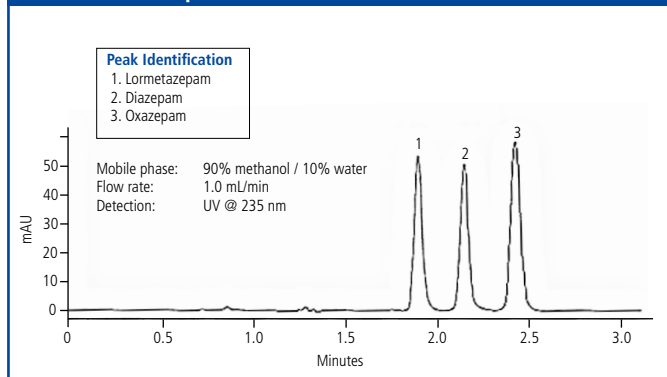
Phase	Length (mm)	ID (mm)	Particle Size (μm)	Part No.
Epic HILIC RP	50	2.1	3	112191-EHRP
Epic HILIC RP	100	2.1	3	122191-EHRP
Epic HILIC RP	100	3.0	3	123191-EHRP
Epic HILIC RP	100	3.0	5	123291-EHRP
Epic HILIC RP	100	4.6	3	125191-EHRP
Epic HILIC RP	150	2.1	3	132191-EHRP
Epic HILIC RP	150	3.0	3	133191-EHRP
Epic HILIC RP	150	3.0	5	133291-EHRP
Epic HILIC RP	150	4.6	3	135191-EHRP
Epic HILIC RP	150	4.6	5	135291-EHRP
Epic HILIC RP	200	4.6	3	145191-EHRP
Epic HILIC RP	250	4.6	5	155291-EHRP
Epic HILIC RP Prep	250	20	5	158291-EHRP
Epic HILIC RP Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-EHRP
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	ES500100

Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

HPLC analysis of steroids using Epic HILIC RP, 250 x 4.6 mm, 5 μm.

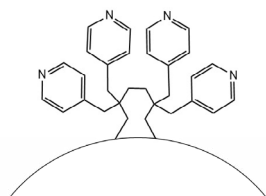


HPLC analysis of benzodiazepines using Epic HILIC RP, 250 x 4.6 mm, 5 μm.



Epic HILIC PI

Epic HILIC PI is a new stationary phase for HILIC chromatography. It consists of an aromatic amine based stationary phase bound to silica. This composition provides for excellent retention and peak shape for polar amine compounds and superior retention of acids.

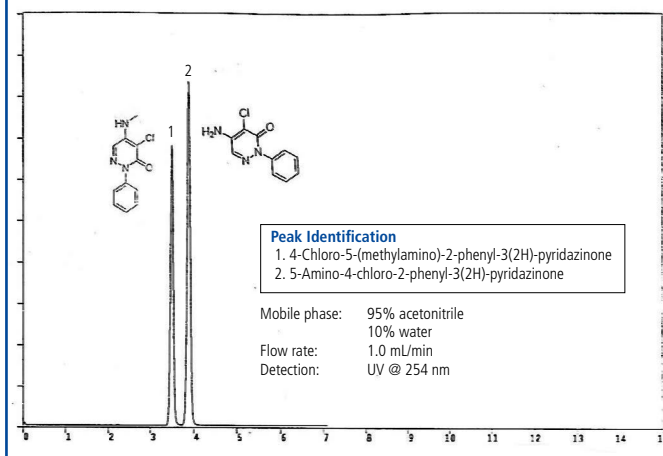


Many of the commercially available HILIC stationary phases are converted normal phase columns. These normal phase columns yield poor methods, poor separations and lack durability. Epic HILIC PI is specifically designed for HILIC chromatography and can achieve high performance separations, yield rugged methods and deliver long column lifetimes.

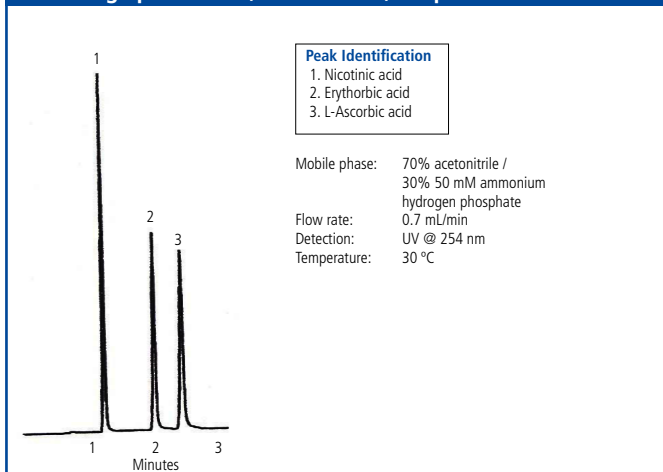
Phase	Length (mm)	ID (mm)	Particle Size (µm)	Part No.
Epic HILIC PI	50	2.1	1.8	512A91-EHIC-PI
Epic HILIC PI	50	2.1	3	112191-EHIC-PI
Epic HILIC PI	75	3.0	3	19d191-EHIC-PI
Epic HILIC PI	100	2.1	1.8	522A91-EHIC-PI
Epic HILIC PI	100	2.1	3	122191-EHIC-PI
Epic HILIC PI	100	4.6	5	125291-EHIC-PI
Epic HILIC PI	150	4.6	3	135191-EHIC-PI
Epic HILIC PI	250	4.6	5	155291-EHIC-PI
Epic HILIC PI Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-EHIC-PI
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	ES500100

Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

HPLC analysis of amine containing heterocycles using Epic HILIC PI, 150 x 4.6 mm, 5 µm.

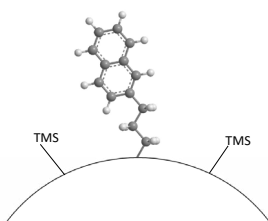


HPLC analysis of nicotinic acid, erythorbic acid and L-ascorbic acid using Epic HILIC PI, 50 x 2.1 mm, 1.8 µm.



Epic Naphthyl

Epic Naphthyl is a naphthalene based material, with high bonding density and intrinsic base deactivation due to a rigid structure that also enables the shape selectivity needed for many diastereomeric separations. It exhibits strong π - π interaction and charge transfer interactions and performs well for diastereomer separations and non-polar compounds. The unique properties of Epic Naphthyl places its selectivity between graphitized carbon and alkyl type stationary phases.

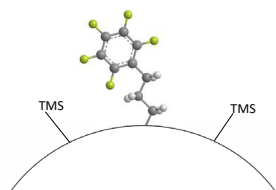


Phase	Length (mm)	ID (mm)	Particle Size (μm)	Part No.
Epic Naphthyl	50	2.1	1.8	512A91-ENAP
Epic Naphthyl	50	2.1	3	112191-ENAP
Epic Naphthyl	50	2.1	5	112291-ENAP
Epic Naphthyl	50	3.0	1.8	513A91-ENAP
Epic Naphthyl	100	2.1	1.8	522A91-ENAP
Epic Naphthyl	100	2.1	3	122191-ENAP
Epic Naphthyl	100	2.1	5	122291-ENAP
Epic Naphthyl	100	4.6	3	125191-ENAP
Epic Naphthyl	150	2.1	3	132191-ENAP
Epic Naphthyl	150	2.1	5	132291-ENAP
Epic Naphthyl	150	4.6	3	135191-ENAP
Epic Naphthyl	150	4.6	5	135291-ENAP
Epic Naphthyl	250	4.6	5	155291-ENAP
Epic Naphthyl Prep	250	20	5	158291-ENAP
Epic Naphthyl prep	250	30	5	15N291-ENAP
Epic Naphthyl Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-ENAP
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	ES500100

Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

Epic PFP LB

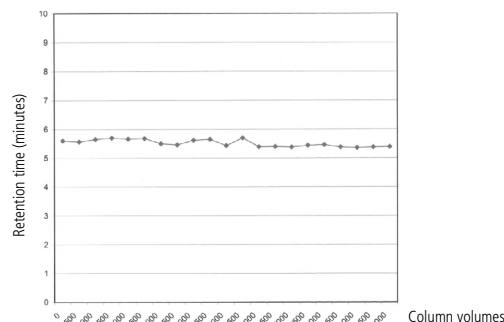
The Epic PFP LB (low bleed) is a pentafluorophenyl that has been baseline stabilized and is ready for high performance separations. The Epic PFP LB is a truly unique stationary phase with properties significantly different than C18 phases. This unique characteristic results from bonded pentafluorophenyl groups imparting a π - π electron interaction which produces an enhanced retention for many compounds, such as natural products, halogenated compounds, aromatics, conjugated compounds and trace impurities in complex matrices. Many of these high-performance separations were not possible with existing PFP columns especially in the area of trace impurities where baseline bleed levels were unacceptable. Epic PFP LB columns have been stabilized to provide low column bleed, increased lifetimes, better pH stability, and superior LC-MS performance.



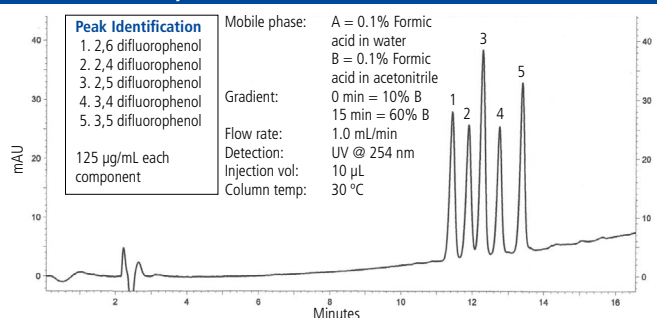
Phase	Length (mm)	ID (mm)	Particle Size (µm)	Part No.
Epic PFP LB	50	2.1	1.8	512A91-EPFP-LB
Epic PFP LB	50	2.1	3	112191-EPFP-LB
Epic PFP LB	50	2.1	5	112291-EPFP-LB
Epic PFP LB	50	4.6	5	115291-EPFP-LB
Epic PFP LB	100	2.1	1.8	522A91-EPFP-LB
Epic PFP LB	100	2.1	3	122191-EPFP-LB
Epic PFP LB	100	2.1	5	122291-EPFP-LB
Epic PFP LB	100	3.0	3	123191-EPFP-LB
Epic PFP LB	100	4.6	3	125191-EPFP-LB
Epic PFP LB	150	2.1	1.8	532A91-EPFP-LB
Epic PFP LB	150	2.1	3	132191-EPFP-LB
Epic PFP LB	150	2.1	5	132291-EPFP-LB
Epic PFP LB	150	4.6	3	135191-EPFP-LB
Epic PFP LB	150	4.6	5	135291-EPFP-LB
Epic PFP LB	250	4.6	5	155291-EPFP-LB
Epic PFP LB Prep	250	20	5	158291-EPFP-LB
Epic PFP LB Prep	250	30	5	15N291-EPFP-LB
Epic PFP LB Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-EPFP-LB
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	E5500100

Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

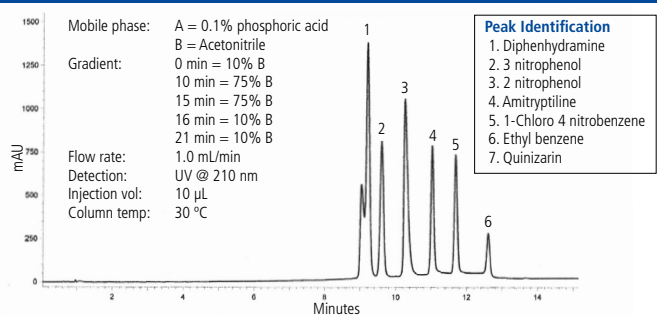
Column robustness studies of naphthalene at pH 10 over 10,000 column volumes using Epic PFP LB, 250 x 4.6 mm, 5 µm.



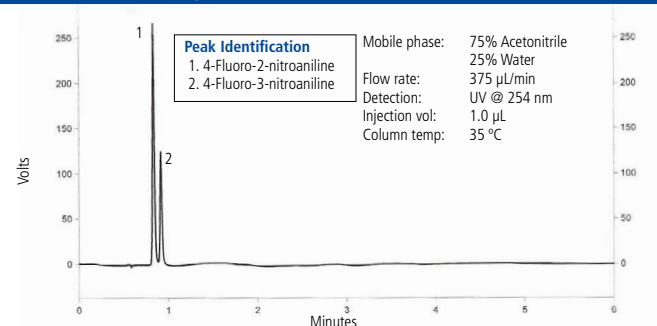
HPLC analysis of difluorophenols using Epic PFP LB, 150 x 4.6 mm, 5 µm.



HPLC analysis of aromatics using Epic PFP LB, 50 x 4.6 mm, 3 µm.

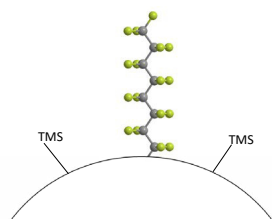


HPLC analysis of fluoro nitroanilines using Epic PFP LB, 100 x 2.1 mm, 1.8 µm.



Epic FO LB

The Epic FO LB is a baseline stabilized alkyl perfluorinated C8 (perfluorooctyl), with low bleed characteristics and is well suited to the separation of trace impurities, especially for halogenated analytes, lipophilic compounds and environmental samples.



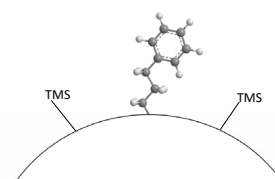
Fluorinated phases are able to perform many unique and difficult separations which cannot be performed on the best available C18 columns. Traditionally, fluorinated phases have suffered from poor column lifetimes, unstable baselines and column bleed, especially when used with mass spectrometry (MS). Epic FO LB has been stabilized to provide low column bleed, increased lifetimes, better pH stability, and superior LC-MS performance.

Phase	Length (mm)	ID (mm)	Particle Size (μm)	Part No.
Epic FO LB	50	2.1	1.8	512A91-EFO-LB
Epic FO LB	50	2.1	3	112191-EFO-LB
Epic FO LB	100	2.1	1.8	522A91-EFO-LB
Epic FO LB	100	2.1	3	122191-EFO-LB
Epic FO LB	150	2.1	1.8	532A91-EFO-LB
Epic FO LB	150	2.1	3	132191-EFO-LB
Epic FO LB	150	3.0	3	133191-EFO-LB
Epic FO LB	150	4.6	3	135191-EFO-LB
Epic FO LB	150	4.6	5	135291-EFO-LB
Epic FO LB	250	4.6	5	155291-EFO-LB
Epic FO LB Prep	250	10	5	157291-EFO-LB
Epic FO LB Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-EFO-LB
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	ES500100

Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

Epic Phenyl

The Epic Phenyl phase is π -basic (electron donating) and is similar in overall retention to alkyl phases. The alternate selectivity exhibited by phenyl phases is explained by the π - π interactions available through the phenyl ring. Compounds that exhibit this alternate selectivity on the Epic



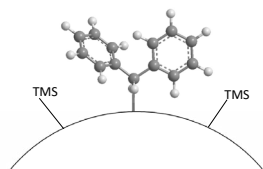
Phenyl phase include antibiotics such as tetracycline, moderate bases such as anesthetics, some acidic compounds such as quinoline antibiotics and nucleosides. The Epic high-density bonding technology delivers superior performance, durability and enhanced lot-to-lot reproducibility. Epic Phenyl offers a truly superior phenyl-based interaction for enhanced chromatographic performance.

Phase	Length (mm)	ID (mm)	Particle Size (μm)	Part No.
Epic Phenyl	50	2.1	1.8	512A91-EPH
Epic Phenyl	50	2.1	3	112191-EPH
Epic Phenyl	50	2.1	5	112291-EPH
Epic Phenyl	100	2.1	1.8	522A91-EPH
Epic Phenyl	100	2.1	3	122191-EPH
Epic Phenyl	100	2.1	5	122291-EPH
Epic Phenyl	100	4.6	3	125191-EPH
Epic Phenyl	150	2.1	3	132191-EPH
Epic Phenyl	150	2.1	5	132291-EPH
Epic Phenyl	150	4.6	3	135191-EPH
Epic Phenyl	150	4.6	5	135291-EPH
Epic Phenyl	250	4.6	5	155291-EPH
Epic Phenyl Prep	250	20	5	158291-EPH
Epic Phenyl Prep	250	30	5	15N291-EPH
Epic Phenyl Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-EPH
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	ES500100

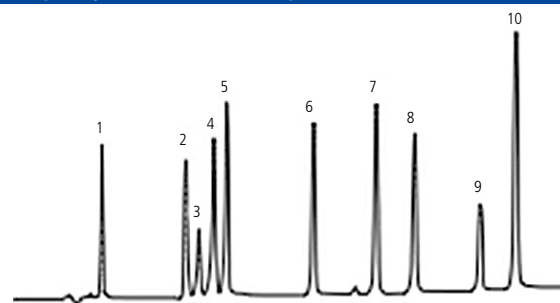
Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

Epic Diphenyl

Epic Diphenyl bonded phase, with reduced hydrophobicity produces HPLC columns with novel selectivity, exhibiting increased speed and resolution, utilizes strong dipole-dipole hydrogen bonding and π - π mechanisms for different selectivity for compounds containing double bonds or aromatic functional groups. In addition, the diphenyl arrangement of the phase can also contribute to steric selectivity allowing for an additional chromatographic interaction. Epic Diphenyl is also highly selective for proteins with aromatic side chains. Epic Diphenyl utilizes our proprietary high-density bonding technology enabling superior performance, durability and enhanced lot-to-lot reproducibility.



HPLC analysis of polar pharmaceutical compounds using Epic Diphenyl, 150 x 4.6 mm, 5 μ m.



Peak Identification

1. Acetaminophen
2. Acetanilide
3. Salicylic acid
4. Acetylsalicylic acid
5. Phenacetin
6. Carbamazepine
7. Tolmetin
8. Naproxen
9. Ibuprofen
10. Diclofenac

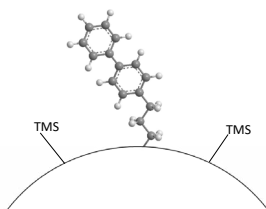
Mobile phase: A: Water+0.1% HCOOH
B: MeCN+0.1% HCOOH
Gradient: 25-80% B in 20 min
Flow rate: 1.0 mL/min
Detection: UV @ 254 nm
Column temp: 25 °C

Phase	Length (mm)	ID (mm)	Particle Size (μ m)	Part No.
Epic Diphenyl	50	2.1	1.8	512A91-EDPH
Epic Diphenyl	50	2.1	3	112191-EDPH
Epic Diphenyl	50	2.1	5	112291-EDPH
Epic Diphenyl	100	2.1	1.8	522A91-EDPH
Epic Diphenyl	100	2.1	3	122191-EDPH
Epic Diphenyl	100	2.1	5	122291-EDPH
Epic Diphenyl	100	3.0	1.8	513A91-EDPH
Epic Diphenyl	100	4.6	3	125191-EDPH
Epic Diphenyl	150	2.1	3	132191-EDPH
Epic Diphenyl	150	2.1	5	132291-EDPH
Epic Diphenyl	150	4.6	3	135191-EDPH
Epic Diphenyl	150	4.6	5	135291-EDPH
Epic Diphenyl	250	4.6	5	155291-EDPH
Epic Diphenyl Prep	250	20	5	158291-EDPH
Epic Diphenyl Prep	250	30	5	15N291-EDPH
Epic Diphenyl Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-EDPH
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	E5500100

Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

Epic Biphenyl

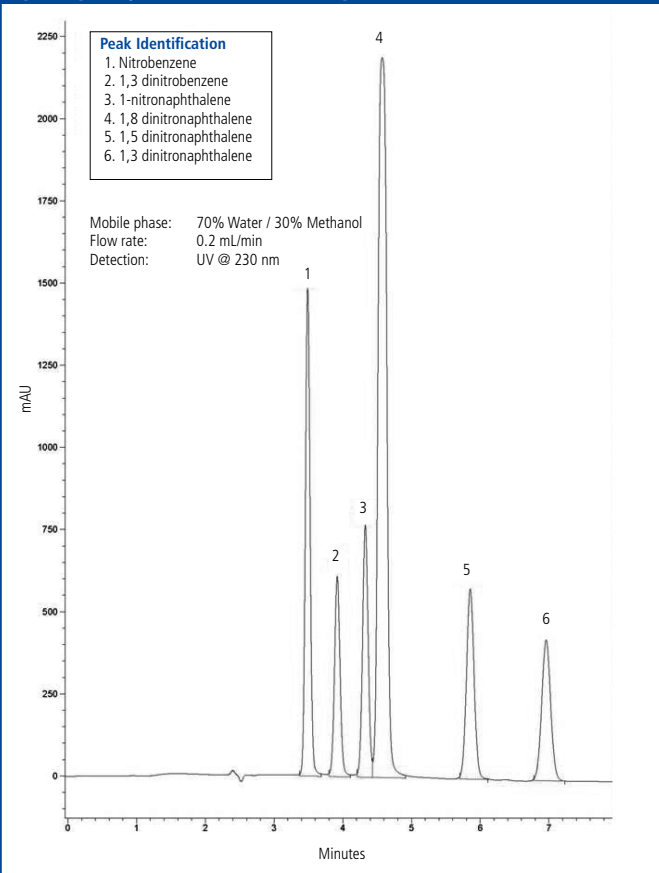
Epic Biphenyl is a truly unique stationary phase with properties significantly different than ODS phases. This unique character results from bonded biphenyl groups, covalently attached to high purity silica, imparting a π - π electron interaction which produces an enhanced retention for many compounds particularly those that contain polarizable electrons. Many classes of compounds contain polarizable electrons including halogenated compounds, aromatics, nitro aromatics and conjugated systems.



Phase	Length (mm)	ID (mm)	Particle Size (μm)	Part No.
Epic Biphenyl	50	2.1	1.8	512A91-EBPH
Epic Biphenyl	50	2.1	3	112191-EBPH
Epic Biphenyl	50	2.1	5	112291-EBPH
Epic Biphenyl	50	3.0	1.8	513A91-EBPH
Epic Biphenyl	100	2.1	1.8	522A91-EBPH
Epic Biphenyl	100	2.1	3	122191-EBPH
Epic Biphenyl	100	2.1	5	122291-EBPH
Epic Biphenyl	100	4.6	3	125191-EBPH
Epic Biphenyl	150	2.1	1.8	532A91-EBPH
Epic Biphenyl	150	2.1	3	132191-EBPH
Epic Biphenyl	150	2.1	5	132291-EBPH
Epic Biphenyl	150	4.6	3	135191-EBPH
Epic Biphenyl	150	4.6	5	135291-EBPH
Epic Biphenyl	250	4.6	5	155291-EBPH
Epic Biphenyl Prep	150	30	5	13N291-EBPH
Epic Biphenyl Prep	250	20	5	158291-EBPH
Epic Biphenyl Prep	250	30	5	15N291-EBPH
Epic Biphenyl Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-EBPH
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	ES500100

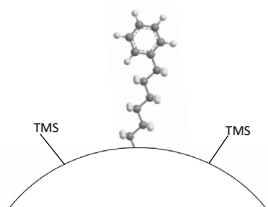
Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

HPLC analysis of aromatic compounds using Epic Biphenyl, 100 x 2.1 mm, 1.8 μm.



Epic Phenyl-Hexyl

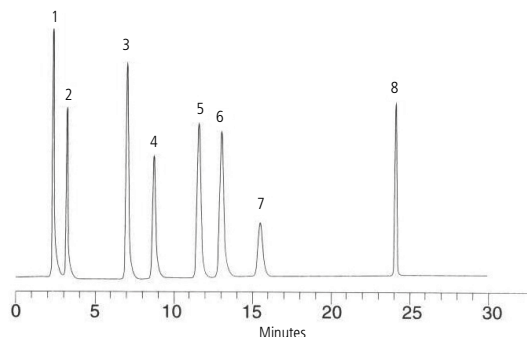
Epic Phenyl-Hexyl employs a 6-carbon (hexyl) linked phenyl phase bonded to high purity silica, where the hexyl alkyl chain delivers unique selectivity and increased hydrolytic stability when compared to propyl-linked phenyl phase chemistry. This retentive phase provides different selectivity to straight chain hydrocarbon phases like C6, C8 or C18, and it is especially useful for aromatic analytes, complex samples and polar pharmaceutical compounds. The Epic high-density bonding technology delivers to the chromatographer superior performance, durability, and enhanced lot-to-lot reproducibility. Epic Phenyl-Hexyl offers the chromatographer a truly superior phenyl-based interaction for enhanced chromatographic performance.



Phase	Length (mm)	ID (mm)	Particle Size (µm)	Part No.
Epic Phenyl-Hexyl	50	2.1	1.8	512A91-EPHX
Epic Phenyl-Hexyl	50	2.1	3	112191-EPHX
Epic Phenyl-Hexyl	50	2.1	5	112191-EPHX
Epic Phenyl-Hexyl	50	4.0	3	114191-EPHX
Epic Phenyl-Hexyl	50	4.6	5	115291-EPHX
Epic Phenyl-Hexyl	75	2.1	3	192191-EPHX
Epic Phenyl-Hexyl	75	3.0	3	193191-EPHX
Epic Phenyl-Hexyl	75	4.6	3	195191-EPHX
Epic Phenyl-Hexyl	100	2.1	1.8	522A91-EPHX
Epic Phenyl-Hexyl	100	2.1	3	122191-EPHX
Epic Phenyl-Hexyl	100	2.1	5	122291-EPHX
Epic Phenyl-Hexyl	100	3.0	3	123191-EPHX
Epic Phenyl-Hexyl	100	4.6	3	125191-EPHX
Epic Phenyl-Hexyl	150	2.1	3	132191-EPHX
Epic Phenyl-Hexyl	150	2.1	5	132291-EPHX
Epic Phenyl-Hexyl	150	3	3	133191-EPHX
Epic Phenyl-Hexyl	150	4.6	3	135191-EPHX
Epic Phenyl-Hexyl	150	4.6	5	135291-EPHX
Epic Phenyl-Hexyl	250	4.0	5	154291-EPHX
Epic Phenyl-Hexyl	250	4.6	10	155391-EPHX
Epic Phenyl-Hexyl	250	4.6	3	155191-EPHX
Epic Phenyl-Hexyl	250	4.6	5	155291-EPHX
Epic Phenyl-Hexyl Prep	250	20	5	158291-EPHX
Epic Phenyl-Hexyl Prep	250	30	5	15N291-EPHX
Epic Phenyl-Hexyl Prep	250	20	10	158391-EPHX
Epic Phenyl-Hexyl Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	500101-EPHX
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	E5500100

Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

HPLC analysis of food additives using Epic Phenyl-Hexyl, 150 x 4.6 mm, 5 µm.

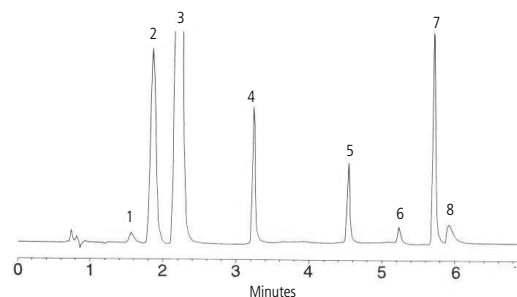


Peak Identification

1. Saccharin
2. p-Hydroxybenzoic acid
3. Sorbic acid
4. p-Hydroxybenzoic acid methyl ester
5. Dehydroacetic acid
6. p-Toluic acid
7. p-Hydroxybenzoic acid ethyl ester
8. n-Propyl p-hydroxybenzoate

Mobile phase: A: 50 mM KH_2PO_4 + 0.1% H_3PO_4
 B: Acetonitrile
 Gradient: A/B (75:25) to A/B (25:75) in 18min, hold at A/B (25:75) for 12min
 Flow rate: 1.0 mL/min
 Detection: UV @ 230 nm
 Injection vol: 5 µL

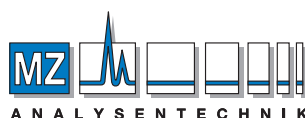
HPLC analysis of polar pharmaceutical compounds using Epic Phenyl-Hexyl, 50 x 4.6 mm, 3 µm.



Peak Identification

1. P-Aminophenol
2. Benzoic acid
3. Acetaminophen
4. Pseudoephedrine
5. Butyl paraben
6. Chlorpheniramine
7. Diphenhydramine
8. Dextromethorpha

Mobile phase: A: Acetonitrile
 B: Methanol/20 mM KH_2PO_4 (80:20)
 A/B (0:100) to A/B (80:20) in 5min
 Flow rate: 1.3 mL/min
 Detection: UV @ 214 nm
 Injection vol: 5 µL



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