

Seperation For Innovation

# HPLC - LC/MS Columns





## Trusted Partner and Innovation Leader in Chromatography.

The company ChromoSep Technologies located in Ahmedabad was founded in 2020 by Mr. Paras Shah & Mr. Shailendra Gupta and have been dealing with the production, development and sales of chromatography columns, separation phases and accessories ever since.

ChromoSep Technologies provide highest quality, cutting edge product with best in class technical support. Our product includes HPLC column, GC Column, SPE Cartridge, Flash Column, bulk silica and chromatography consumables.

ChromoSep Technologies where innovation knows no bounds and production is elevated to an art form. Join us in shaping the future, one remarkable creation at a time.

ChromoSep Technologies aims to revolutionize chromatography processes by providing high-quality, efficient, and user-friendly solutions that meet the diverse needs of our clients while contributing positively to scientific advancement and environmental sustainability.

#### **ChromX**®

- Full range bonded silica packing provide high stability & efficiency
- Most versatile phase availability for the analysis of various type of samples
- High surface area for strong retention of hydrophobic and polar compounds
- Enhanced mechanical stability

Phase	Particle Size	Pore Size	Surface Area	Carbon Load	End Capping	рН
C18	1.7, 3, 3.5, 4, 5, 10	100	330	18	Yes	2-10
C18 (2)	3, 4, 5, 10	100	450	20	Yes	2-8
C18-AQ	3, 3.5, 5, 10	100	330	12	Yes	2-10
C8	3, 5, 10	100	330	10	Yes	2-10
C4	3, 5, 10	100	330	7	Yes	2-10
Phenyl	3, 5, 10	100	330	11	Yes	2-10
Phenyl-Hexyl	3, 5, 10	100	330	14	Yes	2-10
Biphenyl	3, 5, 10	100	330	12	Yes	2-10
C30	3, 5, 10	100	330	18	Yes	2-10
NH <sub>2</sub>	3, 5, 10	100	330	4	No	2-8
CN	3, 5, 10	100	330	7	No	2-8
Si	3, 5, 10	100	330	0	No	2-8
SCX	3, 5, 10	100	330	0	No	2-8





#### NovaSil®

- The proprietary bonding
- Working pH range is 1-12
- Multiple bonded phase ensure more hydrophobic behaviour
- These columns can be used with 100% Aqueous mobile phase
- Separation can be happening via penetration and adsorption

Phase	Particle Size	Pore Size	Surface Area	Carbon Load	End Capping	рН
C18	1.7, 3, 3.5, 4, 5, 10	100	330	19	Yes	1-12
C18 (2)	1.7, 3, 3.5, 4, 5, 10	150	185	14	Yes	1-12
C8	1.7, 3, 5, 10	100	330	11	Yes	1-12

#### InnoSol

- General purpose routine column used for the wide type of application
- Columns are replacement for the well-known column available in market
- Column to column and batch to batch reproducibility

Phase	Particle Size	Pore Size	Surface Area	Carbon Load	End Capping	рН
ODS	3, 5, 10	130	170	10	Yes	2-8
BDS C18	3, 5, 10	130	170	11	Yes	2-8
BDS C8	3, 5, 10	130	170	7	Yes	2-8
Si	3, 5, 10	130	170	0	No	2-8



#### **HyperSol**

- The Full coverage bonded silica packing provide exceptionally high stability and high efficiency
- These columns are suitable for the separation of acidic, neutral and basic organic compound as well as pharmaceuticals API, formulations and peptides.
- Proprietary surface modification to ensure uniform and inert surface
- High surface area for strong retention of hydrophobic and polar compounds

Phase	Particle Size	Pore Size	Surface Area	Carbon Load	End Capping	рН
C18	1.8, 3, 5, 10 µm	120	320	17	Yes	2-10
C18-AQ	3, 5 µm	120	320	12	Yes	2-10
C8	1.8, 3, 5, 10 µm	120	320	10	Yes	2-10

#### **HyperSol Sugar Column**

- Hypersol Sugar Columns contain low-linking sulfonated styrene-divinylbenzene spheres (PS/DVB) in 5,8 and 10% cross-link forms as well as various ionic forms, including calcium, hydrogen. These columns have been specifically designed for high resolution separation of carbohydrates, organic acids, ribavirin, peptides and nucleic acids.
- The separation mechanism for Hypersol Sugar phases includes ionexchange and hydrophilic interactions with the analytes. The separation mechanism could also be due to size exclusion, ion exclusion, and ligand exchange. These multiple modes of interaction enable a unique capability to separate a variety of water soluble compounds

Dimension	P/N
Hypersol Sugar -H, 300 X 7.8 mm, 8µm	HYSU8030078-H
Hypersol Sugar -CA, 300 X 7.8 mm, 8µm	HYSU8030078-CA



#### **HyperSol Ghost-Eliminator Column**

A ghost peak is a peak that looks at a location where we don't anticipate a peak specially in gradient elution". It's a component that shows up in the system and it could show up in the chromatogram. Occasionally it's a sharp peak, occasionally it is a broad peak or even a "hump" and sometimes it's an increasing baseline.

#### Advantage of Using HyperSol Ghost - Eliminator Column

- Clean the Mobile phase.
- Give us true separation results.
- Reduce time of validation.
- Enhance the HPLC Column and Instrument life.

#### **Ordering Information**

Product Code: F62208 | Size: 50X4.6mm Product Code: F62209 | Size: 30X4.6mm

#### DecaSol

- High surface are and higher carbon load provide better separation for complex mixture and peptide analysis.
- Unique bonding technology
- Column to column and batch to batch reproducibility

Phase	Particle Size	Pore Size	Surface Area	Carbon Load	End Capping	рН
C18	3, 5	80	500	22	Yes	2-10
C8	3, 5	80	500	14	Yes	2-8



#### **BioSol SEC**

Size-exclusion chromatography is a chromatographic technique which separates molecules in solution according to their size. With organic mobile phases, the technique is known as gel-permeation chromatography and with aqueous mobile phases, the term gel-filtration chromatography has been used. Size Exclusion Chromatography (SEC) is the dominant separation mode for protein, monoclonal antibodies, vaccine and polymers molecule.

	BioSol SEC-150	BioSol SEC-300	BioSol SEC-500
Functional Group	Diol	Diol	Diol
Based	High Purity Silica	High Purity Silica	High Purity Silica
Pore Size	150 Å	300 Å	500 Å
Particle Size	3,5 µm	3,5 µm	3,5μm
рН	2-8	2-8	2-8
Linear Range (Globular Protein)	5,000 - 150,000	10,000 - 1,000,000	20,000 - 2,000,000
Linear Range (Glucan)	1,000 - 50,000	5,000 - 150,000	20,000 - 500,000
Linear Range (PEG)	200 - 15000	1,000 - 100,000	5,000 - 200,000



#### **ChromoSep GC Capillary Column**

- These are new generation capillary column
- Ultra low bleed and high inertness with respect to active, acid and basic compounds

These columns are able to compete with best column available in market.

Chroi	mosep	Phase Code	Phase Composition	USP Code
	CST-1	CS01	100% Dimethyl Polysiloxane	G1, G2, G9, G38
	CST-SULFUR	CS02	100% Dimethyl Polysiloxane	G1, G2, G9, G38
	CST- PETROL	CS03	100% Dimethyl Polysiloxane	G1, G2, G9, G38
	CST-50.2PONA	CS04	100% Dimethyl Polysiloxane	G1, G2, G9, G38
	CST-2887	CS05	100% Dimethyl Polysiloxane	G1, G2, G9, G38
	CST-Petro.150	CS06	100% Dimethyl Polysiloxane	G1, G2, G9, G38
	CST-5	CS07	95% Dimethyl - 5% Diphenylpolysiloxane	G27, G36, G41
	CST-STEROL	CS08	95% Dimethyl - 5% Diphenylpolysiloxane	G27, G36, G41
	CT-VOLAMINE	CS09	Proprietary Bonded and crosslinked phase	
Low Bleed	CST-5AMINE	CS10	95% Dimethyl - 5% Diphenylpolysiloxane	G27
General Applications	CST-5.625	CS11	95% Dimethyl - 5% Diphenylpolysiloxane	G27
Applications	CST-G27	CS12	95% Dimethyl - 5% Diphenylpolysiloxane	G27
	CSi-5	CS13	5% Phenyl - 95% Methyl Polysiloxane	G27
	CST-1301	CS14	94% Dimethyl -6% Cyanopropyl-Phenyl Polysiloxane	G43
	CST-624	CS15	94% Dimethyl -6% Cyanopropyl-Phenyl Polysiloxane	G43
	CST-G43	CS16	94% Dimethyl -6% Cyanopropyl-Phenyl Polysiloxane	G43
	CST-14	CS17	14% Diphenyl - 86% Dimethyl Polysiloxane	
	CST-20	CS18	20% Diphenyl - 80% Dimethyl Polysiloxane	G28, G32
	CST-35	CS19	35% Diphenyl - 65% Dimethyl Polysiloxane	G42
	CST-1701	CS20	14% Cyanopropyl-Phenyl-86% Dimethyl Polysiloxane	G46
	CST-25	CS21	50% Cyanopropyl-Phenyl-50% Dimethyl Polysiloxane	G7, G19
	CST-50	CS22	50% Diphenyl- 50% Dimethyl Polysiloxane	G3, G17



#### ChromoSep GC Capillary Column

Chromosep		Phase Code	Phase Composition	USP Code
	CST-F50	CS23	50% Trifluoropropyl - 50% Methyl Polysiloxane	G6
	CST-PAG	CS24	50% Polyethylene – 50% Polypropylene Glycol	G18
	ChromWAX-280	CS25	100% Polyethylene Glycol	G14, G15, G16, G20, G39, G47
	CST-WAX	CS26	100% Polyethylene Glycol	G14, G15, G16, G20, G39, G47
	CST-FFAP	CS27	Polyethylene Glycol esterified with nitroteraphtalic acid	G25, G35
	CST-WAX.DB	CS28	Treated Polyethylene Glycol for basic compounds	
	CST-WAX Omega	CS29	100% Polyethylene Glycol (PEG)	
Low Bleed General	Sep.WAX	CS30	100% Polyethylene Glycol (PEG)	
Applications	Sep.WAX400	CS31	100% Polyethylene Glycol (PEG)	G20
	CS-CN100	CS32	100% Cyanopropyl Polysiloxane	G5
	CS-CRESOL	CS33	Proprietary Nonbonded phase	
	CS-17	CS34	Poly (Methyl Phenylsiloxane)	G3
	CST-608	CS35	Proprietary Bonded and crosslinked phase	
	CS-TCEP	CS36	1,2,3-tris (2-cyanoethoxy) propane	
	Sep.VOC	CS37	Proprietary Bonded and crosslinked phase	
	Sep-BLD1 & Sep-BLD2	CS38 CS39	Proprietary Bonded and crosslinked phase	
	Tech.WAX.HT	CS40	100% Polyethylene Glycol	G14, G15, G16, G20, G39, G47
	CST-1HT	CS41	100% Dimethyl Polysiloxane	G1, G2, G9, G38
Ultra Low Bleed High	CST-1HTSimDist	CS42	100% Dimethyl Polysiloxane	G1, G2, G9, G38
Temperature	CST-5HT	CS43	95% Dimethyl - 5% Diphenyl Polysiloxane	G27, G36, G41
	CST-50HT	CS44	50% Diphenyl- 50% Dimethyl Polysiloxane	G3, G17
	CST-BIODIESEL	CS45	Proprietary Bonded and crosslinked phase	
	Septech-1MS	CS46	100% Dimethyl Polysiloxane	G1, G2, G9, G38
	Septech-5MS	CS47	95% Dimethyl - 5% Diphenyl polysiloxane	G27, G36, G41
Ultra Low Bleed & Ultra	Septech-X5MS	CS48	Silphenylene Phase equivalent to SAPIENS-5MS	
Inertness (MS Application)	Septech-WAX.MS	CS49	100% Polyethylene Glycol (PEG)	G14, G15, G16, G20, G39, G47
	Septech-624MS	CS50	Silphenylene phase eq. to 6% Cyanopropylphenyl polysiloxane	G43
	Septech-200	CS51	35% Trifluropropyl-methylpolysiloxane	G6







### **Column Cleaning**

Flush with stronger solvents than your mobile phase. Make sure detector is taken out of flow path.

Reversed-Phase Solvent Choices in Order of Increasing Strength

#### Use at least 10 x Vm of each solvent for analytical columns

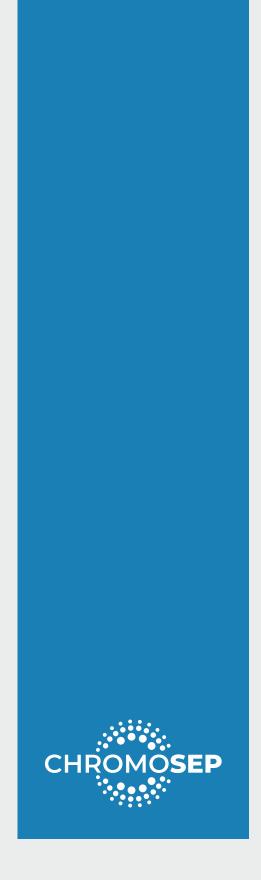
- 1 Mobile phase without buffer salts (water/organic)
- 2 100% Organic (MeOH or ACN)
- 3 Is pressure back in normal range?
- 4 If not, discard column or consider more drastic conditions: 75% Acetonitrile: 25% Isopropanol, then
- 5 100% Isopropanol
- 6 100% Methylene Chloride\*
- 7 100% Hexane\*

When using either Hexane or Methylene Chloride the column must be flushed with IPA before returning to your reversed-phase mobile phase.

#### **Preventing Column Back Pressure Problems**

- 1 Filter mobile phase:
  - Filter non-HPLC grade solvents
  - Filter buffer solutions
  - Install an in-line filter between auto-sampler and column (removes pump seal debris, ALS rotor debris, and sample particulates). Use 2 um frit for 3.5 um columns, use 0.5 um frit for 1.8 um columns.
- 2 Filter all samples and standards
- 3 Perform sample clean-up (i.e. SPE, LLE) on dirty samples.
- 4 Appropriate column flushing flush buffers from entire system at end of day with water/organic mobile phase.





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