

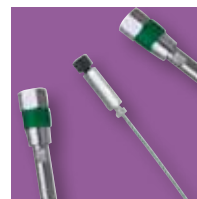
GRACE *Alltech*
HPLC Column



Alltima HP Column

안정성, 순도 및 성능

- 보다 향상된 피크 대칭성 - 고순도 실리카 사용으로 꼬리 끌림 문제 해결
- 긴 컬럼 수명 - 뛰어난 컬럼 안정성으로 비용 절감
- 정밀분석과 극미량 분석에 이상적-컬럼에서 용출(bleeding)이 없습니다.
- 다중 선택 옵션- 머무름, 분리능 및 분석 시간의 최적화

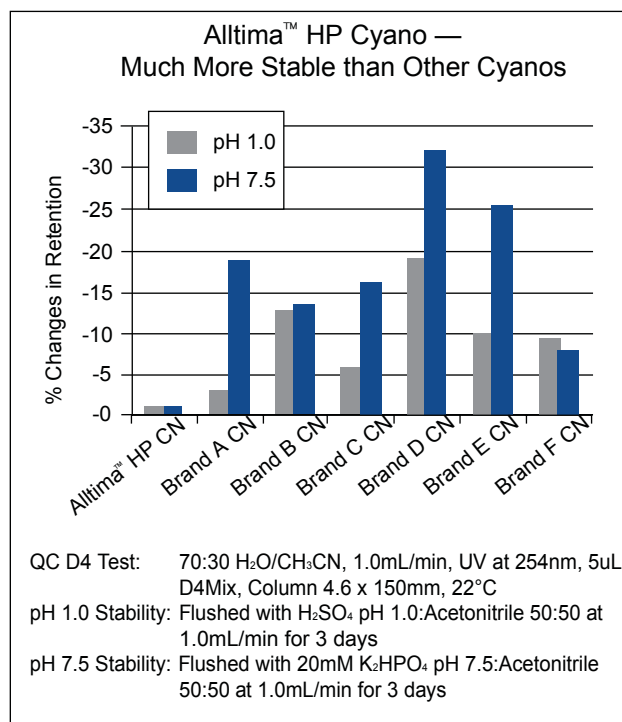
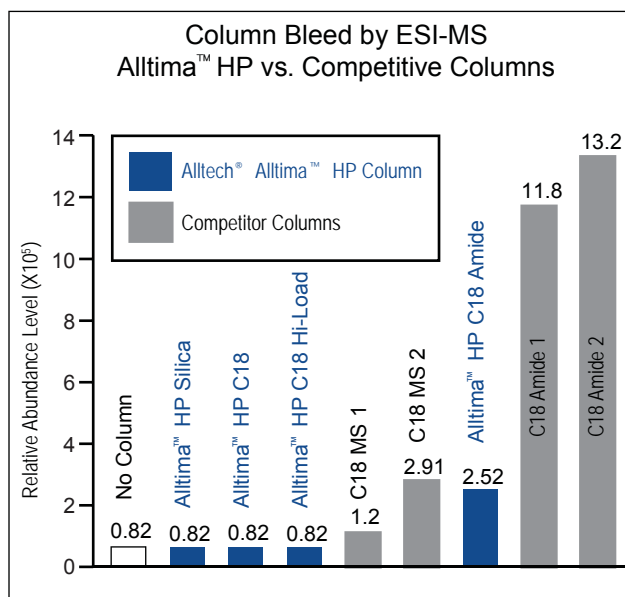


Alltima™ HP 컬럼은 고순도의 실리카에 최상의 화학적 결합상이 결합된 컬럼으로 가장 까다로운 분리 요구 사항을 극복할 수 있도록 필요한 선택성과 성능을 갖춘 컬럼입니다.

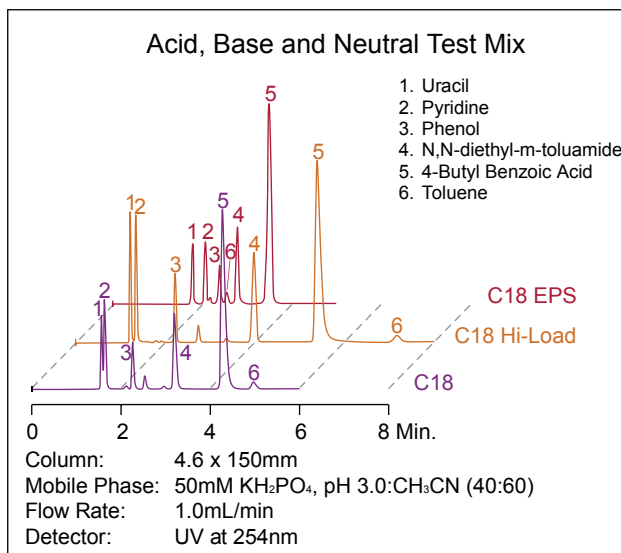
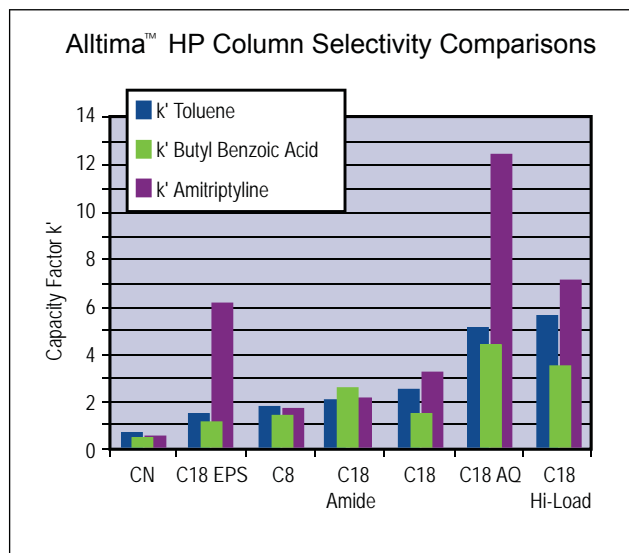
Alltima™ HP Phase Specifications							
Phase	Pore Size (Å)	Surface Area (m ² /g)	Carbon Load (%)	Endcapped	Chromatographic Properties	Application/Benefit	USP L-code
C18	190	200	12	Yes	Classic reversed-phase retention and selectivity.	Routine applications.	L1
C18 EPS	190	200	4	Yes	Greater retention and enhanced peak symmetry for polar compounds. Alternate selectivity to traditional reversed-phases.	Reversed-phase applications where C18 is too retentive.	L1
C18 Hi-Load	100	450	24	Yes	Highest carbon load for superior retention and loadability.	High resolution for complex samples.	L1
C18 AQ	100	450	20	Yes	100% water wettable.	Applications requiring high aqueous mobile phases.	L1
C18 Amide	190	200	12	Yes	Polar-embedded phase with extremely low bleed. Compatible with microbore.	Basic compounds in neutral to alkaline pH, MS applications.	L1
C8	190	200	8	Yes	Lower capacity compared to C18 phases.	Reversed-phase applications where C18 is too retentive.	L7
Cyano	190	200	4	Yes	Extremely stable, long life and reproducible.	Ideal for basic drug analysis.	L10
Silica	100	450	—	No	Highly polar phase.	General purpose normal phase applications.	L3
HILIC	120	230	—	No	Hydrophilic interaction chromatography uses small amounts of water for increased sensitivity with microbore applications.	Very polar analytes that cannot be retained by reversed-phase.	L3

The Alltima™ HP Column Family Demonstrates Low Bleed

Alltima™ HP columns are among the lowest-bleed columns available, making them ideal for microbore applications. The C18 amide polar-embedded phase and the cyano phase have significantly lower column bleed than competitive columns.



Selectivity Options in One Product Family



Alltima™ HP Columns

Format	i.d. (mm)	Length (mm)	Particle Size (µm)	C18		C18		C18		CN	Silica	HILIC
				Part No.	Part No.	Part No.	Part No.	Part No.	Part No.			
Capillary	0.15	50	3	22153	22560	—	22190	22255	22479	—	—	22515
	0.15	100	3	22154	22561	—	—	—	22480	—	—	22516
	0.15	150	3	22155	22562	—	—	—	22481	—	—	22517
	0.3	50	3	22156	22563	—	22193	22258	22482	—	—	22518
	0.3	100	3	22157	22564	—	—	—	22483	—	—	22519
	0.3	150	3	22158	22565	—	—	—	22484	—	—	22520
Expedite™	2.1	20	1.5	—	—	—	—	—	—	—	—	86471
	2.1	10	3	—	—	—	—	—	—	—	—	86473
	2.1	20	3	87674	—	87710	87692	87728	87746	—	—	—
	4.6	10	3	87675	87815	—	—	—	—	—	—	—
	4.6	20	3	87676	87816	—	87694	—	87748	—	—	—
	Microbore	2.1	50	3	87504	—	87508	87506	87510	87512	87514	—
2.1		100	3	87669	87809	87705	87687	87723	87741	—	—	—
2.1		150	3	87670	87810	87706	87688	87724	87742	87760	87788	86463
2.1		150	5	87681	87821	87717	—	87735	87753	87781	87799	86465
2.1		250	5	87682	87822	87718	87700	87736	—	—	87802	—
Solvent Reducer		3	150	3	87601	—	87604	87610	87607	87613	87616	87619
	3	150	5	87602	—	—	87611	87608	87614	—	87620	—
	3	250	5	87603	—	87606	87612	87609	87615	87618	87621	—
Analytical	4.6	50	3	87826	87832	87833	87827	87829	—	87825	87831	86460
	4.6	100	3	87667	87807	87703	87685	87721	87739	87757	—	—
	4.6	150	3	87668	87808	87704	87686	87722	87740	87758	87786	86462
	4.6	150	5	87679	87819	87715	87697	87733	87751	87769	87797	86464
	4.6	250	5	87680	87820	87716	87698	87734	87752	87780	87798	86466
Rocket™	7	53	1.5	—	—	—	—	—	—	—	—	86468
	7	33	3	87671	87811	—	—	87725	—	87761	87789	86469
	7	53	3	87672	87812	87708	87690	87726	87744	87762	87790	86470
	7	53	3	87673	87813	87709	87691	87727	87745	87763	87791	86471
Guard*	2.1	7.5	5	87683	87823	87719	87701	87737	87755	87783	87803	86479
	3	7.5	—	87622	—	—	87624	87625	87627	87626	—	—
	4.6	7.5	5	87684	87832	—	87702	87738	87756	87784	87804	86480

*Requires All-Guard Holder, Part No.80101.

more info

For detailed information on column formats, see Total Catalog.

technical assistance

Contact Tech Support: Email: sales@dongmyung.kr
 Online: www.dongmyung.kr

Prevail Column

100% 유기용매나 수용성 용매에서도 우수한 안정성

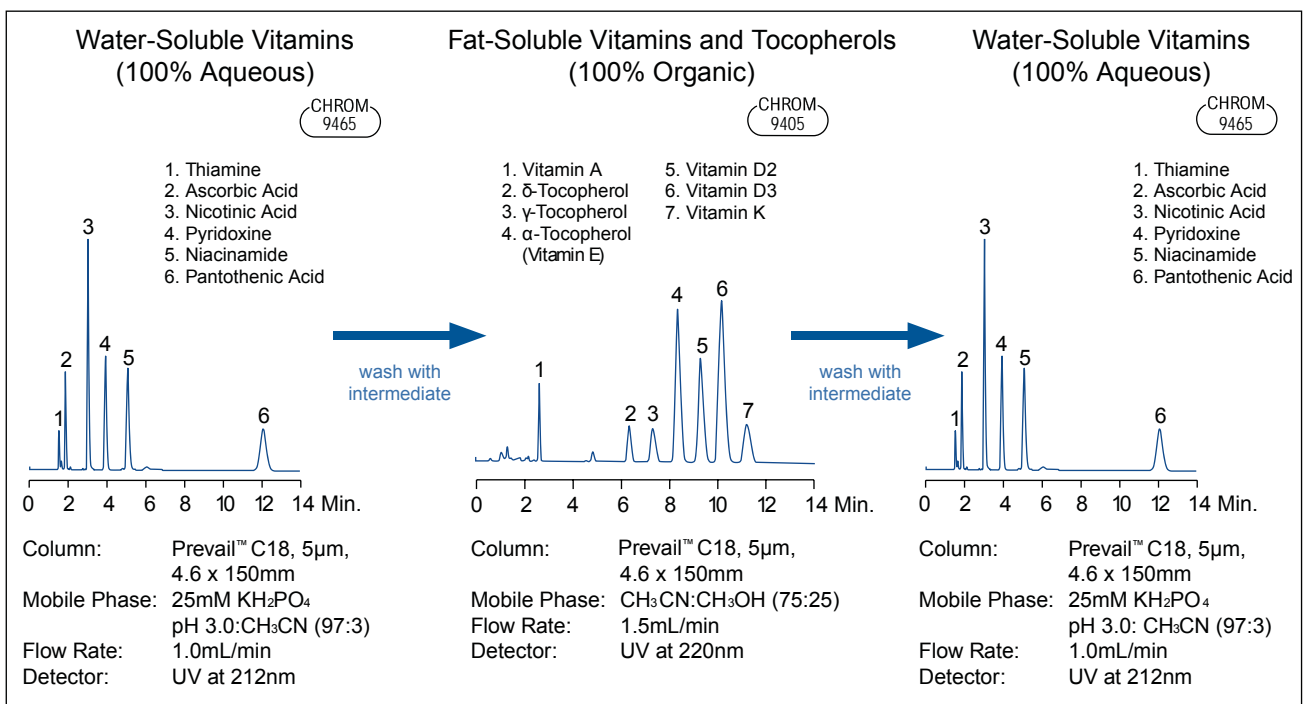
- 긴 컬럼 수명을 위한 뛰어난 결합상의 안정성
- Microbore와 ELSD 응용에 탁월한 감도



Prevail™ HPLC 컬럼은 까다로운 분리에 뛰어난 다양성을 제공합니다. 전통적으로 역상 층진은 높은 수용성(>95%) 조건하에서 결합상이 붕괴되는 경향이 있습니다. Prevail™ 결합상은 100% 수용성에서 완전히 확장된 상태로 유지되고, 100% 유기 용매에서 뛰어난 머무름을 위해 높은 탄소 함량(%)을 제공합니다. 단순히 이동상 조절만으로 극성뿐만 아니라 비극성 화합물을 간단하게 머무르게 할 수 있습니다.

Prevail™ Phase Specifications							
Phase	Pore Size (Å)	Surface Area (m ² /g)	Carbon Load (%)	Endcapped	Chromatographic Properties	Application/Benefit	USP L-code
C18 Select	110	350	17	Yes	Stable in 100% aqueous to 100% organic mobile phases.	Same benefits as Prevail™ C18, but slightly more retentive.	L1
C18	110	350	15	Yes	Stable in 100% aqueous to 100% organic mobile phases.	Flexibility to switch between varied mobile phase conditions to suit a variety of applications. Excellent sensitivity for microbore applications.	L1
C8	110	350	8	Yes	Stable C8 phase.	Use for highly hydrophobic compounds that retain too strongly on C18.	L7
Phenyl	110	350	7	Yes	Lowest hydrophobic capacity.	Selective for aromatic compounds in a variety of mobile phase conditions.	L11
Cyano	110	350	—	Yes	General purpose cyano suitable for normal or reversed-phase use.	Rugged normal phase applications.	L10
Amino	110	350	—	No	Stable in 100% aqueous to 100% organic mobile phases.	Use for carbohydrates or as a weak anion exchanger.	L8
Silica	110	350	—	No	Highly polar phase.	General purpose normal phase applications.	L3
Organic Acid	110	350	—	Yes	Highly efficient silica-based, acid-stable.	Separate common organic acids with unsurpassed resolution, speed and sensitivity. Lower cost than polymeric columns.	—
Carbohydrate ES	—	—	—	No	Extremely stable hybrid phase.	Excellent for mono- and oligosaccharides and sugar alcohols.	—

Switch Between 100% Aqueous and 100% Organic Mobile Phases on the Same Column



Prevail™ Carbohydrate ES Columns

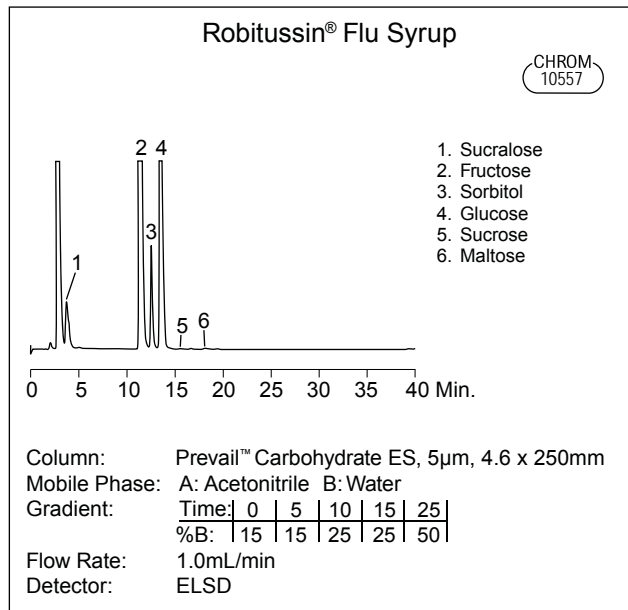
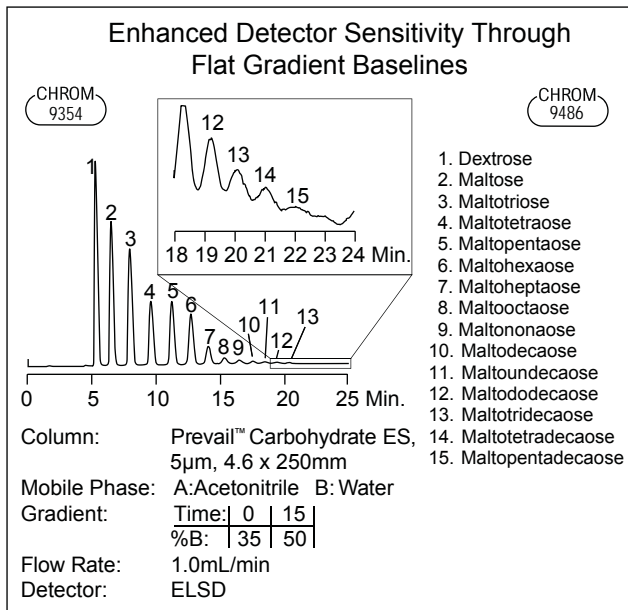
- 긴 컬럼 수명- 폴리머의 안정성과 실리카의 견고함이 결합된 Hybrid phase
- 기존의 아민 결합상 탄수화물 컬럼과 비교하여 기울기 용리에도 안정된 바탕선 제공
- 더 많은 이동상의 선택으로 분석 시간 단축
- 기울기 용리가 가능한 ELSD를 이용한 탄수화물 분리에 적합

Quiet Gradient Baselines

Prevail™ Carbohydrate ES 컬럼은 굴절률 검출기를 이용한 등 용매(isocratic) 분리 조건에서 탁월하지만, ELSD를 이용한 기울기 용리 조건에서 컬럼의 실질적인 강력한 분리 능력을 보여줍니다. 기울기 용리에서 보여주는 잔잔하고 안정된 바탕선은 강력한 선택성과 실행 시간의 단축 및 효율적인 피크에 의한 감도를 극대화 시켜줍니다.

Better Resolution and Peak Shape

Prevail™ Carbohydrate ES 컬럼은 mono-와 oligosaccharides 및 당 알코올(Sugar alcohols)의 분리에 다양하게 적용할 수 있으며, 컬럼을 가열할 필요 없이 실온에서 환원당에 대해 예리한 대칭성이 있는 단일 피크를 보여줍니다.



Prevail™ Columns

Format	i.d. (mm)	Length (mm)	Particle Size (µm)	C18 Part No.	C18 Select Part No.	C8 Part No.	Phenyl Part No.	CN Part No.	Amino Part No.	Silica Part No.	Organic Part No.	Carbohydrate ES Part No.
Expedite™	2.1	10	3	43861	—	—	—	—	—	43841	—	—
	2.1	20	3	43827	—	—	—	—	—	43826	—	—
	4.6	10	3	43878	—	—	—	—	—	43858	—	—
	4.6	20	3	43804	—	—	—	—	—	43816	—	—
Microbore	2.1	50	3	43818	99309	—	—	—	—	43868	—	—
	2.1	100	3	43871	99312	—	—	—	—	43805	88648	—
	2.1	150	3	99200	99313	99212	—	99243	—	99267	—	—
	2.1	150	5	99206	99310	99218	99237	99249	—	99273	—	—
	2.1	250	5	—	99311	—	—	—	—	—	—	—
Solvent	3	150	3	99322	99315	99325	—	99338	—	99341	—	—
Reducer	3	150	5	99320	99316	99323	99326	99329	—	99339	—	—
	3	250	5	99321	99317	99324	99327	99330	—	99340	—	—
	4.6	50	3	43829	—	43922	—	43924	43926	43842	—	—
Analytical	4.6	100	3	99202	99302	99214	—	99245	99257	99269	88650	—
	4.6	150	3	99204	99303	99216	—	99247	99259	99271	88655	—
	4.6	50	5	43903	—	—	—	—	—	—	—	—
	4.6	150	5	99208	99300	99224	99239	99251	99263	99275	88640	35102
	4.6	250	5	99210	99301	99229	99241	99253	99265	99277	88645	35101
	4.6	50	3	99203	99304	99215	—	99246	99258	99270	88655	—
Rocket™	7	33	3	99280	99304	—	—	—	—	—	—	—
	7	53	3	99279	99305	—	—	—	—	—	50755	—
	7	53	5	—	—	—	—	—	—	—	—	35104
Guard*	2.1	7.5	5	96682	96690	99128	99130	99131	—	99133	—	—
	3	7.5	5	99350	99119	—	99352	99353	—	99354	—	—
	4.6	7.5	5	99286	96455	99287	99288	99289	99290	99291	96429	96435

*Requires All-Guard™ Holder, Part No. 80101.

Platinum Column

새로운 컬럼으로 새로운 분리에 도전

- 독특한 선택성
- 극성 화합물에 보다 우수한 피크 모양
- 이중의 선택성에 의한 탁월한 분리능의 선택
- 뛰어난 안정성과 재현성
- 속도와 분리 능을 위한 1.5um 충전제와 많은 시료처리를 위한 Rocket & Expedite 컬럼



The Platinum™ Column Advantage

Platinum™ 컬럼은 실리카의 반응을 제어하는 독특한 기능을 갖고 있습니다. 결합상으로 실리카를 완전히 감싸는 대신에 Platinum™ 컬럼내 실리카의 반응은 시료에 따라 극성이나 비극성 화합물 모두에 반응하는 이중모드로 제어합니다. 이러한 극성의 선택성을 확장하는 것은 다른 역상 컬럼에서는 할 수 없는 분리능을 제공합니다.

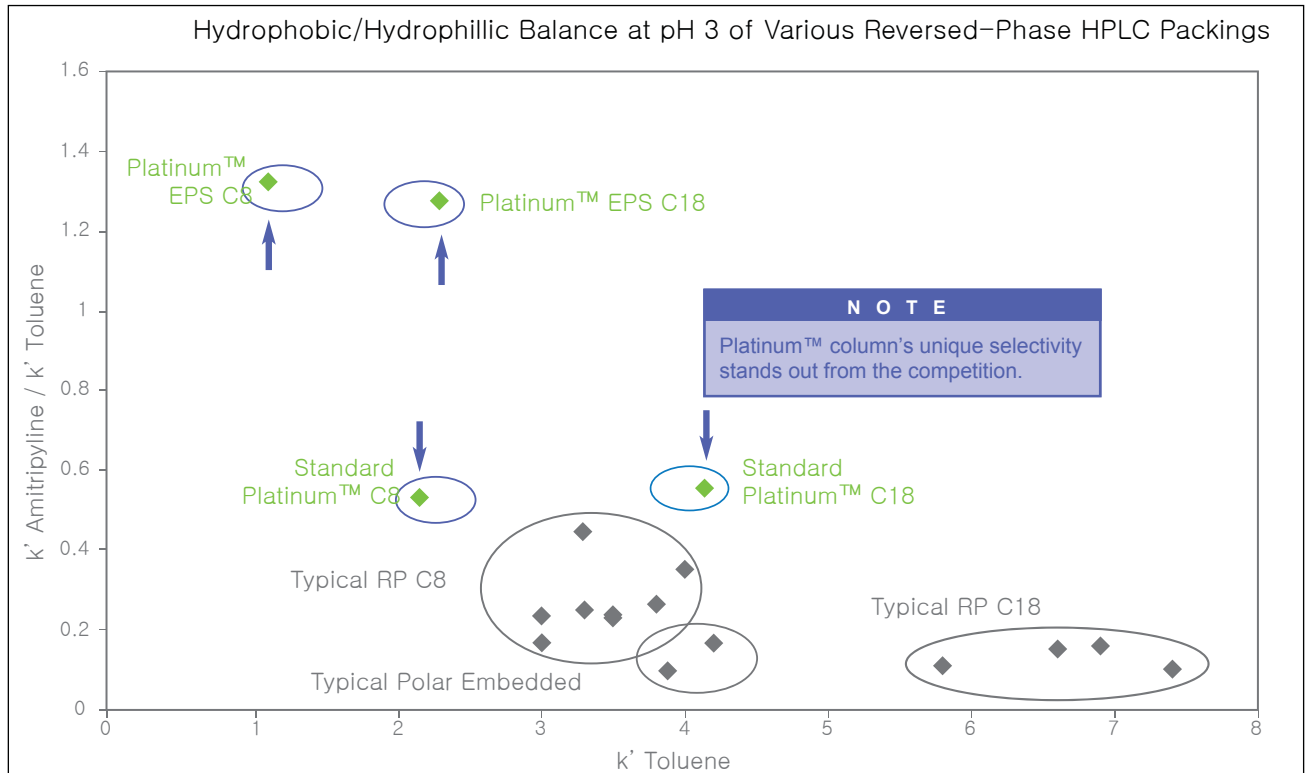
Standard Platinum™ Columns vs Platinum™ EPS Columns

Platinum™ 컬럼은 실리카의 반응 정도에 따라 두 종류가 있습니다. Standard Platinum™ 컬럼은 중간 정도의 실리카 반응이며 중성 또는 중간 정도의 극성 화합물의 분리에 최적입니다. Platinum™ EPS (Extended Polar Selectivity)은 실리카의 반응정도가 높은 것으로 두 개 이상의 극성 작용기를 갖는 화합물의 분리에 적합합니다.

Alltech® Platinum™ Phase Specifications

Phase	Base Material	Particle Shape	Particle Size	Pore Size	Surface Area	Carbon Load	Phase Type	Endcapped?	USP L-code
C18	Silica	Spherical	1.5, 3, 5µm	100Å	200m ² /g	6%	Monomeric	Yes	L1
EPS C18	Silica	Spherical	1.5, 3, 5µm	100Å	200m ² /g	5%	Monomeric	No	L1
C8	Silica	Spherical	1.5, 3, 5µm	100Å	200m ² /g	4%	Monomeric	Yes	L7
EPS C8	Silica	Spherical	3, 5µm	100Å	200m ² /g	2.50%	Monomeric	No	L7
Phenyl	Silica	Spherical	3, 5µm	100Å	200m ² /g	—	Monomeric	Yes	L11
Cyano	Silica	Spherical	3, 5µm	100Å	200m ² /g	—	Monomeric	No	L10
Amino (NH ₂)	Silica	Spherical	3, 5µm	100Å	200m ² /g	—	Monomeric	No	L8
Silica	Silica	Spherical	3, 5µm	100Å	200m ² /g	—	—	—	L3
SAX	Silica	Spherical	3, 5µm*	100Å	200m ² /g	—	Monomeric	No	—

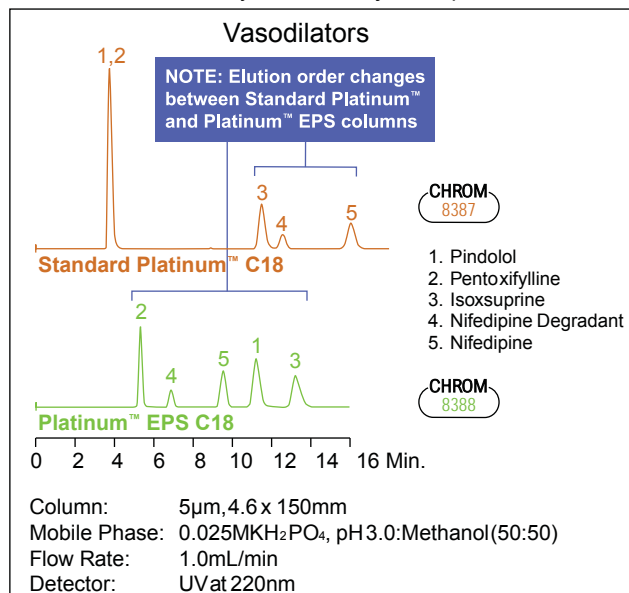
Trying to solve difficult separation problems using typical reversed-phase columns often leads to the same result. Choose Platinum™ columns for completely different selectivity. See chart below.



Plotting k' values of different compounds (polar vs. nonpolar) demonstrate the unique selectivity of Platinum™ and Platinum™ EPS columns, compared to conventional reversed-phase columns.

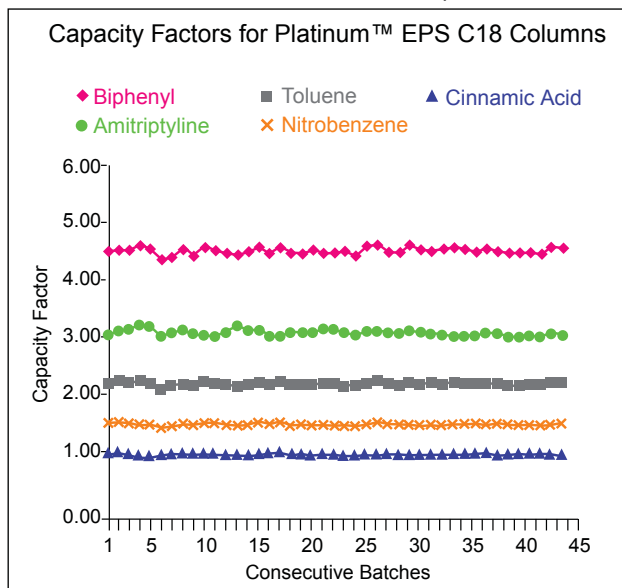
Reverse Elution Order with Standard Platinum™ and Platinum™ EPS Columns

Often, it's preferable when minor components elute before, rather than after, closely retained major components.



Platinum™ EPS Columns Have High Polar Compound Capacity

This is important for early eluting polar compounds which are often unresolved on conventional reversed-phase columns.



Platinum™ HPLC Columns

Packing	Format	i.d. x Length	Standard Part No.	Waters® Fittings Part No.
C18, 1.5µm	Rocket™	7.0 x 33mm	50527	—
	Rocket™	7.0 x 53mm	50529	—
C18, 3µm	Solvent Reducer	3.0 x 150mm	32794	—
	Analytical	4.6 x 100mm	32007	32009
	Analytical	4.6 x 150mm	32020	32029
	Rocket™	7.0 x 33mm	50525	—
C18, 5µm	Rocket™	7.0 x 53mm	50523	—
	Solvent Reducer	3.0 x 150mm	32793	—
	Solvent Reducer	3.0 x 250mm	32792	—
C18, 5µm	Analytical	4.6 x 150mm	32043	32044
	Analytical	4.6 x 250mm	32064	32068
EPS C18, 1.5µm	Rocket™	7.0 x 33mm	50577	—
	Rocket™	7.0 x 53mm	50579	—
EPS C18, 3µm*	Capillary	0.150x 50mm	22300	—
	Capillary	0.150x100mm	22430	—
	Capillary	0.150x150mm	22431	—
	Capillary	0.300x 50mm	22432	—
	Capillary	0.300x100mm	22433	—
	Capillary	0.300x150mm	22434	—
	Solvent Reducer	3.0 x 150mm	32799	—
	Analytical	4.6 x 100mm	32158	32161
EPS C18, 5µm	Analytical	4.6 x 150mm	32183	32184
	Rocket™	7.0 x 33mm	50575	—
EPS C18, 5µm	Rocket™	7.0 x 53mm	50573	—
	Solvent Reducer	3.0 x 150mm	32806	—
	Solvent Reducer	3.0 x 250mm	32802	—
C8, 1.5µm	Analytical	4.6 x 150mm	32214	32216
	Analytical	4.6 x 250mm	32246	32247
C8, 3µm	Rocket™	7.0 x 33mm	50529	—
C8, 5µm	Rocket™	7.0 x 33mm	50532	—
	Analytical	4.6 x 150mm	32370	32371
C8, 5µm	Analytical	4.6 x 250mm	32375	32376
	Analytical	4.6 x 150mm	32415	32416
EPS C8, 3µm	Rocket™	7.0 x 33mm	50583	—
	Rocket™	7.0 x 53mm	50585	—
EPS C8, 5µm	Analytical	4.6 x 150mm	32420	32421
	Analytical	4.6 x 250mm	32425	32426

*1.5µm and 5µm particles and other dimensions are available.

Platinum™ HPLC Columns (continued)

Packing	Format	i.d. x Length	Standard Part No.	Waters® Fittings Part No.
Phenyl, 3µm	Analytical	4.6 x 150mm	32631	32632
Phenyl, 5µm	Analytical	4.6 x 150mm	32636	32637
	Analytical	4.6 x 250mm	32641	32642
Cyano, 3µm	Rocket™	7.0 x 33mm	50593	—
	Rocket™	7.0 x 53mm	50595	—
Cyano, 5µm	Analytical	4.6 x 150mm	32672	32675
	Analytical	4.6 x 250mm	32681	32682
Amino, 3µm	Analytical	4.6 x 150mm	32706	32707
	Rocket™	7.0 x 53mm	50545	—
Amino, 5µm	Analytical	4.6 x 150mm	32713	32714
	Analytical	4.6 x 250mm	32722	32723
Silica, 3µm	Analytical	4.6 x 150mm	32535	32536
Silica, 5µm	Analytical	4.6 x 150mm	32542	32543
	Analytical	4.6 x 250mm	32549	32550
SAX, 3µm	Analytical	4.6 x 150mm	32952	32953
SAX, 5µm	Analytical	4.6 x 150mm	32944	32946
	Analytical	4.6 x 250mm	32943	32945

Platinum™ Guard Cartridges

Packing	i.d. x Length	Qty.	Part No.
C18 All-Guard™, 5µm*	3.0 x 7.5mm	3	99115
	4.6 x 7.5mm	3	32606
EPS C18, 3µm	0.150 x 10mm	—	22693
	Capillary Guard**	0.300 x 10mm	—
EPS C18 All-Guard™, 5µm*	3.0 x 7.5mm	3	99117
	4.6 x 7.5mm	3	32607
C8 All-Guard™, 5µm*	4.6 x 7.5mm	3	32612
EPS C8 All-Guard™, 5µm*	4.6 x 7.5mm	3	32614
Phenyl All-Guard™, 5µm*	4.6 x 7.5mm	3	32619
Cyano All-Guard™, 5µm*	4.6 x 7.5mm	3	32620
Amino All-Guard™, 5µm*	4.6 x 7.5mm	3	32621
Silica All-Guard™, 5µm*	4.6 x 7.5mm	3	32622
SAX All-Guard™, 5µm*	4.6 x 7.5mm	3	32787
All-Guard™ Cartridge Holder (Includes Direct-Connect Column Coupler)		ea	80101
Capillary Guard Cartridge Holder			
Guard Holder for 0.100mm and 0.150mm Guards		ea	GR-3710E
Guard Holder for 0.300mm and 0.500mm Guards		ea	GR-3710A

*All-Guard™ holder required.

**1.5µm and 5µm particles and other dimensions are available.

Alltima Column

고품질의 범용 분석용 HPLC 컬럼

- 극성, 비극성 화합물에 대한 풍부한 분석 응용 사례
- 일반적인 microbore 이동상에 안정되어, microbore 응용에 적합
- 산, 염기의 가혹한 조건에서도 예리한 피크 모양 제공
- 다중 결합상과 이중 말단 폐쇄에 의한 긴 컬럼 수명
- 산성, 염기성 및 중성 화합물을 동시에 분석
- Microbore 에서 Prep. 까지 다양한 규격의 컬럼 공급

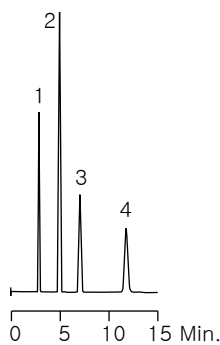
Alltech



Alltima™ Phase Specifications

Phase	Base Material	Particle Shape	Particle Size	Pore Size	Surface Area	Carbon Load	Phase Type	Endcapped?	USP L-code
C18	Silica	Spherical	3, 5, 10µm	100Å	340m ² /g	16%	Polymeric	Yes	L1
C18 LL	Silica	Spherical	5µm	100Å	340m ² /g	9%	Polymeric	Yes	L1
C8	Silica	Spherical	3, 5, 10µm	100Å	340m ² /g	9%	Polymeric	Yes	L7
Phenyl	Silica	Spherical	3, 5µm	100Å	340m ² /g	7.5%	Polymeric	Yes	L11
Cyano	Silica	Spherical	3, 5µm	100Å	340m ² /g	—	Polymeric	Yes	L10
Amino (NH ₂)	Silica	Spherical	3, 5µm	100Å	340m ² /g	—	Polymeric	No	L8
Silica	Silica	Spherical	3, 5, 10µm	100Å	340m ² /g	—	—	—	L3

Basic Drugs

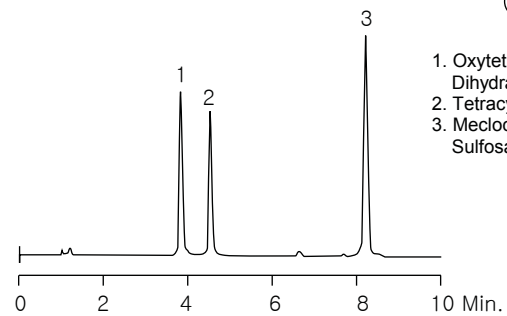


CHROM 8193

1. Procainamide
2. Acetaminophen
3. Theophylline
4. Caffeine

Column: Alltima™ C8, 5µm, 4.6 x 150mm
 Mobile Phase: Methanol:50mM KH₂PO₄, pH 3.0 (20:80)
 Flow Rate: 1.0mL/min
 Detector: UV at 254nm

Antibacterials

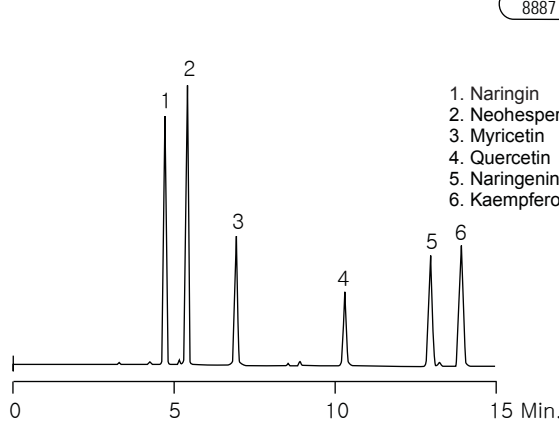


CHROM 8764

1. Oxytetracycline Dihydrate
2. Tetracycline HCL
3. Meclocycline Sulfosalicylate Salt

Column: Alltima™ C18, 3µm, 4.6 x 100mm
 Mobile Phase: A: 50mM KH₂PO₄, pH 3.0 B: CH₃CN
 Gradient: Time: 0 | 10 | %B: 15 | 40
 Flow Rate: 1.0mL/min
 Detector: UV at 254nm

Natural Products

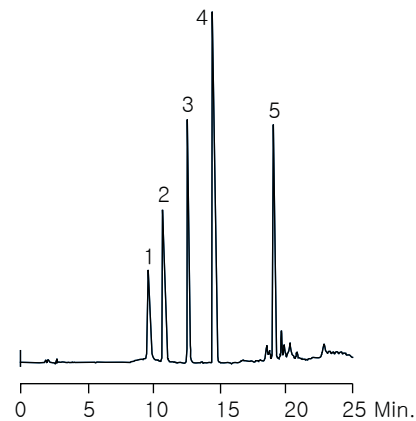


CHROM 8887

1. Naringin
2. Neohesperidin
3. Myricetin
4. Quercetin
5. Naringenin
6. Kaempferol

Column: Alltima™ C18, 3µm, 4.6 x 100mm
 Mobile Phase: A: 50mM KH₂PO₄, pH 2.5 B: CH₃CN
 Gradient: Time: 0 | 15 | %B: 20 | 40
 Flow Rate: 1.0mL/min
 Detector: UV at 280nm

Antihistamines



CHROM 7232

1. Tripelennamine
2. Triprolidine
3. Cyclizine
4. Chlorcyclizine
5. Meclizine

Column: Alltima™ C18, 3µm, 4.6 x 100mm
 Mobile Phase: A: 50mM KH₂PO₄, pH 2.5 B: CH₃CN
 Gradient: Time: 0 | 5 | 20 | %B: 25 | 25 | 70
 Flow Rate: 1.3mL/min
 Detector: UV at 220nm

Alltech® Alltima™ Reversed-Phase Columns

Alltima™ HPLC Reversed-Phase Columns

Packing	Format	i.d. x Length	Standard Part No.	Waters® Fittings Part No.	
C18, 3µm	Microbore	1.0 x 100mm	43853	—	
	Microbore	1.0 x 150mm	43864	—	
	Expedite™ MS	2.1 x 10mm	43836	—	
	Expedite™ MS	2.1 x 20mm	43803	—	
	Microbore	2.1 x 50mm	43849	—	
	Microbore	2.1 x 100mm	43821	—	
	Microbore	2.1 x 150mm	43852	—	
	Solvent Reducer	3.0 x 150mm	81143	—	
	Expedite™ MS	4.6 x 10mm	43837	—	
	Expedite™ MS	4.6 x 20mm	43851	—	
	Analytical	4.6 x 50mm	81412	—	
	Analytical	4.6 x 100mm	81382	81383	
	Analytical	4.6 x 150mm	81387	81388	
	Rocket™	7 x 33mm	50603	—	
	Rocket™	7 x 53mm	50605	—	
	C18, 5µm	Microbore	1.0 x 150mm	88384	—
Microbore		1.0 x 250mm	88385	—	
Microbore		2.1 x 150mm	88370	—	
Microbore		2.1 x 250mm	88371	—	
Solvent Reducer		3.0 x 150mm	81140	—	
Solvent Reducer		3.0 x 250mm	81142	—	
Analytical		4.6 x 150mm	88052	88053	
Analytical		4.6 x 250mm	88056	88057	
C18, 10µm	Analytical	4.6 x 250mm	88307	88308	
C18-LL, 5µm	Microbore	1.0 x 150mm	88390	—	
	Microbore	1.0 x 250mm	88391	—	
	Microbore	2.1 x 150mm	88388	—	
	Microbore	2.1 x 250mm	88389	—	
	Solvent Reducer	3.0 x 150mm	81144	—	
	Solvent Reducer	3.0 x 250mm	81145	—	
	Analytical	4.6 x 150mm	88069	88082	
	Analytical	4.6 x 250mm	88099	88235	
C8, 3µm	Analytical	4.6 x 50mm	81413	—	
	Analytical	4.6 x 100mm	81392	81393	
	Analytical	4.6 x 150mm	81397	81398	
	Rocket™	7 x 33mm	50607	—	
	Rocket™	7 x 53mm	50609	—	
C8, 5µm	Microbore	1.0 x 150mm	88394	—	
	Microbore	1.0 x 250mm	88395	—	
	Microbore	2.1 x 150mm	88372	—	
	Microbore	2.1 x 250mm	88373	—	
	Solvent Reducer	3.0 x 150mm	81146	—	
	Analytical	4.6 x 150mm	88072	88073	
	Analytical	4.6 x 250mm	88076	88077	
C8, 10µm	Analytical	4.6 x 250mm	88317	88318	
Phenyl, 3µm	Microbore	1.0 x 100mm	43892	—	
	Microbore	1.0 x 150mm	43854	—	
	Expedite™ MS	2.1 x 10mm	43809	—	
	Expedite™ MS	2.1 x 20mm	43865	—	
	Microbore	2.1 x 50mm	43835	—	
	Microbore	2.1 x 100mm	43866	—	
	Microbore	2.1 x 150mm	43813	—	
	Expedite™ MS	4.6 x 10mm	43883	—	
	Expedite™ MS	4.6 x 20mm	43822	—	
	Analytical	4.6 x 50mm	81178	—	
	Analytical	4.6 x 100mm	81181	88184	
	Analytical	4.6 x 150mm	81188	81191	
	Phenyl, 5µm	Solvent Reducer	3.0 x 150mm	81147	—
		Analytical	4.6 x 150mm	88087	88088
		Analytical	4.6 x 250mm	88092	88093

Alltech® Alltima™ Normal-Phase Columns

Alltima™ HPLC Normal-Phase Columns

Packing	Format	i.d. x Length	Standard Part No.	Waters® Fittings Part No.
Cyano, 3µm	Analytical	4.6 x 50mm	81179	—
	Analytical	4.6 x 100mm	81182	81186
	Analytical	4.6 x 150mm	81189	81192
Cyano, 5µm	Analytical	4.6 x 150mm	88180	88182
	Analytical	4.6 x 250mm	88189	88191
Amino, 3µm	Analytical	4.6 x 50mm	81180	—
	Analytical	4.6 x 100mm	81183	81187
	Analytical	4.6 x 150mm	81190	81193
Amino, 5µm	Analytical	4.6 x 150mm	88205	88207
	Analytical	4.6 x 250mm	88217	88218
Silica, 3µm	Microbore	1.0 x 100mm	43824	—
	Microbore	1.0 x 150mm	43855	—
	Expedite™ MS	2.1 x 10mm	43891	—
	Expedite™ MS	2.1 x 20mm	43801	—
	Microbore	2.1 x 50mm	43876	—
	Microbore	2.1 x 100mm	43823	—
	Microbore	2.1 x 150mm	43884	—
	Expedite™ MS	4.6 x 10mm	43889	—
Silica, 5µm	Expedite™ MS	4.6 x 20mm	43886	—
	Analytical	4.6 x 50mm	81414	—
	Analytical	4.6 x 100mm	81404	81405
	Analytical	4.6 x 150mm	81409	81410
	Analytical	4.6 x 150mm	88123	88124
Silica, 10µm	Analytical	4.6 x 250mm	88171	88172
	Analytical	4.6 x 250mm	88327	88328

Alltima™ All-Guard™ Normal-Phase Cartridges*

Packing	i.d. x Length	Qty.	Part No.
Cyano, 5µm	4.6 x 7.5mm	3	96084
Amino, 5µm	4.6 x 7.5mm	3	96085
Silica, 5µm	2.1 x 7.5mm	3	96450
	4.6 x 7.5mm	3	96083
All-Guard™ Cartridge Holder (Includes Direct-Connect Column Coupler)			ea 80101

*All-Guard™ holder required. Other particle sizes available.

Alltima™ All-Guard™ Reverse-Phase Cartridges*

Packing	i.d. x Length	Qty.	Part No.
C18, 5µm	2.1 x 7.5mm	3	96680
	3.0 x 7.5mm	3	96361
	4.6 x 7.5mm	3	96080
C18-LL, 5µm	2.1 x 7.5mm	3	96432
	3.0 x 7.5mm	3	96433
	4.6 x 7.5mm	3	96285
C8, 5µm	2.1 x 7.5mm	3	96441
	3.0 x 7.5mm	3	96362
	4.6 x 7.5mm	3	96081
Phenyl, 5µm	2.1 x 7.5mm	3	96442
	3.0 x 7.5mm	3	96445
	4.6 x 7.5mm	3	96082
All-Guard™ Cartridge Holder (Includes Direct-Connect Column Coupler)			ea 80101

*All-Guard™ holder required. Other particle sizes available.

Grace Smart Column

저가의 고품질 컬럼

- 고 순도의 실리카
- 효율과 재현성 있는 분리능
- 최고 수준의 역상 선택성

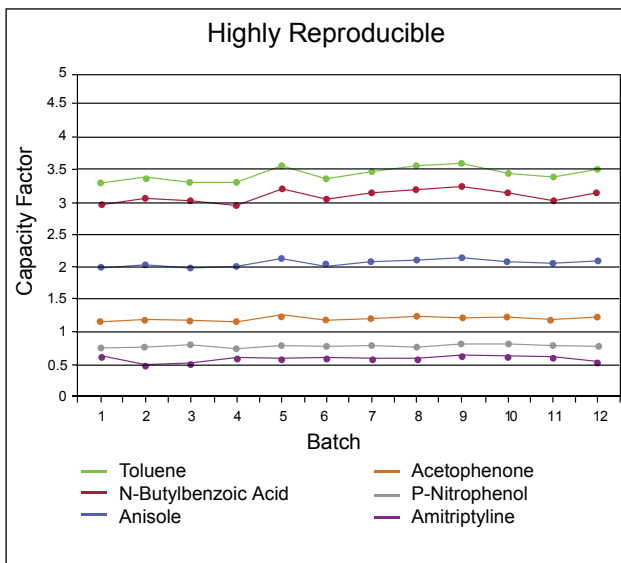


GraceSmart™ HPLC 컬럼의 결합상은 고 순도의 실리카를 사용하여 균일하게 단일화하여 결합됩니다. 이것은 산/염기와 예측 가능한 역상의 선택성을 위해 대칭 피크로 변환됩니다. 일상적인 분석이나 새로운 분석법 개발에 있어서 한계를 극복한 저렴한 가격의 고성능 GraceSmart™ 컬럼을 사용하면 성공적인 새로운 분리 세계를 경험할 수 있습니다.

GraceSmart™ Phase Specifications					Chromatographic Properties	Application/Benefit	USP L-code
Phase	Pore Size (Å)	Surface Area (m ² /g)	Carbon Load (%)	Endcapped			
C18	120	220	10	Yes	High purity silica with monomeric C18 bonding offers classical reversed-phase selectivity.	Excellent value for general purpose, routine applications.	L1

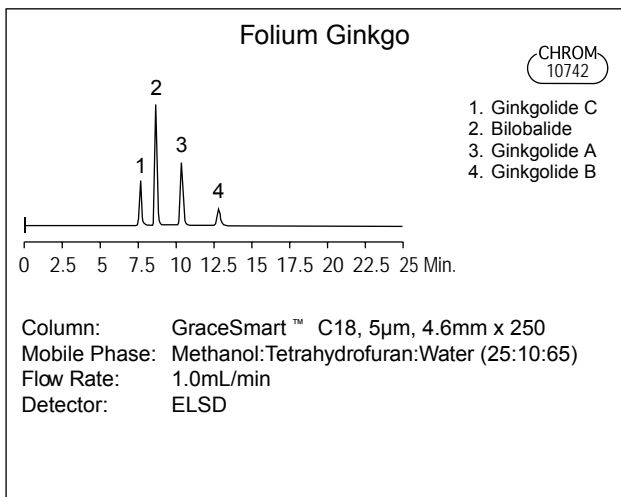
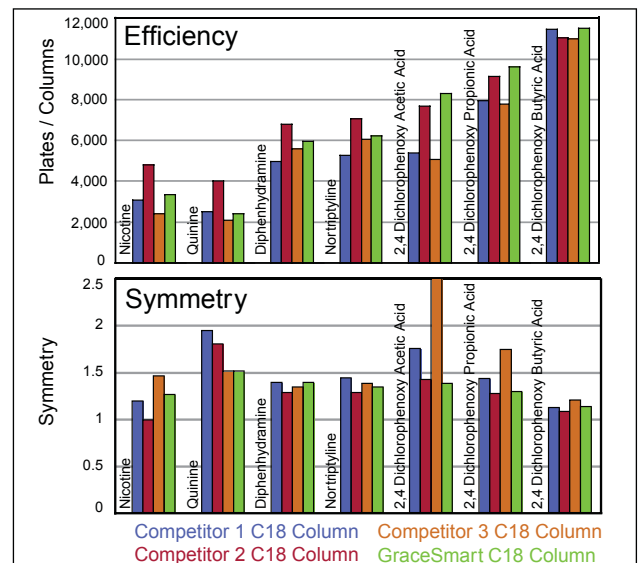
Consistent and Reproducible

Our tightly controlled silica synthesis and bonding keep capacity factor and selectivity variations to a minimum for acidic, basic, and neutral compounds.



Competitive Performance

GraceSmart™ columns show similar or better efficiency and asymmetries for challenging base and acid components in comparison to industry leading columns.



GraceSmart™ Columns

Format	i.d. (mm)	Length (mm)	Particle Size (µm)	C18 Part No.
Microbore M	2.1	50	3	5141756
	2.1	100	3	5141755
	2.1	150	3	5141754
	2.1	150	5	5138811
	2.1	250	5	5138813
Analytical A	4.6	50	3	5141811
	4.6	100	3	5141753
	4.6	150	3	5141752
	4.6	150	5	5138812
	4.6	250	5	5138810

more info

For detailed information on column formats, see total Catalog.

technical assistance

Contact Tech Support: Email: sales@dongmyung.kr
Online: www.dongmyung.kr

Apollo Column

분석용에서 분취용까지 Scale-Up이 자유로운 고성능 컬럼

- 분석에서 분취까지 자유로운 스케일 확장성
- 넓은 pH안정성 - 1.5 to 10.5

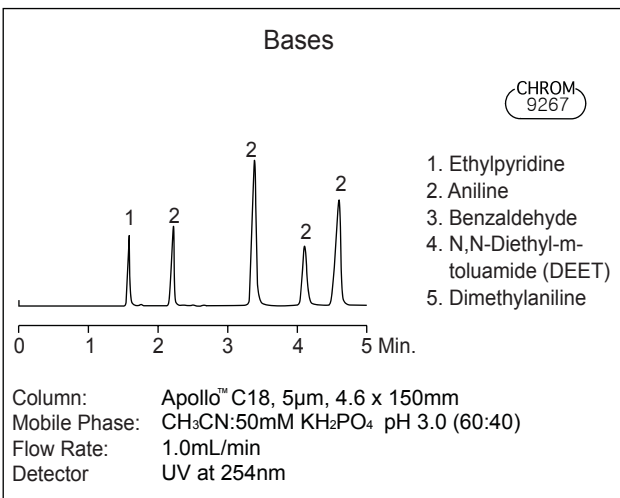
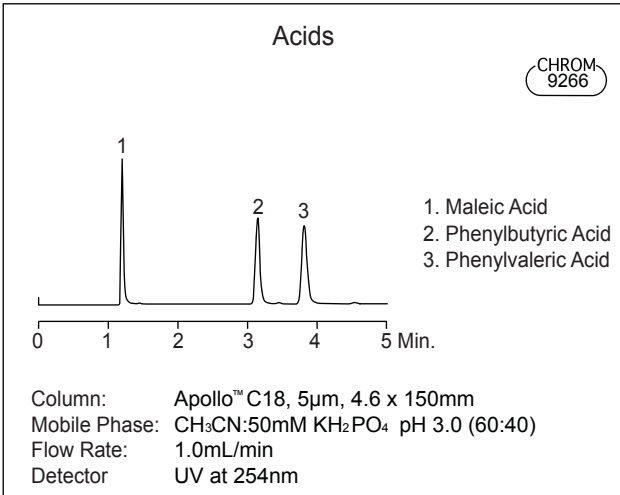
Apollo™ HPLC 컬럼은 경제적인 가격으로 강력한 분리 능력을 얻기 위해 고 순도이고 염기에 비활성인 실리카를 사용함으로써 높고, 낮은 pH 에서 긴 시간 동안 사용하여도 머무름이나 피크 모양의 손실이 나타나지 않습니다. 특히 새로운 분석법 개발에 이상적이며, 분석에서 분취까지 스케일 확장에 의한 화합물의 분리 정제에 적합합니다.

Alltech



Apollo™ Phase Specifications

Phase	Base Material	Particle Shape	Particle Size	Pore Size	Surface Area	Carbon Load	Phase Type	Endcapped?	USP L-code
C18	Silica	Spherical	5µm	100Å	340m ² /g	15%	Monomeric	Yes	L1
C8	Silica	Spherical	5µm	100Å	340m ² /g	9%	Monomeric	Yes	L7
Phenyl	Silica	Spherical	5µm	100Å	340m ² /g	8%	Monomeric	Yes	L11
Silica	Silica	Spherical	5µm	100Å	340m ² /g	—	—	—	L3



Apollo™ HPLC Columns

Packing	Format	i.d. x Length	Part No.
C18, 5µm	Analytical	4.6 x 150mm	36505
	Analytical	4.6 x 250mm	36511
	Prep	7 x 150mm	36530
	Prep	7 x 250mm	36541
	Prep	10 x 150mm	36531
	Prep	10 x 250mm	36543
	Prep	22 x 150mm	36526
	Prep	22 x 250mm	36537
C8, 5µm	Analytical	4.6 x 150mm	36506
	Analytical	4.6 x 250mm	36512
	Prep	7 x 150mm	36546
	Prep	7 x 250mm	36547
	Prep	10 x 150mm	36548
	Prep	10 x 250mm	36549
	Prep	22 x 150mm	36550
	Prep	22 x 250mm	36551
Phenyl, 5µm	Analytical	4.6 x 150mm	36538
	Analytical	4.6 x 250mm	36544
	Prep	7 x 150mm	36525
	Prep	7 x 250mm	36539
	Prep	10 x 150mm	36527
	Prep	10 x 250mm	36532
	Prep	22 x 150mm	36535
	Prep	22 x 250mm	36528
Silica, 5µm	Analytical	4.6 x 150mm	36507
	Analytical	4.6 x 250mm	36513
	Prep	7 x 150mm	36542
	Prep	7 x 250mm	36529
	Prep	10 x 150mm	36533
	Prep	10 x 250mm	36540
	Prep	22 x 150mm	36534
	Prep	22 x 250mm	36524

Apollo™ All-Guard™ Cartridges*

Packing	i.d. x Length	Qty.	Part No.
C18, 5µm	4.6 x 7.5mm	3	96454
C8, 5µm	4.6 x 7.5mm	3	96463
Phenyl, 5µm	4.6 x 7.5mm	3	96430
Silica, 5µm	4.6 x 7.5mm	3	96419
All-Guard™ Cartridge Holder (Includes Direct-Connect Column Coupler)		ea	80101

*All-Guard™ holder required. Other particle sizes available.



서울시 강동구 천호대로 1065 강동상떼빌 315호
Tel : 02) 3431-3252 / Fax : 02) 3431-3253
www.dongmyung.kr / sales@dongmyung.kr

(주)동명과학상사는

크로마토그래피 종합 공급업체인 Grace(Alltech), 천연물 표준품 ChromaDex
Vial 전문 업체 JG Finneran 제품을 취급하고 있습니다.

GRACE **Alltech**

 **ChromaDex**
CONNECTION

 **J.G. Finneran**
Associates, Inc.