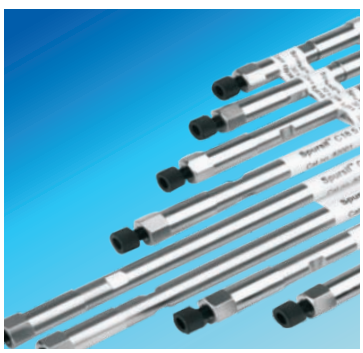
DiKMA®
A reliable partner for your lab

Dikma New HPLC Columns

"Surpassing Competitor's HPLC & UHPLC Columns"

LIQUID CHROMATOGRAPHY

GAS CHROMATOGRAPHY

SAMPLE PREPARATION

BULK PURIFICATION

CHROMATOGRAPHIC MEDIA

Dikma Technologies Inc.

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Inspire™ HILIC

HILIC is normal phase chromatography of polar and ionic compounds under RP conditions. It combines the characteristics of three methods in LC-RP, NP, and IC. Inspire HILIC columns retain a water-enriched layer on the surface of the silica. This water layer facilitates the transfer of polar compounds onto the stationary phase for increased retention. Separation is achieved through the partitioning of polar solutes from the high concentration, water-miscible, organic mobile phase into the hydrophilic surface environment. Polar solutes exhibit increased retention, and elute in the order of increasing hydrophilicity. HILIC is ideal for separating and retaining polar compounds that may not retain on traditional RP packings. Unlike reversed-phase columns, Inspire HILIC columns retain highly polar compounds with only small amounts of water in the mobile phase. These more volatile mobile phases increase sensitivity with microbore applications.

- Unique selectivity and increased retention for highly polar compounds
- Increased sensitivity and lower detection limits with microbore
- Enhanced retention for hydrophilic/polar compounds
- Increased laboratory throughput and productivity
- Superior batch-to-batch reproducibility
- Suitable for the separation of hydrophilic compounds such as polar acids and bases, polar compounds, nucleosides, oligonucleotides, amino acids, peptides, and water-soluble vitamins

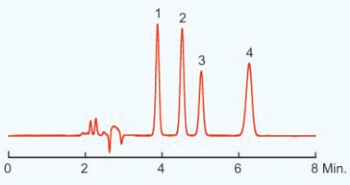
Inspire™ HILIC Material Characteristics

Bonded phase	Particle size (im)	Pore size (Å)	Surface area (m^2/g)	Purity (%)	Phase density (mol/m^2)	Carbon loading (%)	pH range	Endcapping
HILIC	3,5,10	100	440	> 99.999	–	–	1.5–7.5	No

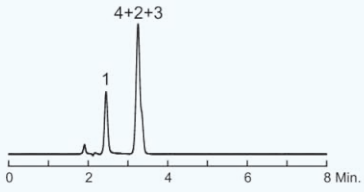
Caffeine metabolites

Column: Listed on chromatograms
Dimension: 150 × 4.6 mm, 5 µm
Mobile Phase: MeCN:10 mM ammonium formate (pH=3.0) = 95:5
Flow Rate: 1.0 mL/min
Temperature: Ambient
Detection: UV 254 nm
Sample:
1. Theophyline
2. 3-Methylxanthine
3. 7-Methylxanthine
4. 1, 3-Dimethyluric acid

Dikma Inspire HILIC



Competitor P HILIC



Inspire™ Diol

Inspire Diol columns are suitable for RP, NP, and HILIC modes. They are less polar than unmodified silica and very easily wettable with water. The water-enriched layer on the surface facilitates the retention of polar compounds. A well-known use of Diol columns, under normal phase conditions, is the separation of steroids and sterols.

- Monomerically bonded dihydroxypropyl group
- Ultra pure silica and unique bonding chemistry promote long column lifetime, excellent column reproducibility and high inertness without endcapping
- Unique selectivity for polar/hydrophilic compounds in RP, NP, and HILIC modes
- Lower polarity than unmodified silica and very easily wettable with water
- Higher retentivity than silica in NP mode and useful tool as preparative column owing to easy dry-up

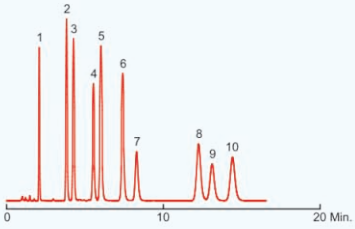
Inspire™ Diol Material Characteristics

Bonded phase	Particle size (im)	Pore size (Å)	Surface area (m^2/g)	Purity (%)	Phase density (mol/m^2)	Carbon loading (%)	pH range	Endcapping
Diol	3,5,10	100	440	> 99.999	2.1	7.5	2.0–7.5	No

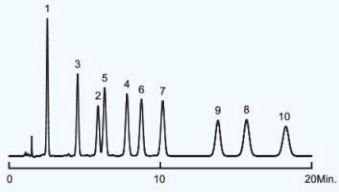
Steroids

Column: Listed on chromatograms
Dimension: 150 × 4.6 mm, 5 µm
Mobile Phase: A：Hexane B：CH_2Cl_2:MeOH = 80:20 A:B = 80:20
Flow Rate: 2.0 mL/min
Temperature: Ambient
Detection: UV 254 nm
Sample:
1. 11-Ketoprogesterone
2. Progesterone
3. Cortisone 21-acetate
4. Corticosterone
5. Prednisolone 21-acetate
6. Cortisone
7. Prednisone
8. Hydrocortisone
9. Dexamethasone
10. Prednisolone

Dikma Inspire Diol



Competitor G Sil-100A



Platisil™

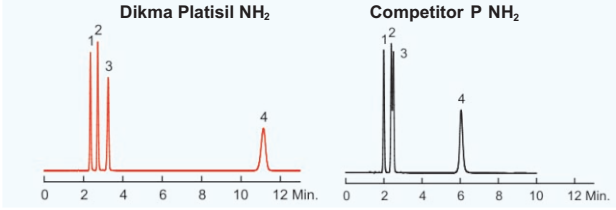
Platisil™ NH_2

Platisil NH_2 columns retain hydrogen-bonding compounds under three separation modes-RP, NP, and IC. Platisil NH_2 columns provide reproducible retention and selectivity with improved column lifetime.

- Aminopropyl modified silica phase for multi-mode chromatography (RP, NP, & IC)
- Improved phase ruggedness and stability
- Excellent retention for polar compounds such as sugars, oligosaccharides, sugar alcohols, and other hydroxyl compounds, as well as DNA bases under RP conditions and vitamins A & D and hydrocarbons in the petroleum industry under NP conditions

Water-soluble vitamins

Column: Listed on chromatograms
Dimension: 150 × 4.6 mm, 5 µm
Mobile Phase: MeCN:25 mM KH_2PO_4 (pH=2.5) = 70:30
Flow Rate: 1.0 mL/min
Temperature: Ambient
Detection: UV 254 nm
Sample:
1. Riboflavin
2. Nicotinamide
3. Pyridoxine
4. Thiamine



Platisil™ NH_2 Material Characteristics

Bonded phase	Particle size (im)	Pore size (Å)	Surface area (m^2/g)	Purity (%)	Phase density (mol/m^2)	Carbon loading (%)	pH range	Endcapping
NH_2	3,5,10	100	440	> 99.999	3.2	7	2.0–7.5	No

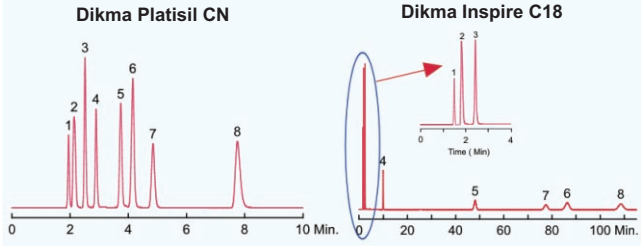
Platisil™ CN

Platisil CN columns offer a unique polar selectivity in RP and NP mode. They provide sharp peaks and great reproducibility run-to-run, column-to-column, and batch-to-batch. The smooth silica allows for a more uniform bonding with improved resistance to bonded phase hydrolysis to produce one of the most stable CN phases. The high coverage combined with a thorough endcapping makes Platisil CN columns suitable for the separation of ionizable compounds such as basic drugs, organic acids, and steroids as well as carboxyl, carbonyl, and amine containing compounds.

- Monomerically bonded cyanopropyl group
- Exceptionally high surface coverage and alternative selectivity
- Low hydrophobicity for rapid elution of hydrophobic analytes
- More reproducible separations than silica for NP applications
- Multi-mode column (RP, NP, & Hilic) widens scope of selectivity
- High retention capacity for polar and unsaturated compounds
- Excellent reproducibility and superior stability
- Quick equilibration and less sensitivity to small changes of the water content in the mobile phase
- Suitable for the separation of ionizable compounds such as basic drugs, organic acids, and steroids

Selectivity and retention comparison

Column: Listed on chromatograms
Dimension: 150 × 4.6 mm, 5 µm
Mobile Phase: MeCN:H_2O =65:35
Flow Rate: 1.0 mL/min
Temperature: Ambient
Detection: UV 254 nm
Sample:
1. Uracil
2. Caffeine
3. Phenol
4. Toluene
5. Butylbenzene
6. Amylbenzene
7. *o*-Terphenyl
8. Triphenylene



Platisil™ CN Material Characteristics

Bonded phase	Particle size (im)	Pore size (Å)	Surface area (m^2/g)	Purity (%)	Phase density (mol/m^2)	Carbon loading (%)	pH range	Endcapping
CN	3,5,10	100	440	> 99.999	4.8	12	1.5–7.5	Yes

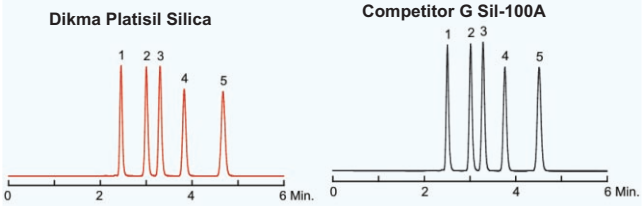
Platisil™ Silica

Platisil Silica is ideal for the rapid separation of low molecular weight compounds that are soluble in organic solvents. Separation on silica columns depend upon the difference in orientation, type, and number of functional groups associated with the compounds in the sample.

- High loading capacity and strong mechanical stability due to exceptionally stable silica packing
- Minimal peak distortion
- Useful for separating compounds differing in the number and type of the functional groups
- Suitable for the separation of stereoisomers as well as neutral and weakly acidic compounds
- Excellent batch-to-batch reproducibility

Phthalate esters

Column: Listed on chromatograms
Dimension: 150 × 4.6 mm, 5 µm
Mobile Phase: A：Hexane B：CH_2Cl_2:MeOH = 80:20 A:B = 95:5
Flow Rate: 1.0 mL/min
Temperature: Ambient
Detection: UV 254 nm
Sample:
1. Di-n-octyl phthalate
2. Dibutyl phthalate
3. Dipropyl phthalate
4. Diethyl phthalate
5. Dimethyl phthalate



Platisil™ Silica Material Characteristics

Bonded phase	Particle size (im)	Pore size (Å)	Surface area (m^2/g)	Purity (%)	Carbon loading (%)	pH range	Endcapping
Silica	3,5,10	100	440	> 99.999	–	1.5–7.5	No

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Inspire™ Ordering Information

3 µm Microbore Columns (2.1 mm)					
Phases	**30 x 2.1**	**50 x 2.1**	**100 x 2.1**	**150 x 2.1**	**250 x 2.1**
Inspire™ Hilic	81430	81404	81412	81413	81415
Inspire™ Diol	81230	81204	81212	81213	81215
3 µm Analytical Columns (3.0 mm)					
Phases	**30 x 3.0**	**50 x 3.0**	**100 x 3.0**	**150 x 3.0**	**250 x 3.0**
Inspire™ Hilic	81429	81421	81422	81423	81424
Inspire™ Diol	81229	81221	81222	81223	81224
3 µm Analytical Columns (4.6 mm)					
Phases	**30 x 4.6**	**50 x 4.6**	**100 x 4.6**	**150 x 4.6**	**250 x 4.6**
Inspire™ Hilic	81431	81416	81417	81418	81420
Inspire™ Diol	81231	81216	81217	81218	81220
5 µm Microbore Columns (2.1 mm)					
Phases	**30 x 2.1**	**50 x 2.1**	**100 x 2.1**	**150 x 2.1**	**250 x 2.1**
Inspire™ Hilic	81433	81403	81407	81402	81409
Inspire™ Diol	81233	81203	81207	81202	81209
5 µm Analytical Columns (3.0 mm)					
Phases	**30 x 3.0**	**50 x 3.0**	**100 x 3.0**	**150 x 3.0**	**250 x 3.0**
Inspire™ Hilic	81432	81425	81426	81427	81428
Inspire™ Diol	81232	81225	81226	81227	81228
5 µm Analytical Columns (4.6 mm)					
Phases	**30 x 4.6**	**50 x 4.6**	**100 x 4.6**	**150 x 4.6**	**250 x 4.6**
Inspire™ Hilic	81434	81410	81411	81401	81406
Inspire™ Diol	81234	81210	81211	81201	81247

5 µm & 10 µm Semi-preparative Columns					
Phases	**Particle Size (µm)**	**250 x 4.6**	**250 x 10.0**	**150 x 21.2**	**250 x 21.2**
Inspire™ Hilic	5	81406	81438	81445	81439
Inspire™ Hilic	10	81435	81436	81446	81437
Inspire™ Diol	5	81247	81238	81245	81239
Inspire™ Diol	10	81235	81236	81246	81237

Platisil™ Ordering Information

5 µm Analytical Columns		
Phase	150 x 4.6	250 x 4.6
Platisil™ NH_2	99504	99505
Platisil™ CN	99506	99507
Platisil™ Silica	99508	99509

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