

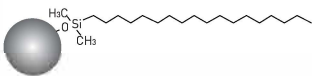
# Topsil® Series HPLC Column

Topsil® series HPLC column is a next-generation column by Welch. This series uses different silica and provides different selectivity.

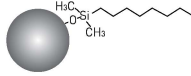
## Features:

- High purity silica (99.99%) with 150 Å pore size and 260 m<sup>2</sup>/g surface area
- 12% carbon loading for C18 phase
- Because of large pore and moderate carbon loading, Topsil® C18 phase can also be used as AQ-C18 without phase collapse
- Endcapped for excellent peak shape and lifetime
- Lower back pressure than Ultisil™, almost the same column efficiency as Ultisil™
- Good for small molecules and peptides
- Topsil phases including C18, C8, Phenyl-Hexyl, Silica, NH<sub>2</sub> and CN

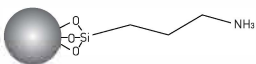
### Topsil® C18

Structural Formula	
pH Range	2.0-9.5
Particle Size	3 µm, 5 µm
Surface Area(m <sup>2</sup> /g)	260(150 Å)
Carbon Loading(%)	12(150 Å)
USP List	L1
Endcapped	Yes

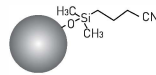
### Topsil® C8

Structural Formula	
pH Range	2.0-9.5
Particle Size	3 µm, 5 µm
Surface Area(m <sup>2</sup> /g)	260(150 Å)
Carbon Loading(%)	10(150 Å)
USP List	L7
Endcapped	Yes


### Topsil® NH<sub>2</sub>

Structural Formula	
pH Range	2.0-8.0
Particle Size	5 µm
Surface Area(m <sup>2</sup> /g)	260(150 Å)
Carbon Loading(%)	3(150 Å)
USP List	L8
Endcapped	No

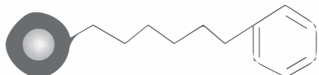
### Topsil® CN

Structural Formula	
pH Range	2.0-8.0
Particle Size	5 µm
Surface Area(m <sup>2</sup> /g)	260(150 Å)
Carbon Loading(%)	6(150 Å)
USP List	L10
Endcapped	Yes

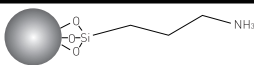
### Topsil® Silica

Structural Formula	
pH Range	2.0-8.0
Particle Size	5 µm
Surface Area(m <sup>2</sup> /g)	260(150 Å)
Carbon Loading(%)	N/A
USP List	L3
Endcapped	No

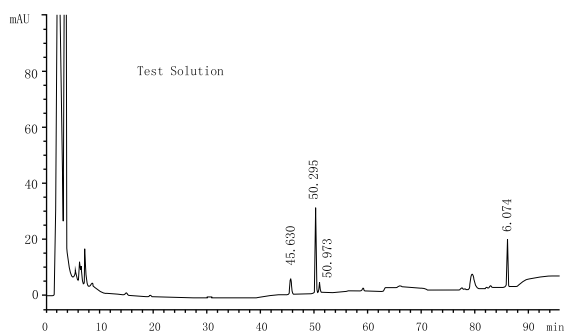
### Topsil® Phenyl-Hexyl

Structural Formula	
pH Range	2.0-9.5
Particle Size	3 µm, 5 µm
Surface Area(m <sup>2</sup> /g)	260(150 Å)
Carbon Loading(%)	12(150 Å)
USP List	L11
Endcapped	Yes

## Topsil® HILIC NH<sub>2</sub>

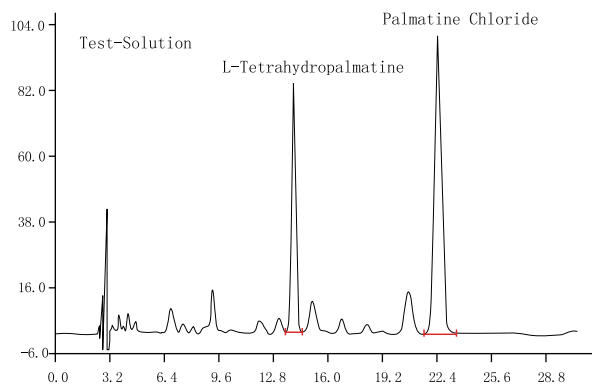
Structural Formula	
pH Range	2.0-8.0
Particle Size	5 µm
Surface Area(m <sup>2</sup> /g)	260(150 Å)
Carbon Loading(%)	3(150 Å)
USP List	L8
Endcapped	No

## Compound Salvia Tablets



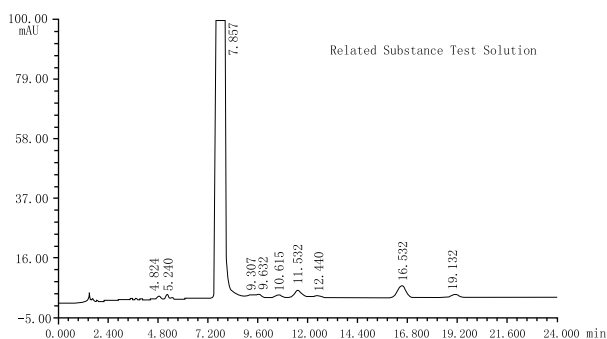
Column:	Topsil® C18, 250x4.6 mm, 5 µm		
Mobile Phase:	A: acetonitrile B: water		
Gradient Program:	Time(min)	A(%)	B(%)
	0	19	81
	35	19	81
	55	71	29
	70	71	29
	100	40	60
Flow Rate:	1.0 mL/min		
Temperature:	30°C		
Detector:	203 nm		
Injection Volume:	20 µL		

## Epigeal Srephaia Root



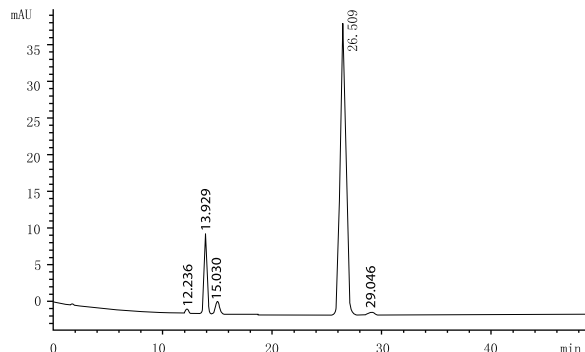
Column:	Topsil® C18, 250x4.6 mm, 5 µm		
Mobile Phase:	25 mM sodium acetate buffer{2% trimethylamine, adjust pH to 3.50 with acetic acid}		
Flow Rate:	1.5 mL/min		
Temperature:	40°C		
Detector:	280 nm		
Injection Volume:	20 µL		

## Ketoprofen



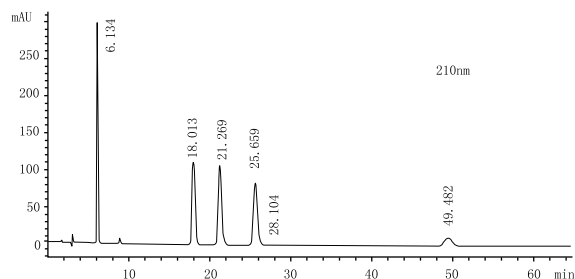
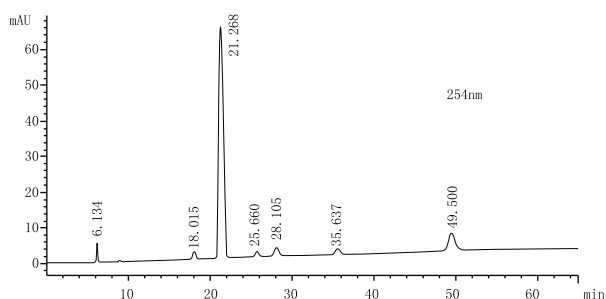
Column:	Topsil® C18, 150x4.6 mm, 5 µm		
Mobile Phase:	Phosphate buffer {68g KH <sub>2</sub> PO <sub>4</sub> dissolve in 1000 mL water, adjust pH to 3.5 with H <sub>3</sub> PO <sub>4</sub> }		
Flow Rate:	1.0 mL/min		
Temperature:	30°C		
Detector:	233 nm		
Injection Volume:	20 µL		

## Vitamin D3



<b>Column:</b>	Topsil® Silica, 250x4.6 mm, 5 µm
<b>Mobile Phase:</b>	N-hexane/n-amyl alcohol=99.7/0.3
<b>Flow Rate:</b>	2.0 mL/min
<b>Temperature:</b>	30°C
<b>Detector:</b>	254 nm
<b>Injection Volume:</b>	20 µL

## Sex hormone in Cosmetics



<b>Column:</b>	Topsil® Phenyl-Hexyl, 250x4.6 mm, 5 µm
<b>Mobile Phase:</b>	Methanol/water=60/40
<b>Flow Rate:</b>	1.0 mL/min
<b>Temperature:</b>	30°C
<b>Detector:</b>	210 nm, 254 nm
<b>Injection Volume:</b>	20 µL
<b>Mixed Standards:</b>	Estrogen: estradiol, oestrone, estrotilben, estriol Androgen: testosterone, methyltestosterone Progestational hormone: progesterone

## Ordering Information

### 3 µm Topsil analytical columns

Bonded phase	Column ID (mm)	Column Length (mm)									Guard Cartridge	Guard Column Holder
		30	50	75	100	125	150	200	250	300		
C18	2.1	00410-02009	00410-02010	00410-02011	00410-02012	00410-02013	00410-02014	00410-02015	00410-02016		00808-23301	00808-01107
	3.0	00410-02018	00410-02019	00410-02020	00410-02021	00410-02022	00410-02023	00410-02024	00410-02025	-	00808-23301	00808-01107
	4.0	00410-02027	00410-02028	00410-02029	00410-02030	00410-02031	00410-02032	00410-02033	00410-02034	00410-02035	00808-03301	00808-01101
	4.6	00410-02036	00410-02037	00410-02038	00410-02039	00410-02040	00410-02041	00410-02042	00410-02043	00410-02044	00808-03301	00808-01101
C8	2.1	00420-02009	00420-02010	00420-02011	00420-02012	00420-02013	00420-02014	00420-02015	00420-02016		00808-23302	00808-01107
	3.0	00420-02018	00420-02019	00420-02020	00420-02021	00420-02022	00420-02023	00420-02024	00420-02025	-	00808-23302	00808-01107
	4.0	00420-02027	00420-02028	00420-02029	00420-02030	00420-02031	00420-02032	00420-02033	00420-02034	00420-02035	00808-03302	00808-01101
	4.6	00420-02036	00420-02037	00420-02038	00420-02039	00420-02040	00420-02041	00420-02042	00420-02043	00420-02044	00808-03302	00808-01101
Phenyl-Hexyl	2.1	00460-02009	00460-02010	00460-02011	00460-02012	00460-02013	00460-02014	00460-02015	00460-02016		00808-23305	00808-01107
	3.0	00460-02018	00460-02019	00460-02020	00460-02021	00460-02022	00460-02023	00460-02024	00460-02025	-	00808-23305	00808-01107
	4.0	00460-02027	00460-02028	00460-02029	00460-02030	00460-02031	00460-02032	00460-02033	00460-02034	00460-02035	00808-03305	00808-01101
	4.6	00460-02036	00460-02037	00460-02038	00460-02039	00460-02040	00460-02041	00460-02042	00460-02043	00460-02044	00808-03305	00808-01101

### 5 µm Topsisil analytical columns

Bonded phase	Column ID (mm)	Column Length (mm)									Guard Cartridge	Guard Column Holder
		30	50	75	100	125	150	200	250	300		
C18	2.1	00410-01009	00410-01010	00410-01011	00410-01012	00410-01013	00410-01014	00410-01015	00410-01016	-	00808-24301	00808-01107
	3.0	00410-01018	00410-01019	00410-01020	00410-01021	00410-01022	00410-01023	00410-01024	00410-01025	-	00808-24301	00808-01107
	4.0	00410-01027	00410-01028	00410-01029	00410-01030	00410-01031	00410-01032	00410-01033	00410-01034	00410-01035	00808-04301	00808-01101
	4.6	00410-01036	00410-01037	00410-01038	00410-01039	00410-01040	00410-01041	00410-01042	00410-01043	00410-01044	00808-04301	00808-01101
C8	2.1	00420-01009	00420-01010	00420-01011	00420-01012	00420-01013	00420-01014	00420-01015	00420-01016	-	00808-24302	00808-01107
	3.0	00420-01018	00420-01019	00420-01020	00420-01021	00420-01022	00420-01023	00420-01024	00420-01025	-	00808-24302	00808-01107
	4.0	00420-01027	00420-01028	00420-01029	00420-01030	00420-01031	00420-01032	00420-01033	00420-01034	00420-01035	00808-04302	00808-01101
	4.6	00420-01036	00420-01037	00420-01038	00420-01039	00420-01040	00420-01041	00420-01042	00420-01043	00420-01044	00808-04302	00808-01101
Phenyl-Hexyl	2.1	00460-01009	00460-01010	00460-01011	00460-01012	00460-01013	00460-01014	00460-01015	00460-01016	-	00808-24305	00808-01107
	3.0	00460-01018	00460-01019	00460-01020	00460-01021	00460-01022	00460-01023	00460-01024	00460-01025	-	00808-24305	00808-01107
	4.0	00460-01027	00460-01028	00460-01029	00460-01030	00460-01031	00460-01032	00460-01033	00460-01034	00460-01035	00808-04305	00808-01101
	4.6	00460-01036	00460-01037	00460-01038	00460-01039	00460-01040	00460-01041	00460-01042	00460-01043	00460-01044	00808-04305	00808-01101
CN	2.1	00440-01009	00440-01010	00440-01011	00440-01012	00440-01013	00440-01014	00440-01015	00440-01016	-	00808-24304	00808-01107
	3.0	00440-01018	00440-01019	00440-01020	00440-01021	00440-01022	00440-01023	00440-01024	00440-01025	-	00808-24304	00808-01107
	4.0	00440-01027	00440-01028	00440-01029	00440-01030	00440-01031	00440-01032	00440-01033	00440-01034	00440-01035	00808-04304	00808-01101
	4.6	00440-01036	00440-01037	00440-01038	00440-01039	00440-01040	00440-01041	00440-01042	00440-01043	00440-01044	00808-04304	00808-01101
NH <sub>2</sub>	2.1	00430-01009	00430-01010	00430-01011	00430-01012	00430-01013	00430-01014	00430-01015	00430-01016	-	00808-24303	00808-01107
	3.0	00430-01018	00430-01019	00430-01020	00430-01021	00430-01022	00430-01023	00430-01024	00430-01025	-	00808-24303	00808-01107
	4.0	00430-01027	00430-01028	00430-01029	00430-01030	00430-01031	00430-01032	00430-01033	00430-01034	00430-01035	00808-04303	00808-01101
	4.6	00430-01036	00430-01037	00430-01038	00430-01039	00430-01040	00430-01041	00430-01042	00430-01043	00430-01044	00808-04303	00808-01101
Silica	2.1	00450-01009	00450-01010	00450-01011	00450-01012	00450-01013	00450-01014	00450-01015	00450-01016	-	00808-24306	00808-01107
	3.0	00450-01018	00450-01019	00450-01020	00450-01021	00450-01022	00450-01023	00450-01024	00450-01025	-	00808-24306	00808-01107
	4.0	00450-01027	00450-01028	00450-01029	00450-01030	00450-01031	00450-01032	00450-01033	00450-01034	00450-01035	00808-04306	00808-01101
	4.6	00450-01036	00450-01037	00450-01038	00450-01039	00450-01040	00450-01041	00450-01042	00450-01043	00450-01044	00808-04306	00808-01101
HILIC NH <sub>2</sub>	2.1	00431-01009	00431-01010	00431-01011	00431-01012	00431-01013	00431-01014	00431-01015	00431-01016	-	00808-24307	00808-01107
	3.0	00431-01018	00431-01019	00431-01020	00431-01021	00431-01022	00431-01023	00431-01024	00431-01025	-	00808-24307	00808-01107
	4.0	00431-01027	00431-01028	00431-01029	00431-01030	00431-01031	00431-01032	00431-01033	00431-01034	00431-01035	00808-04307	00808-01101
	4.6	00431-01036	00431-01037	00431-01038	00431-01039	00431-01040	00431-01041	00431-01042	00431-01043	00431-01044	00808-04307	00808-01101

Don't see your needed size or format? Contact Welch or your local distributor for other dimensions.