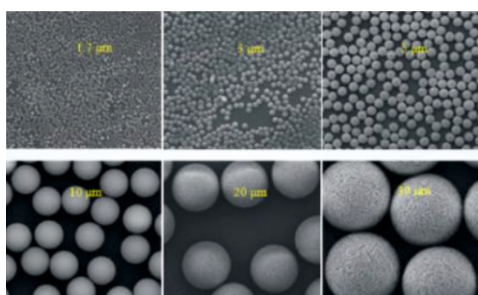


ChromX

The full range bonded ChromX silica packing provide high stability & efficiency. Complete end capping of this column provide high stability. ChromX has most versatile phase availability for the analysis of various type of samples. ChromX has reverse phase, normal phase and HILIC chemistry. Narrow Pore Size (100Å) and Particles Size Distribution.

- High surface area for strong retention of hydrophobic and polar compounds
- Enhanced mechanical stability
- Range of particle size from 3 µm to 10 µm for analytical to preparative

These columns are suitable for analysis of acidic, neutral and basic organic compound as well as pharmaceuticals API, formulations and peptides.



The pictures show the uniformity of the particle sizes and smoothness of particle surface, which enables more uniform packing with less channeling effect and leads to lower back pressure and the higher column efficiency. Our silica has a surface area of 320 m²/g to 450 m²/g with a controlled mean pore size of 100 Å.

Packing Material	Partical Size (µm)	Pore Size (Å)	Surface Area (m ² /g)	Carbon Load %	End Capping	pH Stability
ChromX C18	3, 5, 10 µm	100	320 m ² /g	17	Yes	2-10
ChromX C18 (2)	3, 4, 5, 10 µm	100	450 m ² /g	20	Yes	2-10
ChromX C18-AQ	3, 5, 10 µm	100	320 m ² /g	12	Yes	2-10
ChromX C8	3, 5, 10 µm	100	320 m ² /g	12	Yes	2-10
ChromX Phenyl	3, 5, 10 µm	100	320 m ² /g	11	Yes	2-10
ChromX NH ₂	3, 5, 10 µm	100	320 m ² /g	4	Yes	2-10
ChromX CN	3, 5, 10 µm	100	320 m ² /g	6	No	2-10
ChromX SiO ₂	3, 5, 10 µm	100	320 m ² /g	0	No	2-10
ChromX Diol	3, 5, 10 µm	100	320 m ² /g	4	No	2-10

ChromX Reverse Phase Column

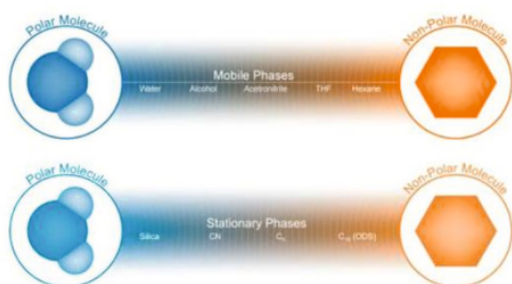
ChromX C18 Reverse phase and normal phase HPLC techniques are two liquid chromatographic techniques. The key difference between reverse phase and normal phase HPLC is that the reverse phase HPLC uses a nonpolar stationary phase and a polar mobile phase whereas the normal phase HPLC uses a polar stationary phase and a less polar mobile phase.

Reverse phase technique is more reproducible and has broad applicability, reversed phase chromatography is used for approximately 75% of all HPLC methods. Most of these protocols use as the mobile phase an aqueous blend of water with a miscible, polar organic solvent, such as acetonitrile or methanol. This typically ensures the proper interaction of analytes with the non-polar, hydrophobic particle surface. A C18-bonded silica [sometimes called ODS] is the most popular type of reversed-phase HPLC packing.

ChromX C18

Features

- C8 and C18 Column in HPLC
 - Unique fixed phase bonding technology, double-end technology
 - Super high purity and all-porous silica gel, purity > 99.999%
 - The perfect combination of peak shape and the lowest backpressure
 - The combination of the perfect peak and the lowest backpressure
 - PH Range: 1.5-10.0



ChromX C18 is bonded with gas phase endcapping which doesn't demonstrate any silanophilic activity. ChromX C18 is bonded with gas phase endcapping which doesn't demonstrate any silanophilic activity. An absence of silanophilic interactions by the selected ionic liquids added to the mobile phase in high-performance liquid chromatography (HPLC) is reported. The ionic liquids studied appeared to significantly affect analyte retention in HPLC systems tested. Consequently, ChromX HPLC Column increased separation selectivity was attained.

ChromX Addition of ionic liquid already in very small concentration (0.5%, v/v) could reduce the amount of acetonitrile used during the optimization of basic analytes separations in HPLC system. Moreover, the influence of temperature on the separation of basic analytes was demonstrated and considered in practical HPLC method development.

ChromX silica is slightly more hydrophobic than other normal C18 column. Therefore hydrophobic material are more retained by this phase. The complete endcapping and inertness allow the analysis of alkaline substance and increase the stability in strong acidic and slightly alkaline media.

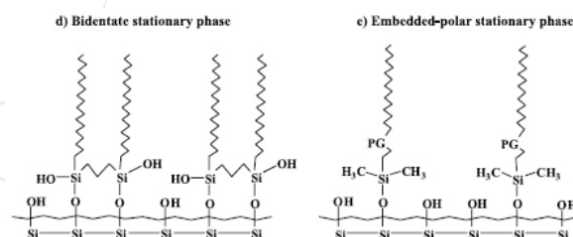
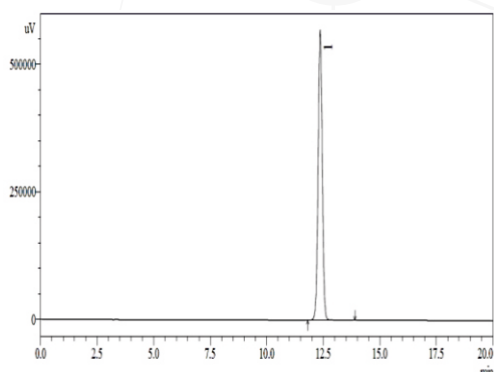


Figure 2. Chemically bonded stationary phases developed to reduce silanophilic activity.

Application

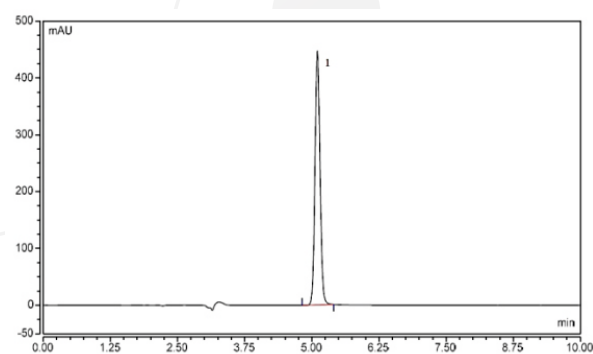
Paracetamol IP Assay



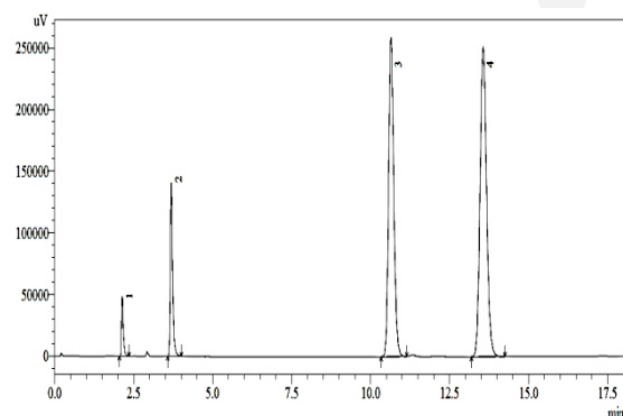
Column	ChromX C18 5µm, 250X4.6mm,
Mobile Phase	93%phosphate Buffer pH 4.0/ 7% ACN
Flow Rate	1 ml/min
Detector	215 nm
Temp	40 °C
Sample	0.3mg/mL Paracetamol Standard

Column	ChromX C18 5µm, 250X4.6mm,
Mobile Phase	77%0.1% OPA/33% ACN
Flow Rate	1 ml/min
Detector	225 nm
Temp	25 °C
Sample	5mg/100mL Favipiravir Standard

Favipiravir IP Assay



Column QC testing



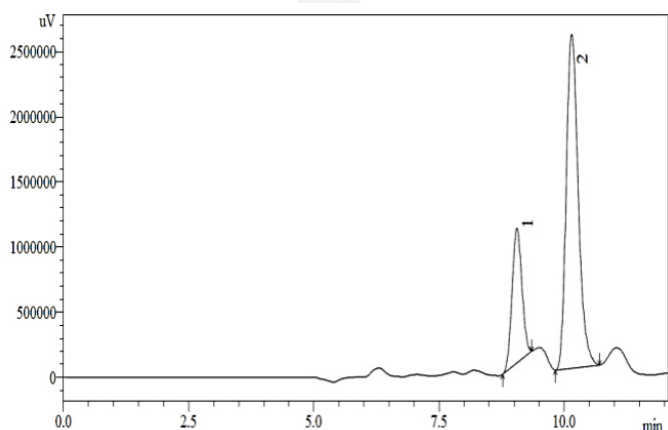
Column	ChromX C18 5µm, 250X4.6mm,
Mobile Phase	35% Water/65% ACN
Flow Rate	1 ml/min
Detector	254 nm
Temp	25 °C
Sample	Uracil, Phenol, Toluene, Naphthalene

ChromX C18 (2)

ChromX C18 (2) is an octadecyl silane with ligands bound to the silica surface, with very hydrophobic stationary phase that offers great methylene selectivity. ChromX C18 (2) is high carbon load and high surface area containing column. The non-polar endcapping of the ChromX C18 (2) column phase virtually eliminates silanol interactions. This can be used for USP methods or general LC method development. This column can be used as

- Unique phase bonding technology
- Super high purity and all-porous silica gel, purity more than 99.999%
- Perfectly spherical shape enabling higher loading capacity with lower back pressure

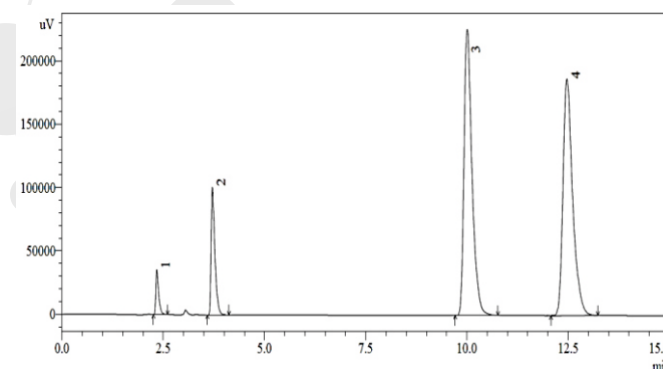
Application



Column	ChromX C18 (2) 4µm, 125X4.6mm,
Mobile Phase	Tetrabutylammonium Hydroxide pH 6.5/ CAN (3:1)
Flow Rate	0.2 ml/min
Detector	254 nm
Temp	40°C
Sample	0.2mg/mL Cefixime solution Peak-1 Isomer E,

ID	Name	Ret. Time	Area	Height	Area%	Theoretical Plate#	Tailing Factor	Resolution	RRT
1	Isomer E	9.050	14089818	1034759	24.838	9552	1.07	0.00	0.9
2	Cefixime	10.145	42635982	2563370	75.162	8879	1.27	2.73	1.0
			56725800	3598129					

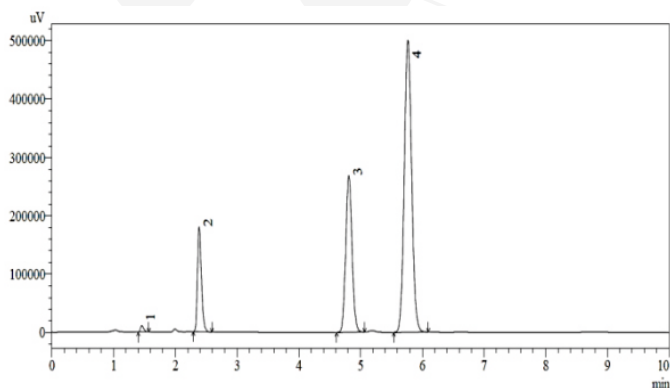
Column	ChromX C18 (2) 5µm, 250X4.6mm,
Mobile Phase	35% Water/65% ACN
Flow Rate	1 ml/min
Detector	254 nm
Temp	25°C
Sample	1) Uracil, 2) Phenol, 3) Toluene, 4) Naphthalene



ChromX C18-AQ

ChromX C18-AQ is dual mode RP column. C18 phase is embedded with polar molecule. It is compatible with 100% aqueous solution for separation of hydrophilic compound. It can be used for the analysis of Azithomycin RS.

1) Column QC testing



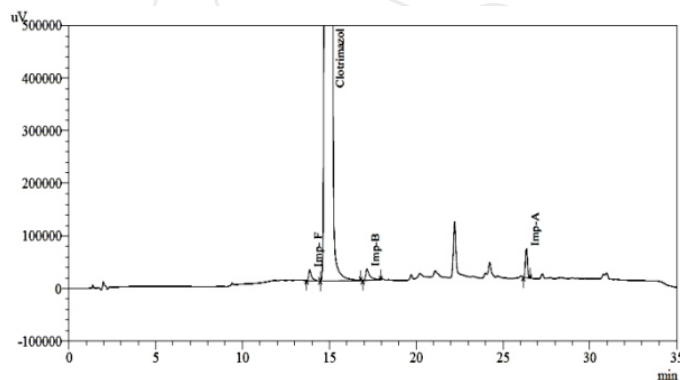
Column	ChromX C18-AQ 5µm, 150X4.6mm,
Mobile Phase	35% Water/65% ACN
Flow Rate	1 ml/min
Detector	254 nm
Temp	25°C
Sample	1) Uracil, 2) Phenol, 3) Toluene, 4) Naphthalene

ChromX C8

ChromX C8 is less hydrophobic than ChromX C18 due to the low carbon load content. The silanophilic action is more noticeable due to the accessibility of the silica gel surface. These columns are recommending for the analysis of compound which are more retain on C18 column.

Application:

Column	ChromX C8 5µm, 150X4.6mm,		
Mobile Phase	A) 1 gm K2HPO4 + 0.5g of tetrabutylammonium hydrogen in 1000ml water B) Acetonitrile		
Flow Rate	1 ml/min		
Gradient:	Time	A	B
	0	75	25
	3	75	25
	25	20	80
	30	20	80
Detector	210nm		
Temp	40°C		
Sample	Clotrimazol reference solution containing Imp-A,B & F		



ChromX C4

ChromX C4 is very less hydrophobic compare to ChromX C18 and C8. The silanophilic activity is very prominent on this phase. These columns mainly used for the analysis of protein and peptide molecule.

ChromX Phenyl

ChromX Phenyl is aliphatically modified reverse phase with gas phase endcapping. Alkylphenyl modification and other selectivity along with π - π interactions influence the separation for polar and non-polar aromatic hydrocarbons or fatty acids.

Normal Phase

There are different modified and unmodified silica gels are available for normal phase which includes Silica, NH₂, CN and Diol. During gradient run analysis modified silica gel provide fast equilibration and reproducible analysis.

Due to free silanol group at the surface of the silica gel has slightly acidic effect. CN and Diol are neutral modification while NH₂ provides alkaline effect.

ChromX SIL:

ChromX SIL is general purpose normal Phase column. Ultra-pure phase with high surface area provide robust, high resolution separation of non-polar and moderate organic compound. It has polar interaction and high silanophilic activity.

ChromX CN:

ChromX CN is neutral chemical modified Alkyl Nitrile group attached with silica gel. It shows polar interactions, π - π interactions, hydrophobic interactions, very low silanophilic activity.

ChromX Diol:

ChromX Diol is also neutral chemical modified Diol group attached with silica gel. It provides polar interactions, hydrogen bridge connections and has silanophilic activity. It is used as alternative of SIL column for the separation of polar natural product, herbicides, pesticides, metabolites and pharmaceuticals product

ChromX NH₂:

ChromX Diol is also neutral chemical modified Diol group attached with silica gel. It provides polar interactions, hydrogen bridge connections and has silanophilic activity. It is used as alternative of SIL column for the separation of polar natural product, herbicides, pesticides, metabolites and pharmaceuticals product

ChromX HILIC

Hydrophilic Interaction Liquid Chromatography (HILIC) is a separation mode where normal phase modification can be handled with mobile phase use in reverse phase chromatography.

In HILIC phase separation surface of the stationary phase is covered with an aqueous phase. Analyte separation is based on interaction and distribution of analytes between water layer and mobile phase.

- Polar compounds have very good retention in HILIC
 - Reversed order when compared to Reverse phase.
 - Improved MS sensitivity
 - Ideal for SPE (the samples dissolved in highly organic mixtures can directly analyzed)
 - Can be an interesting alternative to Reverse Phase for some types of compounds, like Saccharide and glycans, amino acids and peptides, polar basic compounds, antibiotics and soon.

ChromX HILIC have two variants ChromX HILIC and ChromX HILIC-ZW with pore size of 100Å and ideal particle size of 5µm.

Physical Properties:

Packing Material	Particle Size (µm)	Pore Size (Å)	Surface Area (m ² /g)	Carbon Load %	End Capping	pH Stability
ChromX HILIC	3 & 5 µm	100	320 m ² /g	NA	No	2-8
ChromX HILIC-ZW	5 µm	100	320 m ² /g	7%	No	2-8