

ZODIAC[®]
Life Sciences



A SOURCE FOR CHROMATOGRAPHY CHEMISTS

We aspire to offer matchless solutions and contribute to the future of Pharma, Life Sciences and diagnostics by setting a new benchmark in chromatography.



CONTENT

INDEX PAGE	01
ABOUT US	02
PRESTO	03
HST SERIES	05
HPLC COLUMNS	07
PREP COLUMNS	11
CARB COLUMN	12
ALTIN	13
SIFTO GHOST BLUSTER COLUMNS	14
VELOX SOLVENT WASTE SYSTEM	15
VELOX SAFETY CAPS	16





Source for Chromatography Chemist

At Zodiac Life Sciences, we don't just manufacture chromatography solutions — we solve real-world analytical challenges. With a deep-rooted passion for experimental chemistry and innovation, our mission is to develop technologies that tackle the most complex separation problems faced by QC analysts and R&D chemists.

By leveraging our strong expertise in ligand designing, chemical bonding and material science technologies we have solved Thousands of separation challenges encountered with our customers so far. We have created products that bring clarity and performance to difficult drug applications —from high-retention polar analytes to closely eluting impurities.

Zodiac's Next-Gen Innovations:

- **Zodiac HST Series:** Our flagship mixed-mode separation technology, designed to achieve multiple interactions within a single column. Four specialized column types launched under this series.
- **Zodiac CST Series:** Proprietary core-shell technology columns (1.7 μm , 2.7 μm) developed in-house for high sensitive and fast separations with excellent peak shapes.

We aim to address as many chromatographic challenges as possible, offering scientifically robust, application-specific solutions for pharmaceutical R&D and QC teams.

GLOBAL PRESENCE, TRUSTED QUALITY

Today, Zodiac products are available in 60+ countries, earning recognition for their precise performance, batch- to- batch consistency, and competitive pricing. Each Zodiac product — whether an HPLC column or a consumable—undergoes stringent quality control at every step: from silica synthesis and bonding to hardware integration and performance validation.

With over 25 years in the industry, our journey has been driven by one core principle:

Customer satisfaction is our greatest motivation.

This growth and trust are made possible by the dedicated work of experienced post-doctoral scientists and industry experts who form the backbone of our R&D, manufacturing, and quality teams.

At Zodiac, we're not just innovating chromatography — we're building partnerships, one solution at a time.

Presto® – Core-Shell Technology for Next-Level Chromatography

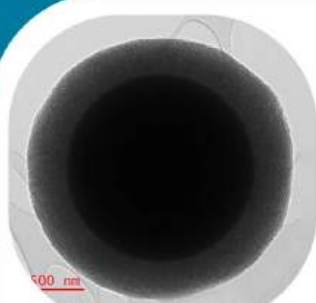


Analysts demand sharper peaks, faster separations, and results they can trust.

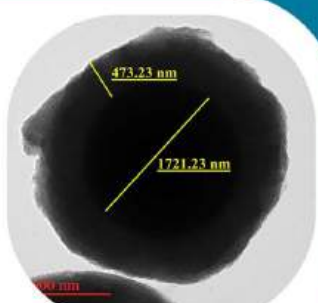
Presto® Core-Shell Technology, engineered through our proprietary nano-structuring process, delivers exactly that. At Presto, every step of core-shell column manufacturing is performed in-house; a distinction held by very few globally

Unlike fully porous particles, Presto®'s core-shell architecture ensures analytes travel shorter diffusion paths. The result: higher efficiency, reduced band broadening, and superior plate counts —without excessive back-pressure.

What makes Presto® Core-shell different from other Leading Brands ?



Presto Core-Shell – Smooth, Homogenous, Perfectly Engineered



A leading Competitor Brand – Rough, Irregular, Performance compromised

Presto® stands apart with **complete in-house manufacturing**, backed by **50+ quality checks** at every stage — from raw material to the finished column. Unlike competitor columns with rough, irregular shells, Presto® particles are **perfectly spherical, ultra-uniform, and nearly monodispersed**.

This precision delivers sharper peaks, reproducible results, and unmatched lot-to-lot consistency, with an impressive **%RSD < 1%**—giving analysts confidence in every run.

What you get from Presto®?

Faster – Achieve UHPLC-level efficiency on standard HPLC systems, saving time without sacrificing quality.

Durability – Proven stability across 3000+ injections under harsh pH and elevated temperature conditions.

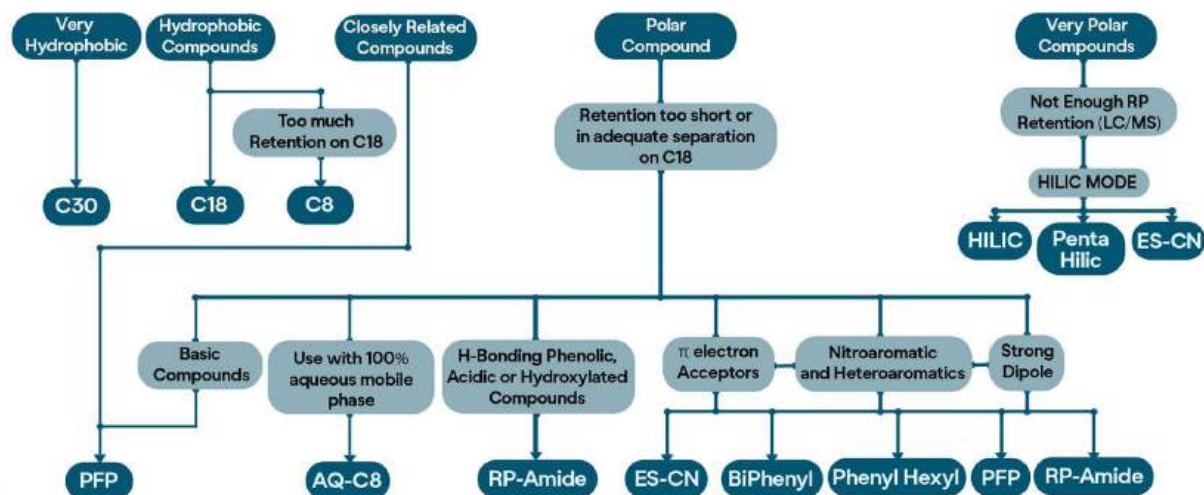
Sharper Peaks – Uniform spherical particles enhance resolution and improve signal-to-noise ratio, making even trace impurities easier to detect.

Consistency You Can Trust – Presto core-shell particles have %RSD < 1% particle distribution that ensures reproducibility across every batch.

Versatility – Available in 11 unique phases, offering method flexibility for everything from small molecules to complex analytes.

Presto® Family- Phase Selection Flowchart

Depending on the nature of the analytes that need to be separated, one can use the flow chart as a guide for choosing the most appropriate Presto® stationary phase.



Presto Column Specifications

Bonded Phase	USP Designation	Particle Size (µm)	Pore Size (Å)	Carbon Load (%)	Surface Area (m ² /g)	Low pH/Temp Limit	High pH/Temp Limit	Endcapped
C18	L1	2.7	90	8	135	2 / 60 °C	9 / 40 °C	Yes
		1.7	90	8	120			
AQ-C18	L1	2.7	90	7	135	2 / 60 °C	9 / 40 °C	Yes
		1.7	90	7	120			
C8	L7	2.7	90	6	135	2 / 60 °C	9 / 40 °C	Yes
		1.7	90	5	120			
C30	L62	2.7	120	5	90	2 / 60 °C	9 / 40 °C	Yes
Phenyl-Hexyl	L11	2.7	90	7	135	2 / 60 °C	9 / 40 °C	Yes
		1.7	90	7	120			
Biphenyl	L11	2.7	90	7	135	2 / 60 °C	9 / 40 °C	Yes
		1.7	90	7	120			
PFP	L43	2.7	90	6	135	2 / 60 °C	8 / 40 °C	Yes
		1.7	90	6	120			
RP-Amide	L60	2.7	90	7	135	2 / 60 °C	9 / 40 °C	Yes
		1.7	90	7	120			
HILIC	L3	2.7	90	Unbonded	135	1 / 60 °C	8 / 40 °C	No
		1.7	90	3	120			
Penta-HILIC	L95	2.7	90	3	135	2 / 60 °C	9 / 40 °C	No
		1.7	90	3	120			

Zodiac HST[®] – High Selectivity Series

When standard reverse-phase columns fail to separate complex polar and non-polar mixtures, QC and R&D teams turn to Zodiac HST[®]. Built on our FlexiPhase[®] mixed-mode chemistry, Zodiac HST[®] provides multiple interaction mechanisms in a single column—hydrophobic, ionic, π - π , and hydrogen bonding—making it the ultimate solution for challenging separations.

Why HST[®] is Different

- **One Column, Multiple Interactions** – Retain acidic, basic, neutral, and aromatic compounds in a single run.
- **Stable in 100% Aqueous Mobile Phase** – Polar groups prevent dewetting, unlike conventional C18s.
- **LC-MS Compatible** – No ion-pairing reagents needed; Zodiac HST[®] works seamlessly with mass spectrometry.
- **Multi-Mode Flexibility** – Reverse-phase, normal-phase, HILIC, ion-exchange, ion-exclusion in a single column.
- **No End-Capping Issues** – Eliminates selectivity drift, ensuring reproducibility over time.

EXPERIENCE THE POWER OF MULTIMODE SEPARATION
TECHNOLOGY WITH ZODIAC HST SERIES

A GAME-CHANGING SOLUTION FOR MODERN CHROMATOGRAPHY

Zodiac HST Offers Varied type of Column chemistries based on Charge group present on the Ligands



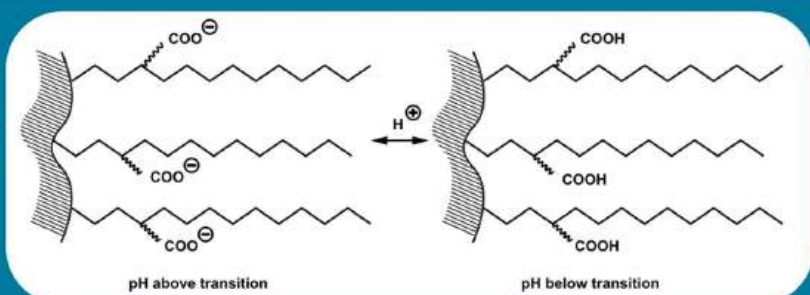
The Power of FlexiPhase[®]

Zodiac's FlexiPhase[®] multimode chemistry gives analysts full control:

- **Hydrophobic retention** – controlled by organic modifier in the mobile phase
- **Polar/ionic retention** – tuned by buffer strength (acid or base) & pH.
- **Dynamic pH-responsive behaviour** – acidic groups switch from RP to ion-exchange or ion-exclusion depending on pH of the mobile phase.

Result: One Zodiac HST column adapts to your molecule, simplifying method development and saving time in QC & AR&D.

For example In **Zodiac HST Acidic Group columns**, functional group acidity responds directly to pH, when pH of the mobile phase is:



- **Above the transition pKa** of the column → acidic groups ionize, enabling **Ion-Exchange** (opposite charges attract) and **Ion-Exclusion** (like charges repel) interactions
- **Below the transition pKa** of the column → groups remain neutral, and the column behaves like a **classic reversed-phase** system.

Zodiac HST Column Groups Strengths & Applications

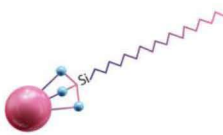
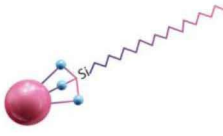
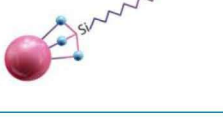
Group	Columns	Strengths and Applications
Acidic Group	HST-A HST-OG HST-OG2 HST-C	• Tunable acidity, Strong retention for Weak/ Strong bases, amino acids& vitamins • Ion-exchange mode for bases • Ion-exclusion mode for acids
Basic Group	HST-B HST-B2 HST-SB	• High selectivity for acidic compounds, bile acids, corticosteroids, vitamins. • Eliminates silanol effects.
HILIC	HSTS1 HST S2 HST S3 HSTN HST TH	• Strong retention for sugars, amino acids, nucleosides; wide pH range(HST S1,S2,S3), • HST-N- Strong polar HILIC Column replaces multiple RP-AQ, IC, NP, HILIC columns in one. • HST TH Trimodal : RP ,Ion Exchange and Ion Exclusion modes in single column
Speciality Columns	HST-P1 HST P2 HSTRP HST HB	• HST P1,&P2 : Unique selectivity for polar aromatics • HST HB : Hydrogen bonding specific • HST RP: Plasma bio-fluid analysis

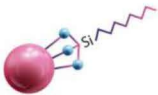
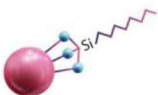
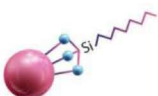
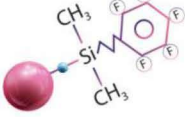
For every hard-to-separate molecule, there's Zodiac HST. Powered by FlexiPhase[®] Technology, it delivers infinite possibilities from a single column—giving QC and AR&D analysts the confidence to solve today's toughest separations."

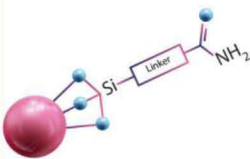
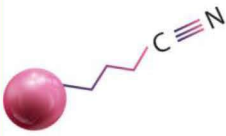
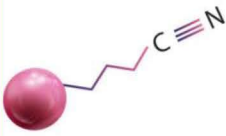
ZODIAC[®] HPLC Columns

- Our deep experience in controlled Silica particle synthesis and superior bonding technology enables us production of ZODIAC HPLC Columns of exceptional high quality.
- Zodiac HPLC Columns are best choice for method development owing to complete bonding chemistries and stable performance.
- High resolution with maximum efficiency and long column life.
- Excellent Column to Column reproducibility.
- Superior ruggedness even under the most demanding conditions.

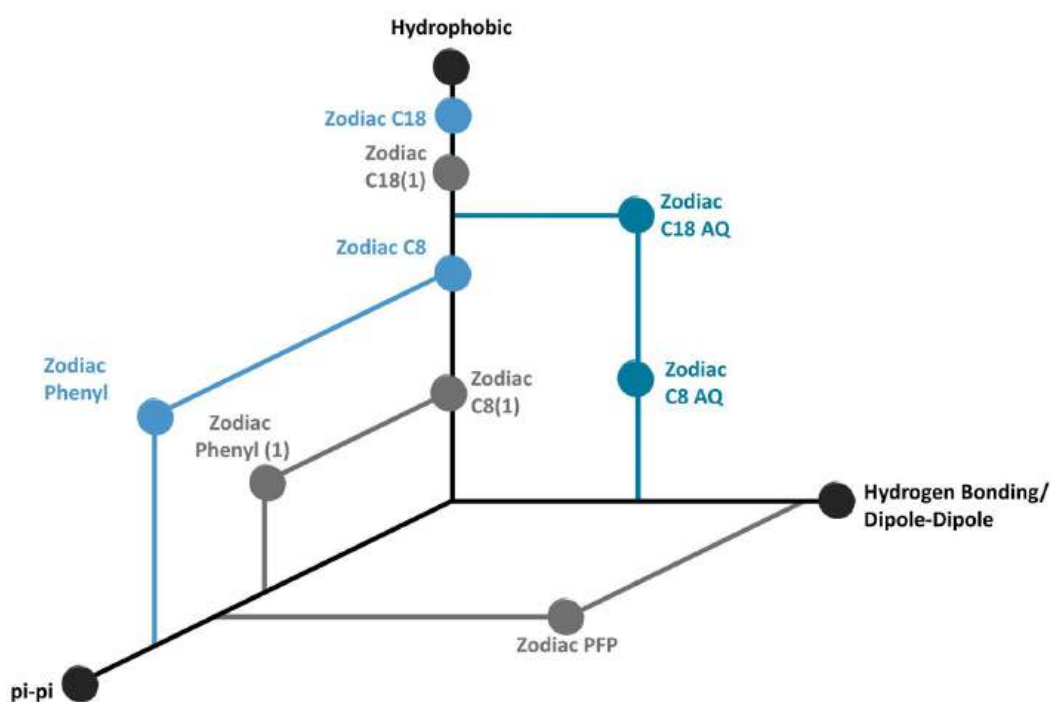


Series	Particle	Features
ZODIAC C18		• Highest hydrophobic selectivity among Zodiac series with 24% Carbon load. • General purpose Column, best choice for method development. Selectivity: Best choice for separation of polar compounds.
ZODIAC C18(1)		• Has reduced carbon load of 13% to achieve perfect hydrophobic selectivity. • Protective end capping gives the advantage of faster separation and better resolution. Selectivity: Perfect choice for separation of acids, bases, and neutral compounds.
ZODIAC C18(AQ)		• Lowest hydrophobic selectivity among C18 series. Selectivity: Stronger retention of hydrophilic polar compounds compared to above C18 series.

Series	Particle	Features
ZODIAC C8		• Its an Admirable choice that need marginally more polar phase than C18. • Less hydrophobic column with high surface area and optimum carbon load. Selectivity: Low retentivity of hydrophobic compounds or neutral compounds and hence faster analysis.
ZODIAC C8(1)		• Faster separation than C18 column. • Has modified chemistry, reduced carbon load of 8% Selectivity: Yields faster analysis of hydrophobic compounds.
ZODIAC C8(AQ)		• Lowest hydrophobic selectivity in C8 series • With more of hydrogen bonding and dipole-dipole interactions. Selectivity: Best choice for polar and hydrophilic compounds
ZODIAC Bi Phenyl		• Pi- Pi, interactions and hydrogen bonding in phenyl stationary phase influences solute Pi electrons separating compounds containing isomers Selectivity: enhanced aromatic selectivity for compounds containing rings, conjugated compounds, and ring substituents
ZODIAC Bi Phenyl (1)		• With low carbon load less Pi-Pi and hydrophobic interactions compared to Zodiac Phenyl phase • Gives extremely fast separation without any effect on peak symmetry Selectivity: shows selectivity and favorable low retention of aromatic, polar and different pharmaceuticals
ZODIAC PFP		• A Pentafluoro phenyl phase with a propyl spacer • Unique aromatic selectivity due to highly electronegative fluorine's attached to phenyl ring. • Gives pi-pi, hydrogen bonding, dipole dipole interactions Selectivity: Towards aromatic, halogenated compounds, and Nitro compound

Series	Particle	Features
ZODIAC Amino		- Chemically bonded with amino propyl bonded sorbent Has specific pore size of 100Å, high carbon load. - Used for Anion exchange, NP, and RP separations Selectivity: Best choice for separation of sugars
ZODIAC Amino (1)		Large pore size 190Å Low carbon load. Selectivity: Less retentive when compared with Zodiac Amino Column
ZODIAC RP Amide		- Particularly well suitable for highly H2O soluble compounds due to polar amide groups - An excellent choice when a C18 or C8 phase fails to provide an adequate separation Selectivity: Best choice for analytes with H2 bond donor characteristics, Acids and Basic compounds
ZODIAC Cyano		- Elutes hydrophobic molecules faster when compared to C18/Phenyl column - Can be used in either NP or RP mode Selectivity: Highest selectivity towards polar compounds
ZODIAC Cyano (1)		Large pore size of 190Å compared to Zodiac Cyano and low Carbon loading. Selectivity: Low selectivity towards polar compounds when compared to CN Column.
ZODIAC Silica		Made of Ultra-pure fully porous silica gel with extremely low acidity and metal content Selectivity: Strong hydrophilic compounds in NP mode with highly nonpolar mobile phase
ZODIAC Silica (1)		- Large pore size of 190Å pore size compared to Zodiac Si - Made of ultra-pure type B silica Selectivity: Hydrophilic compounds

An Overview of Phase Interactions



Series	USP Classification	Particle size	Pore Size (Å)	Carbon Loading %	End - Cap	pH Range
ZODIAC C18	L1	3,5,10	100	24	Yes	1.5-10
ZODIAC C18 (1)	L1	3,5,10	190	12.9	Yes	1.5-10
ZODIAC C18(AQ)	L1	3,5,10	120	17	Yes	1.5-10
ZODIAC C8	L7	3,5,10	100	15	Yes	1.5-10
ZODIAC C8(1)	L7	3,5,10	190	7.4	Yes	1.5-10
ZODIAC C8(AQ)	L7	3,5,10	120	10	Yes	1.5-10
ZODIAC Phenyl	L11	3,5,10	100	14	Yes	1.5-8
ZODIAC Phenyl (1)	L11	3,5,10	190	7.4	Yes	1.5-8
ZODIAC PFP	L43	3,5,10	190	15	Yes	2-8
ZODIAC Amino	L8	3,5,10	100	10	Yes	2-7
ZODIAC Amino (1)	L8	3,5,10	190	8	Yes	2-7
ZODIAC RP Amide	L60	3,5,10	120	15	Yes	2-8
ZODIAC Cyano	L10	3,5,10	100	15	Yes	2-7.5
ZODIAC (1) Cyano	L10	3,5,10	190	12	Yes	2-7.5
ZODIAC Silica	L3	3,5,10	100	0	No	2-6
ZODIAC Silica (1)	L3	3,5,10	190	0	No	2-6



Prep Columns



Preparative chromatography is an important stage in liquid chromatography employed for scale ups, isolation of proteins, peptides or impurities and purification of samples in pharma and life science industries

Zodiac provides various range of preparative columns for preparative separations of following the C18, C8, Phenyl, PFP, Amino, RP Amide, Silica and Cyano Chemistries.

- Manufactured under controlled stringent testing procedures under highest standards
- The column possesses uniform and stable packing for maximum column efficiency, performance and column life
- Optimum bed density
- Available in wide range of chemistries
- Customizable solutions to meet any application needs
- Scale up your current analytical method with ease





Analysis of carbohydrates, sugars & sugar alcohols in different formulations, matrices and substances is a complex process. Any one carb column cannot separate all carbohydrates

Hence, Zodiac provides a range of columns to select in order to achieve specific, selected separations and analysis of carbohydrates.

Zodiac Carb columns are made of Polystyrene divinylbenzene spherical particles which are modified with metal ligands. It employs the use of ligand exchange and size exclusion mechanisms and are designed for achieving high resolution for separation of water soluble and partially water-soluble compounds like carbohydrates, sugars, and many other small bio-organic molecules

- Each phase optimized for a different class of compound
- Separates compounds using a combination of size exclusion and ligand exchange mechanisms
- Robust customizable solutions to meet any application needs
- Columns packed with polystyrene divinylbenzene
- Specifically designed to maximize your separation needs

Carb Series	Ionic Form	Key Samples
Zodiac 87C	Calcium	Industry standard for analysis of general sweeteners
Zodiac 87P	Lead	Monosaccharides and cellulose products
Zodiac 87N	Sodium	Molasses and other sugars high salt samples
Zodiac 87H	Hydrogen	Best choice for analysis of carbohydrates found in solution with carboxylic acids, volatile fatty acids, short chain fatty acids, alcohols, and ketones
Zodiac 87K	Potassium	Sugars samples such as brewing wort, betaine
Zodiac USP L-19	Sulfonated cross-linked styrene-divinylbenzene copolymer in the Calcium form	Polysaccharides, monosaccharides, and sugars alcohols
Zodiac USP L-17	Sulfonated cross-linked styrene-divinylbenzene copolymer in the Hydrogen form	Amino Acids, nucleotides to large proteins

Affordable Columns with Zodiac Assurance

ALTIN® is created for labs that need **cost efficiency** without compromising on the reliability of their results. Unlike other economy brands that cut corners, ALTIN® delivers consistent performance—crafted under Zodiac’s rigorous manufacturing and QC standards.

With ALTIN®, you no longer need to choose between budget and reliability. you get the **right balance of price and performance**—a practical solution for routine analyses, academic labs, and QC environments where every run matters.

Why Choose ALTIN® Over Other Economy Brands?

- **Backed by Zodiac Expertise** – Manufactured with the same precision processes trusted in premium Zodiac columns.
- **Reliable Performance** – Consistent peak shapes, reproducibility, and column lifetime compared to unstable economy substitutes.
- **Proven Chemistry Portfolio** – Covers all essential phases: C18, C8, Phenyl, Amino, CN, and Silica
- **Assured Quality at Every Step** – Each batch undergoes stringent in-process and final QC checks.
- **Cost-Effective Alternative** – Competitive pricing without hidden compromises.



Series	USP Classification	Particle Size	Surface Area m ² /g	Pore Size	Carbon Loading %	End Capping	pH Range
Altin C18	L1	3,5,10	340	100Å	19	Yes	2.0-8.5
Altin C8	L7	3,5,10	340	100Å	9	Yes	2.0-8.5
Altin Phenyl	L11	3,5,10	340	100Å	10	Yes	2.0-8.5
Altin Amino	L8	3,5,10	340	100Å	10	Yes	2.0-8.5
Altin Cyano	L10	3,5,10	340	100Å	8	Yes	2.0-8.5
Altin Silica	L3	3,5,10	340	100Å	0	No	2.0-8.5

Designed for routine and high-throughput analysis, ALTIN® offers the right balance of performance and price. Backed by Zodiac’s trusted quality systems, it ensures reliability you can count on, run after run.

Sifto Ghost Buster Columns



Contaminants from a variety of sources such as mobile phase solvents, mobile phase containers, flow liners, pumps, filters, gradients mixers etc. cause unknown peaks called as ghost peaks that appear in chromatogram interfering with the target peaks making the gradient analysis unreliable.

This causes overall resolution of ghost peaks difficult.

Sifto Ghost buster columns effectively absorbed the impurities from mobile phase and eliminates the risk of ghost peaks interfering with target peaks making the gradient analysis reliable

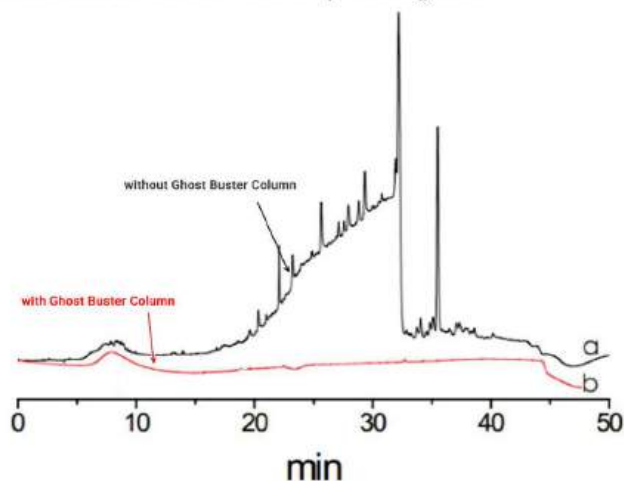
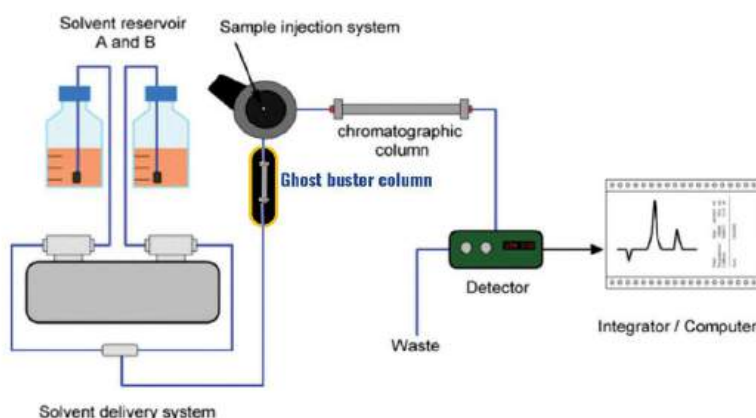
Longer column life when used with sifto ghost buster column. Compatible with any method or column deployed by you

Stable over wide range of pH, organic solvents and aqueous buffers



Installed between the gradient mixer and the sampler, Ghost Buster Column can trap most ghost peaks before HPLC analysis.

Installation



Condition

Column	Zodiac C18, 250 mm x 4.6, 5 μ m
Flow Rate	1.0 mL/min
Injection Volume	10 μ L
Wavelength	210 nm Column
Column Temperature	40° C
Sample Preparation Solution	Ultra Pure Water
Mobile Phase A	11.54 g/L ammonium acetate,
	Adjust pH to 4.0 with glacial Acetic Acid
Mobile Phase B	Acetonitrile

VELOX™

Solvent Waste System

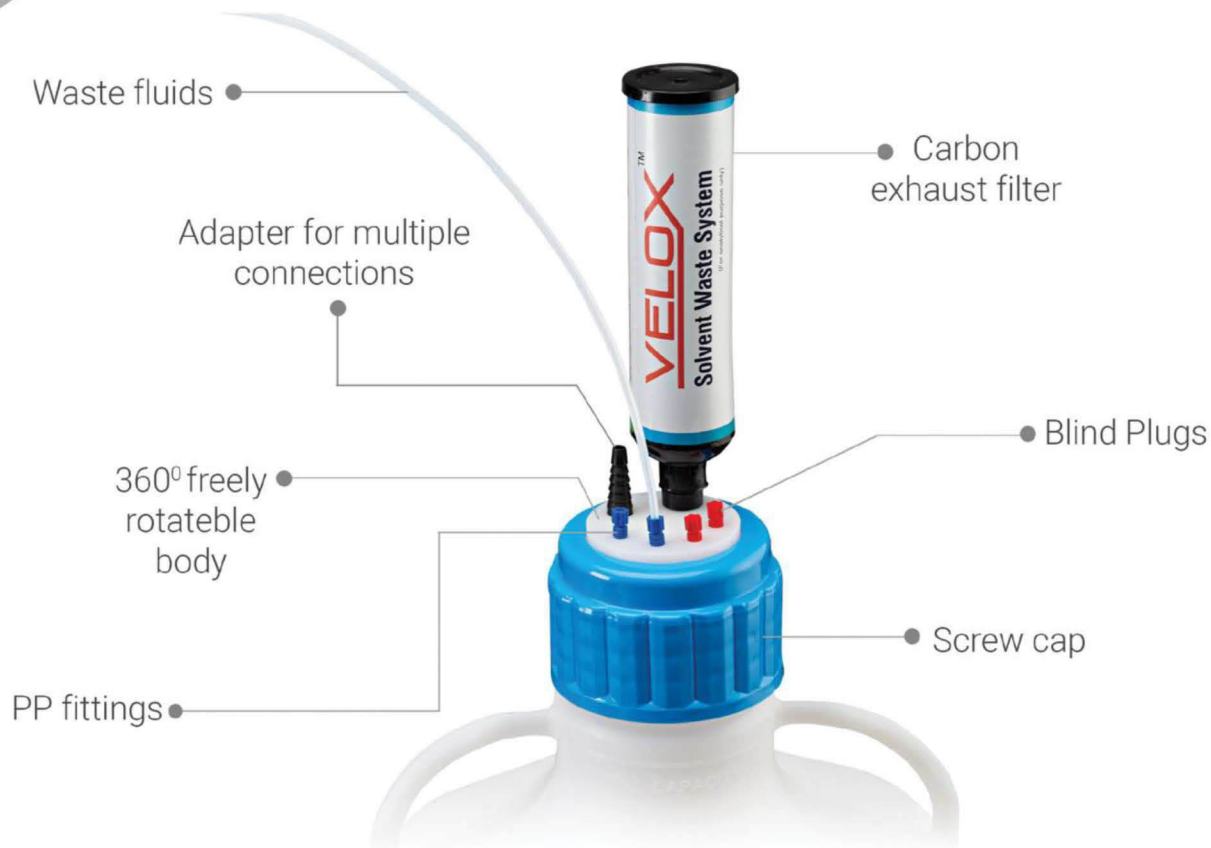


Fluids in HPLC waste systems are extremely dangerous containing potent volatile organic compounds, posing threat to lab workers.

Zodiac life Sciences came with an innovative solution introducing Velox solvent waste system, with activated carbon filters allowing 99% of the volatile vapors to be trapped, providing an organized containment and disposal of HPLC Liquid wastes.



- Filters against harmful vapors
- Different size containers compatible to any space condition
- Several systems can be connected to 1 container
- Capillary fixations with PFA fittings



VELOX™

Safety Caps



Velox Solvent Safety caps provides an airtight seal around the bottles with filter function working in dual ways by preventing the dust and Contaminant particles from air entering the mobile phase, at the same time blocking the solvent volatile vapours escaping into air. Hence ensuring constant precise mixing ratios of solvents throughout the time



- All vapors are blocked
- No accidental intake of air into HPLC system
- Easy container changes with freely rotatable cap
- With Velox you pass quality and safe inspections with confidence



Agilent Type



VELOX™
Suction Filters

Waters Type



Shimadzu Type



PEEK ONE

Piece Finger Tight Fittings



01 Finger Tight upto 350 bar.
One Piece - No ferrule required

02 Superior Material - Biocompatible
Excellent Chemical and Mechanical Properties

SS UNIONS FOR HPLC

- 01** Choice of 3 bore sizes
Ideal for 1/16" OD tubing
- 02** Tight Connections
Lowest dead volume



ZODIAC®
Consumables

PEEK COUPLER FOR HPLC

- 01** Couples two devices together
male to male 10-32 coned port connection
- 02** Excellent Chemical resistance
3.6 uL swept volume



PEEK UNIONS

- 01** Biocompatible
Available in 0.25, 0.50, 0.75mm bore sizes
- 02** Low dead volume
Rated to 25,000 psi (350 bar)





SCAN FOR MORE DETAILS

Zodiac Products are Available Worldwide



ASIA -

Bangladesh, China, Nepal, Indonesia, Japan,
South Korea, Singapore, Taiwan, Lebanon,
Thailand, Turkey, Vietnam.

EUROPE -

Bulgaria, Portugal, France, Germany,
Hungary, Netherlands, Poland, Slovenia,
Czech Republic, Spain, Greece, UK, Croatia,
Ukraine, Romania, Belgium

MIDDLE EAST:

Jordan, Saudi Arabia, U.A.E, Egypt, Bahrain,
Sudan.

SOUTH AMERICA

Brazil, Chile, Peru, Argentina, Colombia

NORTH AMERICA

USA, Mexico

www.zodiaclifesciences.com
info@zodiaclifesciences.com
+91-40-29881474, +91-40-29882474

Plot. No.93 | ALEAP Industrial Estate,
Pragathi Nagar, Hyderabad.