

Liquid Chromatography Product Catalog



Biovanix Technology Co., Ltd

www.biovanix.com

Biovanix Technology

Evolving from Liquid Chromatography to Integrated Solutions

Biovanix Technology Co., Ltd. is a specialized biotechnology firm. Building upon our foundational expertise in liquid chromatography, we have strategically evolved into a comprehensive provider of integrated solutions that span the entire lifecycle of research, analysis, and production.

Core Business Pillars

Leveraging our deep technical heritage, we have established three pillars that support workflows from laboratory analysis to industrial-scale synthesis:

Liquid Chromatography Series: We provide industry-leading analytical columns, packing materials, and high-quality consumables, serving as the essential foundation for precise analytical detection.

Automated Sample Preparation: Our high-throughput automated systems eliminate human error, ensuring accuracy, reproducibility, and superior efficiency across laboratory workflows.

Pharmaceutical Synthesis Equipment: We offer advanced synthesis equipment tailored for applications from laboratory-scale research to industrial pilot-scale production, empowering the efficient output of compounds and pharmaceutical intermediates.

Competitive Advantages

Deep Cross-Disciplinary Integration: We seamlessly integrate core analytical tools – such as chromatography products – with complex process equipment, including synthesis, filtration, and automation systems. This approach transcends the limitations of traditional, single-stage suppliers by providing full-cycle technical support.

Industry-Leading Technical Expertise: Biovanix is led by a team of seasoned experts. Our deep process understanding covers the entire value chain, from synthesis and purification to quality control and final analysis.

Seamless Transition from Bench to Production: Our solutions are engineered to facilitate a smooth transition from laboratory R&D to full-scale manufacturing, significantly optimizing time-to-market and enhancing experimental reliability.

Company Mission: Quality-Driven, Customer-Centric

Biovanix is committed to enhancing the research and production efficiency of our global clients through innovative, integrated solutions. We strive to be more than just a supplier; we are your trusted professional technical partner.

CATALOGUE

Prepacked HPLC Column	1
Reversed / Normal Phase Silica-gel HPLC Column	3
HILIC HPLC Column	5
Ion Exchange HPLC Column	7
Sugar Analysis HPLC Column	9
Size-Exclusion Chromatography (SEC) Column	11
DNA Analysis Column	13
Polysaccharide-Coated Chiral Column	14
Prosep Protein A Affinity Column	16
Silica-gel For HPLC Column	19
Isoplex HPLC Column Packing System	20
Chromatography Hardware	21
Stainless Steel Column Tubing	21
Guard Column for HPLC Column	22
PEEK HPLC Column Tubing	22
Pre-column / In-line Frits	22
Chromatography Hardware	22
Piston Pump	23
High-pressure Precision Piston Pump	23
Double-Piston Pump	25
TPP Three-Piston Metering Pump	28
Liquid Chromatography System	30
Distillate Collector	34
Variable Dual Wavelength UV/VIS Detector	35
LabChrom Chromatography Software	36
Dynamic Axial Compression Column System	37
Customization Chromatography Column & Controller	40

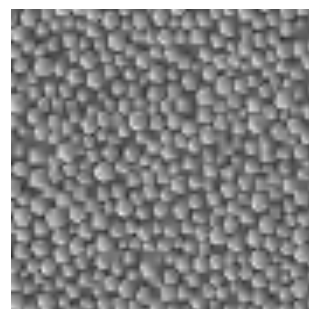
Prepacked HPLC Column

Biovanix pre-packed HPLC columns are engineered using high-purity, porous, spherical silica, suitable for a wide range of reversed-phase and normal-phase HPLC applications.

Advantages

- ✓ **Minimized Silanol Activity:** Through comprehensive end-capping, secondary retention effects are effectively suppressed, resulting in improved peak shapes for basic compounds.
- ✓ **Uniform Ligand Bonding:** High-consistency surface modification ensures stable and durable selectivity.
- ✓ **Ultra-Low Metal Content:** Minimizes chelation to prevent peak tailing and enhances analytical precision for sensitive compounds.
- ✓ **Narrow Particle Size Distribution:** A tightly controlled particle size distribution significantly enhances column efficiency and minimizes system back-pressure.
- ✓ **Exceptional Stability:** Offers excellent resistance to acid and base, alongside extended column life, effectively reducing overall operational costs.

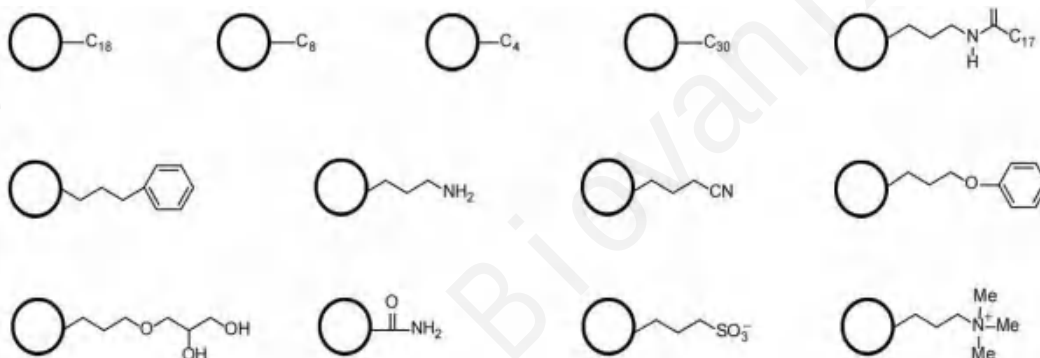
Silica SEM Images



Functional Group

Common functional group categories cover reversed phase (RP), normal phase (NP), hydrophilic interaction chromatography (HILIC), ion-exchange (IEX), size exclusion chromatography (SEC), ion exclusion chromatography (ICE) and affinity chromatography (AC).

For biological products, column chemistry is of critical importance to guarantee target selectivity and reduce non-specific binding between the substrate and the analytes. Biovanix bio-separation columns adopt an innovative technology that forms a neutral hydrophilic layer on the surface of the substrate, and selected functionalities are grafted onto this layer afterward. Apart for functional group, the quantity and distribution of the functional groups also exert notable influence on column selectivity and peak symmetry.



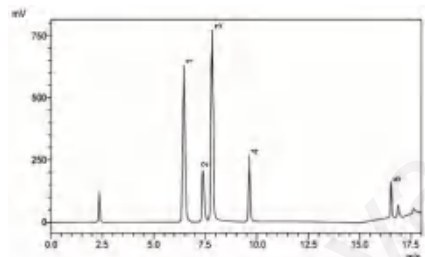
USP Listing

USP Listing	Description	Products
L1	Octadecyl silane chemically bonded to porous or non-porous silica or ceramic microparticles, 1.5 to 10 µm in diameter, or a monolithic rod	C18/ODS
L3	Porous silica particles, 1.5 to 10 µm in diameter, or a monolithic silica rod	Silica
L7	Octylsilane chemically bonded to totally or superficially porous silica particles, 1.5 to 10 µm in diameter, or a monolithic silica rod	C8
L8	An essentially monomolecular layer of aminopropylsilane chemically bonded to totally porous silica gel support, 1.5 to 10 µm in diameter, or a monolithic silica rod	NH ₂
L9	Irregular or spherical, totally porous silica gel having a chemically bonded, strongly acidic cation-exchange coating, 3 to 10 µm in diameter	SCX
L10	Nitrile groups chemically bonded to porous silica particles, 1.5 to 10 µm in diameter, or a monolithic silica rod	CN
L11	Phenyl groups chemically bonded to porous silica particles, 1.5 to 10 µm in diameter, or a monolithic silica rod	Phenyl
L14	Silica gel having a chemically bonded strongly basic quaternary ammonium anion-exchange coating, 5 to 10 µm in diameter	SAX
L17	Strong cation-exchange resin consisting of sulfonated cross-linked styrene-divinylbenzene copolymer in the hydrogen form, 6 to 12 µm in diameter	Sugar-10H
L19	Strong cation-exchange resin consisting of sulfonated cross-linked styrene-divinylbenzene copolymer in the calcium form, 5 - 15 µm in diameter	Sugar-10Ca
L20	Dihydroxypropane groups chemically bonded to porous silica or hybrid particles, 1.5 to 10 µm in diameter, or a monolithic silica rod	HILIC-Diol SEC
L26	Butyl silane chemically bonded to totally porous or superficially porous silica particles, 1.5 to 10 µm in diameter	C4
L40	Cellulose tris-3,5-dimethylphenylcarbamate coated porous silica particles, 3 µm to 20 µm in diameter	Chiral OD
L43	Pentafluorophenyl groups chemically bonded to silica particles by a propyl spacer, 1.5 to 10 µm in diameter	PFP
L51	Amylose tris-3,5-dimethylphenylcarbamate-coated, porous, spherical, silica particles, 3 to 10 µm in diameter	Chiral AD
L58	Strong cation-exchange resin consisting of sulfonated cross-linked styrene-divinylbenzene copolymer in the sodium form, about 6 to 30 µm diameter	Sugar-10Na
L60	Spherical, porous silica gel, 10 µm or less in diameter, the surface of which has been covalently modified with alkyl amide groups and endcapped	Polar C18
L62	C30 silane bonded phase on a fully porous spherical silica, 3 to 15 µm in diameter	C30
L68	Spherical, porous silica, 10 µm or less in diameter, the surface of which has been covalently modified with alkyl amide groups and not endcapped	HILIC-Amide Glycan
L78	A silane ligand that consists of both reversed-phase (an alkyl chain longer than C8) and anion-exchange (primary, secondary, tertiary, or quaternary amino groups) functional groups chemically bonded to porous or non-porous silica or ceramic micro-particles, 1.0 to 50 µm in diameter, or a monolithic rod	SAA
L80	Cellulose tris(4-methylbenzoate)-coated, porous, spherical, silica particles, 5 - 20 µm in diameter	Chiral OJ
L90	Amylose tris-[(S)-alpha-methylbenzylcarbamate] coated on porous, spherical silica particles, 3 to 10 µm in diameter	Chiral AS
L118	Aqueous polymerized C18 groups on silica particles, 1.2 to 5 µm in diameter	PAH

Reversed / Normal Phase Silica-gel HPLC Column

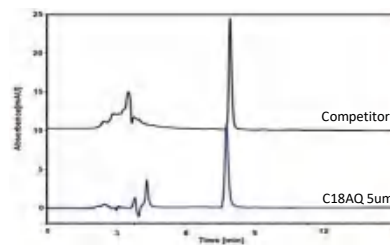
Products	Particle Size	Pore Size	Surface Area	Carbon Content	pH Range
C18	3/5/10 um	100Å	300m ² /g	16%	2-8
C18H	5/10 um	120Å	300m ² /g	18%	2-8
C18 AQ	5/10 um	100Å	300m ² /g	13%	2-8
C8	3/5/10 um	120Å	300m ² /g	12%	2-8
C4-300	5/10um	300Å	100m ² /g	3%	2-8
C8-300	5/10um	300Å	100m ² /g	5%	2-8
C18-300	5/10 um	300Å	100m ² /g	8%	2-8
Phenyl	3/5/10 um	120Å	300m ² /g	8%	2-8
SiO ₂	3/5/10 um	120Å	300m ² /g	-	2-8
NH ₂	3/5/10 um	120Å	300m ² /g	4%	2-8
CN	3/5/10 um	120Å	300m ² /g	7%	2-8
Diol	5/10 um	120Å	300m ² /g	8%	2-8
Amide	5/10 um	120Å	300m ² /g	4%	2-8

Application



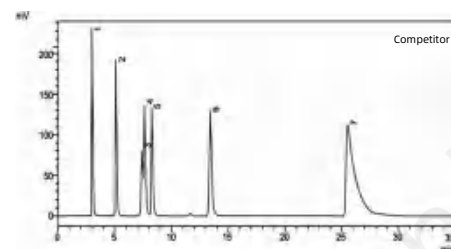
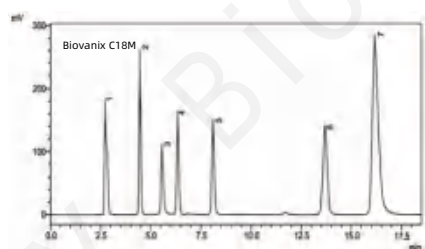
Water-soluble multivitamin

Column: C18 5µm 4.6×150mm
Mobile Phase: phosphoric acid bufer / acetonitrile
Flow Rate:1ml/min
Wavelength:210nm
Temp.:25°C
1 Pyridoxine; 2 VB1;
3 Nicotinamide; 4 Folic acid; 5 VB2



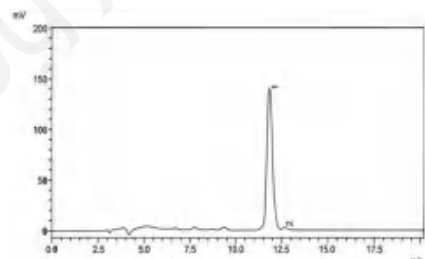
Tripeptide (5 ppm)

Column: C18AQ 5µm 4.6×250mm
Mobile Phase:70/30 v/v
Water/MeCN
Injection: 25µL
Flow Rate:1ml/min
Wavelength:220nm
Temp.:25°C



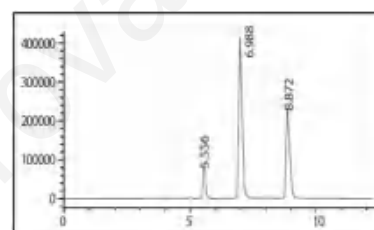
Polar/Nonpolar/ Neutral/Alkal Compounds

Column: C18H 5µm 4.6×250mm
Competitor 5µm 4.6×250mm
Mobile Phase: phosphoric acid bufer / methyl alcohol
Flow Rate:1ml/min
Wavelength:254nm
Temp.:30°C
1 Uracil; 2 Butyl p-hydroxybenzoate;
3 Propranolol; 4 Di-propyl ortho-phthalate;
5 Naphthalene; 6 Acenaphthene; 7 Amitriptyline



Orlistat

Column: C8 5µm 4.6×250mm
Mobile Phase:water / EtOH
Flow Rate:1ml/min
Wavelength:203nm
Temp.:25°C



Maleic Maleic Fumaric Acid

Column: SiO₂ 5µm 4.6×250mm
Mobile Phase:
N-hexane/THF/Trifluoroacetic acid = 650/350/1.2
Injection: 20µL
Flow Rate:0.8ml/min
Wavelength:255nm
Temp.:30°C

Order Information

3um	2.1-50mm	2.1-150mm	4.6-50mm	4.6-150mm
C18	721-03010-002105	721-03010-002115	721-03010-004605	721-03010-004615
Phenyl	706-03010-002105	706-03010-002115	706-03010-004605	706-03010-004615
SiO2	720-03010-002105	720-03010-002115	720-03010-004605	720-03010-004615
NH2	705-03010-002105	705-03010-002115	705-03010-004605	705-03010-004615
CN	704-03010-002105	704-03010-002115	704-03010-004605	704-03010-004615

5um	4.6-150mm	4.6-250mm	10-250mm	20-250mm	30-250mm
C18	721-05010-004615	721-05010-004625	721-05010-010025	721-05010-020025	721-05010-030025
C18H	722-05010-004615	722-05010-004625	722-05010-010025	722-05010-020025	722-05010-030025
C18 AQ	723-05010-004615	723-05010-004625	723-05010-010025	723-05010-020025	723-05010-030025
C8	725-05010-004615	725-05010-004625	725-05010-010025	725-05010-020025	725-05010-030025
C4-300	730-05010-004615	730-05010-004625	730-05010-010025	730-05010-020025	730-05010-030025
C8Bio	729-05010-004615	729-05010-004625	729-05010-010025	729-05010-020025	729-05010-030025
C18Bio	728-05010-004615	728-05010-004625	728-05010-010025	728-05010-020025	728-05010-030025
Phenyl	706-05010-004615	706-05010-004625	706-05010-010025	706-05010-020025	706-05010-030025
SiO2	720-05010-004615	720-05010-004625	720-05010-010025	720-05010-020025	720-05010-030025
NH2	705-05010-004615	705-05010-004625	705-05010-010025	705-05010-020025	705-05010-030025
CN	704-05010-004615	704-05010-004625	704-05010-010025	704-05010-020025	704-05010-030025
Phenyl	706-05010-004615	706-05010-004625	706-05010-010025	706-05010-020025	706-05010-030025
Diol	707-05010-004615	707-05010-004625	707-05010-010025	707-05010-020025	707-05010-030025
Amide	708-05010-004615	708-05010-004625	708-05010-010025	708-05010-020025	708-05010-030025

10um	4.6-250mm	10-250mm	20-250mm	30-250mm	50-250mm
C18	721-10010-004625	721-10010-010025	721-10010-020025	721-10010-030025	721-10010-050025
C18H	722-10010-004625	722-10010-010025	722-10010-020025	722-10010-030025	722-10010-050025
C8	725-10010-004625	725-10010-010025	725-10010-020025	725-10010-030025	725-10010-050025
C4-300	730-10010-004625	730-10010-010025	730-10010-020025	730-10010-030025	730-10010-050025
C8-300	729-10010-004625	729-10010-010025	729-10010-020025	729-10010-030025	729-10010-050025
C18-300	728-10010-004625	728-10010-010025	728-10010-020025	728-10010-030025	728-10010-050025
SiO2	720-10010-004625	720-10010-010025	720-10010-020025	720-10010-030025	720-10010-050025

HILIC HPLC Column

Hydrophilic interaction liquid chromatography (HILIC) is used to improve retention of very polar substances under reversed-phase chromatography conditions. HILIC has a wide variety of stationary phases, and in principle, any stationary phase with the polar surface can be used in HILIC mode. Therefore, stationary phases such as silica, amino (NH₂), diol, amide (AM) and cyanogen (CN) packing materials can be used as stationary phases for HILIC.

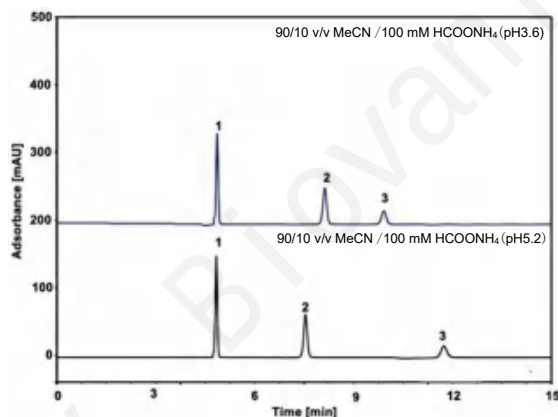
Core Advantages

- ✓ **Overcoming Retention Limits:** Specifically engineered to resolve the "dead time" elution challenges typically encountered with highly polar compounds in reversed-phase chromatography.
- ✓ **Enhanced Sensitivity:** Optimized for compatibility with high-percentage organic mobile phases, this technology significantly boosts ionization efficiency and detection sensitivity in LC-MS workflows.
- ✓ **Broad Analytical Compatibility:** Provides exceptional peak shape and resolution for a diverse range of analytes, spanning from small-molecule metabolites to complex biological macromolecules.
- ✓ **Consistent Process Stability:** Stringent quality control over silica matrix purity ensures dynamic stability in retention times, guaranteeing high batch-to-batch reproducibility.

Product Parameter

Product	Particle Size	Pore Size	Surface Area	Carbon Content	pH Value
HILIC-Diol	3/5/10um	120Å	330m ² /g	10%	2-8
HILIC-Amide	3/5/10um	120Å	330m ² /g	7.5%	2-7
HILIC-Imidazole	3/5/10um	120Å	330m ² /g	5.5%	2-7

Application



Column: HILIC-Diol 5µm 4.6×250mm

Mobile phase:

Blue: 90/10 v/v MeCN / 100 mM HCOONH₄ (pH3.6)

Black: 90/10 v/v MeCN / 100 mM HCOONH₄ (pH5.2)

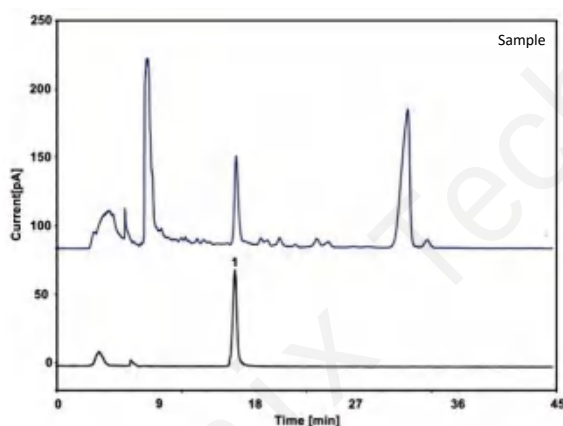
Flow rate: 1 mL/min

Temperature: 30°C

Injection: 5 µL

Detection: 218 nm

Peaks: 1. DICY; 2. MET; 3. Melamine



Column: HILIC-Amide 5 µm

Dimension: 4.6×250mm

Mobile phase: 80/10 v/v MeCN / 100 mM CH

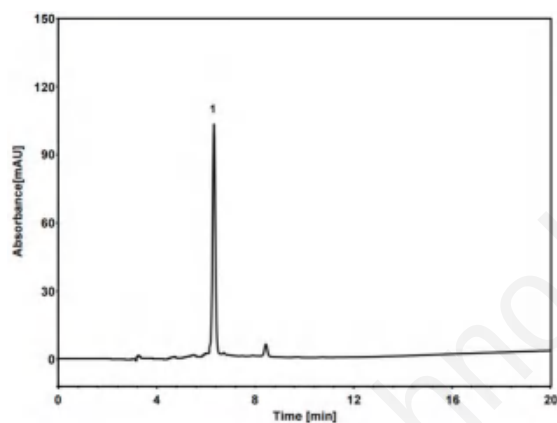
Flow rate: 0.5 mL/min

Temperature: 20°C

Injection: 10 µL

Detection: CDA

Peaks: 1. Stachydrine

Column: HILIC-Amide, 5 μ m 4.6 $\times$ 250 mm

Mobile Phase: A) MeCN;

B) 10 mM sodium dihydrogen phosphate in H₂O

Gradient:	t(min)	%A	%B
	0	10	90
	15	90	10
	20	90	10
	20.1	10	90
	40	10	90

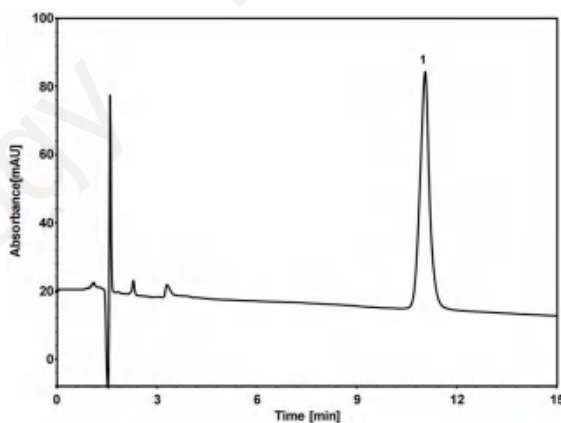
Flow Rate: 1.0 mL/min

Temperature: 30 $^{\circ}$ CInjection: 20 μ L

Detection: UV 210 nm

Sample: 2-Methansulfonylacetic Acid (0.5 mg/ml dissolved in 50% MeCN solution)

Peak: 1. 2-Methansulfonylacetic Acid

Columns: HILIC-Imidazole, 5 μ m 4.6 $\times$ 250 mmMobile Phase: 3/97 v/v MeOH/2 mM potassium dihydrogen phosphate in H₂O, pH1.9

Flow Rate: 1.5 mL/min

Temperature: 30 $^{\circ}$ CInjection: 10 μ L

Detection: UV 195 nm

Peak: 1. Glyphosate (2 mg/mL)

Order Information

Particle Size (μ m)	Inner-diameter (mm)	Length (mm)	Product		
			HILIC-Diol	HILIC-Amide	HILIC-Imidazole
5	4.6	250	A020-050012-04625	A068-050012-04625	A208-050012-04625
		150	A020-050012-04615	A068-050012-04615	A208-050012-04615
		100	A020-050012-04610	A068-050012-04610	A208-050012-04610
		50	A020-050012-04605	A068-050012-04605	A208-050012-04605
3	4.6	150	A020-030012-04615	A068-030012-04615	A208-030012-04615
		100	A020-030012-04610	A068-030012-04610	A208-030012-04610
		50	A020-030012-04605	A068-030012-04605	A208-030012-04605
		30	A020-030012-04603	A068-030012-04603	A208-030012-04603
5	4.6	10	A020-030012-04601	A068-030012-04601	A208-030012-04601
3	4.6	10	A020-030012-04601	A068-030012-04601	A208-030012-04601



Ion-Exchange HPLC Column

Biovanix IEX columns are engineered on a highly modified, ultra-pure silica matrix, specifically designed for high-resolution separation of proteins and ionic compounds. Our comprehensive portfolio, ranging from weak cation to strong anion exchangers, enables precise characterization of charge heterogeneity in biopharmaceuticals.

Product Portfolio

- **Weak Cation Exchange (WCX):** Features carboxylic acid-modified silica. Optimized for separating charge variants of monoclonal antibodies (mAbs), making it the ideal choice for protein drug quality control.
- **Strong Cation Exchange (SCX):** Utilizes a sulfonic acid-modified silica matrix. Provides robust cation exchange for the separation and purification of various cationic analytes.
- **Strong Anion Exchange (SAX):** Employs a quaternary ammonium-modified silica matrix, delivering exceptional separation performance for anionic analytes.

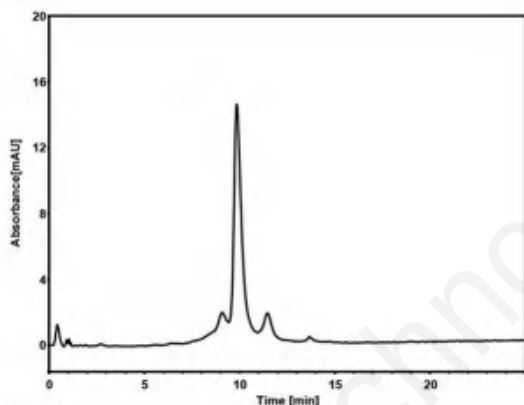
Core Advantages

- ✓ **Superior Selectivity:** Optimized for antibody charge variants (acidic/basic peaks), providing industry-leading resolution.
- ✓ **Excellent Peak Shape & Low Carryover:** Advanced surface modification minimizes non-specific adsorption, ensuring peak symmetry and reducing cross-contamination risks.
- ✓ **High Efficiency & Mechanical Strength:** The high-performance silica matrix maintains structural integrity and separation efficiency even at high flow rates.
- ✓ **Broad Robustness:** Excellent tolerance to acids, bases, and organic solvents, compatible with diverse mobile phases and Clean-in-Place (CIP) protocols.
- ✓ **Exceptional Reproducibility:** Stringent batch-to-batch control ensures consistent column performance, facilitating seamless method development and transfer.

Product Parameter

Product Name	WCX Column	SCX Column	SAX Column
Functional Group	Carboxylic Acid	Sulfonic Acid	Quaternary Ammonium
Substrate	Monodispersed spherical PS/DVB particles		
Particle Size	5 & 10 µm		
Pore Size	Nonporous		
Pressure Limit	4500 psi for 10 µm; 5000 psi for 5 µm		
Temperature Limit	60°C		
pH Range	2-12		

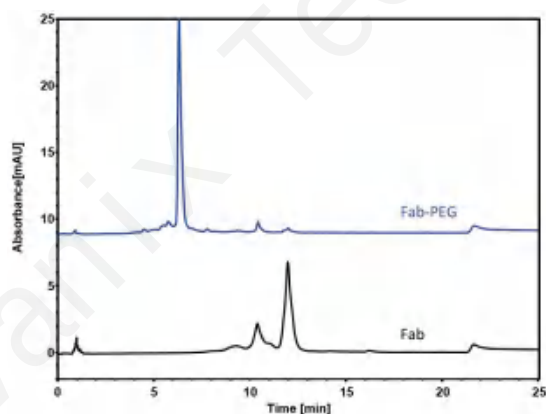
Application



Column: WCX, 10 μ m, 4.6 $\times$ 150 mm
Mobile Phase: A) 20 mM ACES, pH7.0; B) 300 mM NaCl in 20 mM ACES
Gradient:

t (min)	%A	%B
20	80	20
0	80	20
5	80	20
25	60	40
25.1	0	100
30	0	100

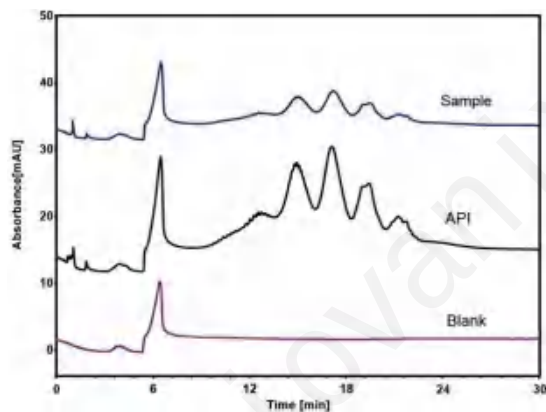
Flow Rate: 1.0 mL/min
Temperature: 30°C
Injection: 2 μ L
Detection: UV 280 nm
Sample: mAb (5.0 mg/mL in mobile phase A)



Column: SCX, 10 μ m, 4.6 $\times$ 150 mm
Mobile Phase: A) 20 mM MES, pH5.5; B) 300mM NaCl in 20 mM MES, pH5.5
Gradient:

t(min)	%A	%B
10	100	0
0	100	0
20	60	40
20.1	0	100
25	0	100

Flow Rate: 1.0 mL/min
Temperature: 30 °C
Injection: 2 μ L
Detection: UV 280 nm
Sample: Fab-PEG (3 mg/mL in 50mM sodium acetate solution); Fab (5 mg/mL in 50mM phosphate bufer)



Column: SAX, 10 μ m
Dimension: 4.6 $\times$ 250 mm
Mobile Phase: A) 20 mM phosphate bufer, pH3.0; B) 300 mM NaCl in 20 mM phosphate bufer, pH3.0
Gradient:

t(min)	%A	%B
15	100	0
0	100	0
20	0	100
23	0	100

Flow Rate: 1.0 mL/min
Injection: 5 μ L
Temperature: 30 °C
Detection: UV 280 nm
Sample: API (40 mg/mL in mobile phase A); Injection sample (10 mg/mL)

Order Information

		4.6-50mm	4.6-100mm	4.6-150mm	4.6-250mm
WCX	5um	B311-050000-004605	B311-050000-004610	B311-050000-004615	B311-050000-004625
	10um	B311-100000-004605	B311-100000-004610	B311-100000-004615	B311-100000-004625
SCX	5um	B411-050000-004605	B411-050000-004610	B411-050000-004615	B411-050000-004625
	10um	B411-100000-004605	B411-100000-004610	B411-100000-004615	B411-100000-004625
SAX	5um	B611-050000-004605	B611-050000-004610	B611-050000-004615	B611-050000-004625
	10um	B611-100000-004605	B611-100000-004610	B611-100000-004615	B611-100000-004625

Sugar Analysis HPLC Column

Biovanix Sugar Analysis columns are engineered for the high-efficiency analysis of various polysaccharides, sugar alcohols, and organic acids. Utilizing high-performance monodisperse polystyrene-divinylbenzene (PS-DVB) microspheres as the base matrix, this series combines advanced ligand-exchange and ion-exchange principles to deliver exceptional resolution for the qualitative and quantitative analysis of complex samples.

- **Monodisperse PS-DVB Matrix:** Features monodisperse polymer microspheres with two distinct cross-linking degrees. This design balances superior physical strength with an optimized pore structure, ensuring extended column longevity under high-temperature and high-pressure conditions.
- **Proprietary Sulfonation Process:** Precision chemical modification securely bonds functional groups to the polymer surface, guaranteeing highly reproducible analytical results.
- **Ligand-Exchange Mechanism:** Separation is achieved through differential coordination between metal counter-ions and the hydroxyl groups of saccharides, providing ideal resolution even for structurally similar isomers.

Product Type:

- **H⁺ Form:** Specialized for the analysis of organic acids, sugar alcohols, and mixed carbohydrates. It excels under low pH conditions, making it the primary choice for fermentation analysis and food quality monitoring.
- **Na⁺ Form:** Designed for the separation of oligosaccharides and neutral sugars, offering optimized elution sequences and separation efficiency for high-molecular-weight carbohydrates.
- **Ca²⁺ Form:** Targeted at sugar alcohols, monosaccharides (e.g., glucose, fructose), and components in honey or beverages. It provides enhanced retention and superior resolution for sugar alcohols.

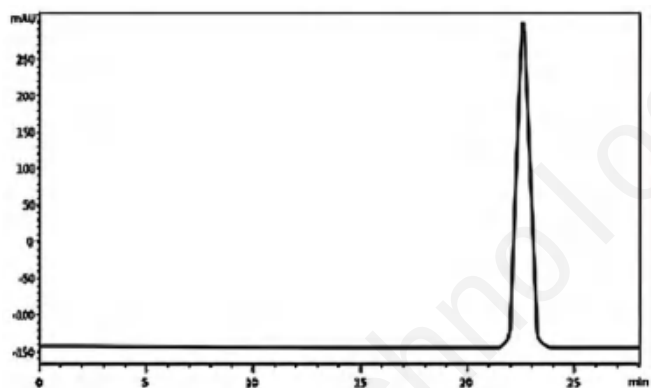
Core Advantages

- ✓ **Versatile Application:** Broad range coverage from monosaccharides to complex polysaccharides.
- ✓ **Sustainable Operations:** Aqueous-based mobile phase minimizes solvent consumption and costs.
- ✓ **Superior Robustness:** Polymer-based matrix ensures wide pH tolerance and exceptional chemical stability.
- ✓ **Consistent Quality:** Stringent manufacturing standards guarantee high batch-to-batch reproducibility for streamlined validation.

Product Parameter

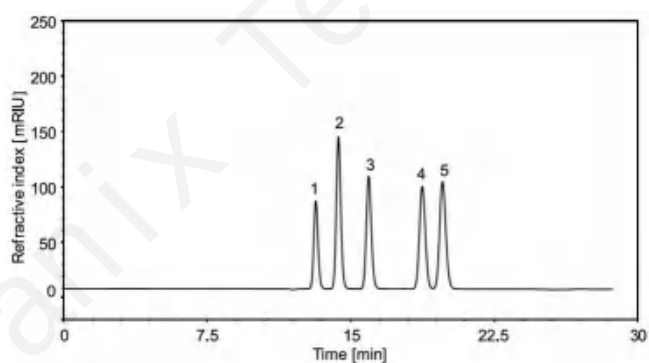
	Sugar-10H	Sugar-10Ca	Sugar-10Na
Ligand	-SO ₃ H	-SO ₃ Ca	-SO ₃ Na
Substrate	Monodisperse PS-DVB substrate		
Particle Size	6um/8um		
Degree of crosslinking	0.1		
pH Range	1-3	5-9	5-9
Temperature	<95°C		
Pressure	1200psi		
Application	Organic acids and alcohols mixer	honey and oligosaccharides	sugars and mannitols

Application



Riboviron, RBV

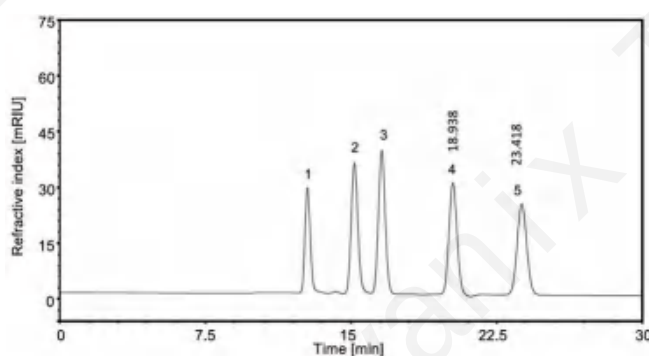
Column: Sugar-10H, 8 μ m
Dimension: 7.8 $\times$ 300mm
Mobile phase: H₂SO₄ H₂O, pH2.5
Flow rate: 0.5mL/min
Temperature: 30°C
Detection: UV207 nm



Column: Sugar-10H, 6 μ m
Dimension: 7.8 $\times$ 300mm
Mobile phase: 9mM H₂SO₄
Flow rate: 0.5mL/min
Temperature: 65°C

Injection: 5 μ L
Detector: RID

Samples:
1. Citric acid; 2. Malic acid; 3. Succinic acid; 4. Formic acid; 5. Acetic acid.



Mannitol

Column: Sugar-10Ca, 6 μ m
Dimension: 7.8 $\times$ 300mm
Mobile phase: H₂O
Flow rate: 0.5mL/min
Temperature: 80°C
Injection: 5 μ L
Detection: RID

Sample:
1. Sucrose; 2. Galactose; 3. Fructose; 4. Mannito; 5. Sorbitol

Order Information

Particle Size	Column Size	Sugar-10H	Sugar-10Na	Sugar-10Ca
6 μ m	4.6*250mm	017-06010-04625	058-06010-04625	019-06010-04625
	7.8*250mm	017-06010-07825	058-06010-07825	019-06010-07825
8 μ m	4.6*250mm	017-08010-04625	058-08010-04625	019-08010-04625
	7.8*250mm	017-08010-07825	058-08010-07825	019-08010-07825

Size-Exclusion Chromatography (SEC) Column

Biovanix SEC columns are high-performance size-exclusion tools specifically engineered for the separation of biological macromolecules. Based on the principle of hydrodynamic volume (molecular size) differentiation, this series is widely utilized in biopharmaceutical quality control, drug development, and fundamental life science research.

- **SEC-120:** Optimized for small-molecule drugs, peptides, polysaccharide fragments, and short-chain oligonucleotides.
- **SEC-150:** Tailored for peptides, medium-molecular-weight proteins, glycans, and oligonucleotides.
- **SEC-300:** The industry-standard choice for the determination of monoclonal antibodies (mAbs), variants, and aggregates.
- **SEC-500:** Designed for large protein complexes, high-molecular-weight polysaccharides, and large-molecule nucleic acids.

Technical Excellence

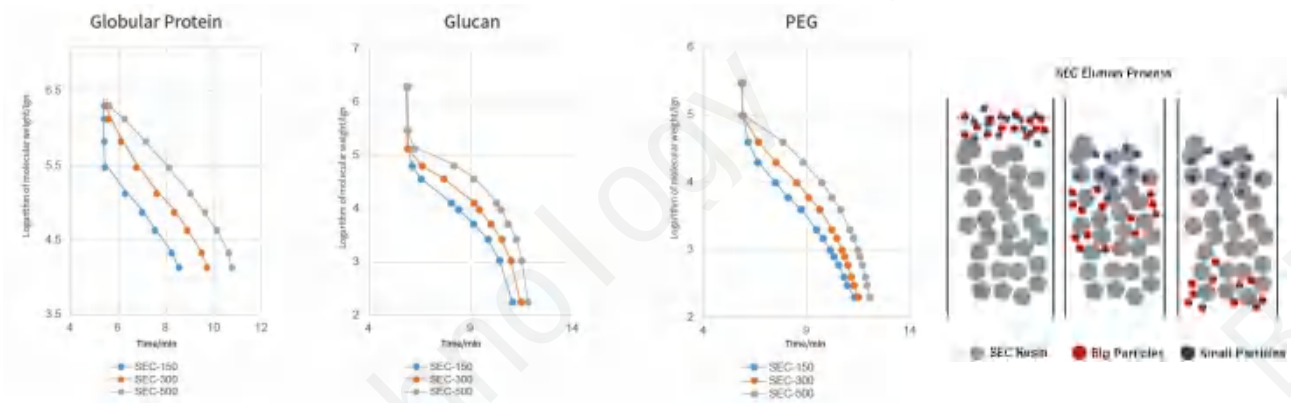
- **Monodisperse High-Strength Silica:** Utilizes specialized monodisperse microspheres to deliver exceptional column efficiency and mechanical stability.
- **Neutral Hydrophilic Coating:** A highly stable, neutral hydrophilic film is chemically bonded to the silica surface, effectively shielding active sites on the base matrix.
- **Ultra-Low Non-Specific Adsorption:** This advanced coating minimizes secondary interactions between the stationary phase and biological analytes, ensuring superior peak symmetry and maximum sample recovery.

Core Advantages

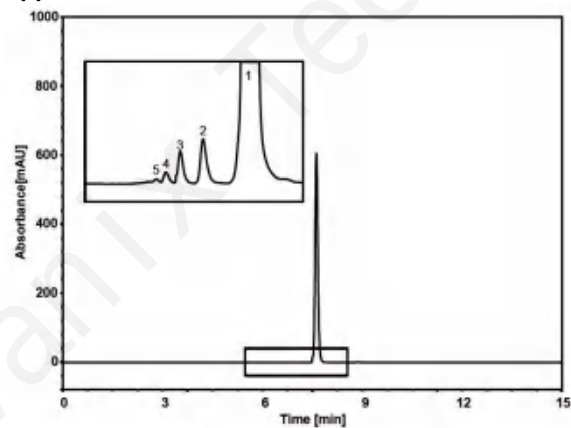
- ✓ **High Efficiency & Resolution:** Precisely controlled pore size distribution ensures maximum clarity when separating monomers, dimers, and higher-order aggregates.
- ✓ **Superior Peak Shape & Recovery:** Minimal residual adsorption allows for accurate quantitative results, even when analyzing complex biological matrices.
- ✓ **Enhanced Physical Stability:** The high-strength silica matrix withstands elevated operating pressures, significantly extending the service life of the column.
- ✓ **Versatile Applications:** Addresses a broad spectrum of separation needs, ranging from small-molecule drugs and peptides to large proteins, nucleic acids, and polysaccharides.

Product Parameter

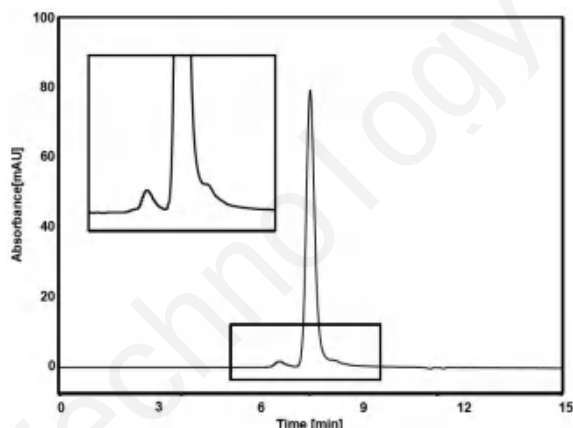
	SEC-150	SEC-300	SEC-500
Ligand	Diol		
Substrate	Monodisperse High-pure Silica Particle		
Particle Size	5um		
Pore Size	150A	300A	500A
pH Range	2-8		
Temperature	<40°C		
Pressure	6000psi		
Ligand Range (PEG)	200-15,000	1,000-100,000	5,000-200,000
Ligand Range (Glucan)	1,000-50,000	5,000-150,000	20,000-500,000
Ligand Range (Globular Protein)	5,000-150,000	10,000-1,000,000	20,000-2,000,000



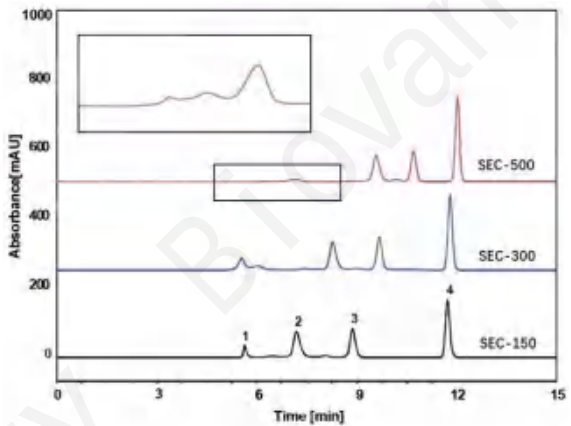
Application



Cetirizine Sodium
Column: SEC-120, 5 μ m 7.8 $\times$ 300 mm
Mobile Phase: 5mM phosphate bufer, pH7.0
Flow Rate: 1.0 mL/min
Temperature: 30 $^{\circ}$ C
Injection: 2 μ L
Detection: UV 231 nm
Peaks: 1. Cetirizine ; 2~5. Polymers of Cetirizine



Fusion Protein
Column: SEC-500, 5 μ m 4.6 $\times$ 300 mm
Mobile Phase: 150 mM phosphate bufer, pH6.8
Flow Rate: 0.35 mL/min
Temperature: 30 $^{\circ}$ C
Injection: 5 μ L
Detection: UV 280 nm
Sample: Fusion Protein (1 mg/mL in H₂O)



Column Black: SEC-150, 5 μ m
Column Blue: SEC-300, 5 μ m
Column Red: SEC-500, 5 μ m
Dimension: 4.6 $\times$ 300mm
Mobile phase: 150 mM Phosphate Bufered Saline (pH 6.8)
Flow rate: 0.35 mL/min
Temperature: 30 $^{\circ}$ C
Injection: 5 μ L
Detection: UV 280 nm
Peaks:
1. Thyroglobulin (0.5mg/mL) -669,000Da
2. Conalbumin (1mg/mL) -75,000Da
3. Ribonuclease A (1mg/mL) -13,700Da
4. Uracil (0.1mg/mL) -112Da

Order Information

	5um 7.8 $\times$ 300mm	5um 4.6 $\times$ 300mm	5um 4.6 $\times$ 50mm	5um 4.6 $\times$ 10mm
SEC-150	213-05015-07830	213-05015-04630	213-05015-04605	213-05015-04601
SEC-300	213-05030-07830	213-05030-04630	213-05030-04605	213-05030-04601
SEC-500	213-05050-07830	213-05050-04630	213-05050-04605	213-05050-04601

DNA Analysis Column

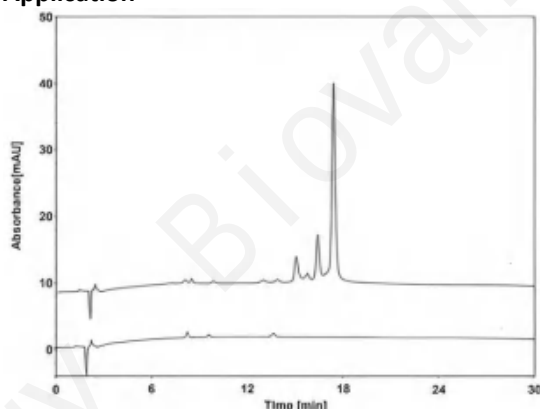
DNA columns are based on the most advanced column technology and designed for highly efficient separation and precise characterization of oligonucleotides including DNA/RNA, mRNA and plasmid by liquid chromatography and LC-MS.

- **DNA RP columns:** separates large DNA and RNA molecules.
- **DNA SEC:** separates plasmids, circular RNA, retroviruses (RV), adenoviruses (AV), adeno-associated viruses (AAV), lentiviruses (LV) and their aggregates/fragments, applied in gene therapy.
- **DNA 1000-C18:** separates DNA/RNA fragments, mRNA and plasmids in ion-pair reversed-phase mode.
- **DNA AAV-SEC:** suitable for analysis of aggregated forms of different serotypes of adeno-associated viruses (AAVs).
- **DNA AAV-Q:** suitable for analysis of empty/loaded ratios of different serotypes of adeno-associated viruses (AAVs).

Product Parameter

Product	DNA RP	DNA SEC-1000	DNA SEC-2000	DNA 1000-C18	DNA AAV-SEC	DNA AAV-Q
Functional Group	Quaternary Ammonium	Diol	Diol	Octadecyl	Diol	Quaternary Ammonium
Substrate	PS-DVB	Spherical Silica	Spherical Silica	PS-DVB	Spherical Silica	Spherical Silica
Particle Size	5um	3um	3um	5um	3um	10um
Pore Size	-	1000A	2000A	1000A	-	-
Pressure Limit	5000 psi	3000psi	3000psi	5000psi	3000psi	4000psi
Temperature Limit	80°C	40°C	40°C	50°C	40°C	60°C
pH Range	2-12	2-8	2-8	2-11	2-8	2-12

Application



RNA in Vaccines

Column: DNA1000 C18, 5 μ m 4.6 $\times$ 150 mm

Mobile Phase: A) 0.1 M CH₃COOH-Et₃N solution, pH7.0

B) 25/75 v/v MeCN/ 0.1 M CH₃COOH-Et₃N solution, pH7.0

Gradient:

t(min)	%A	%B
0	60	40
30	35	65
31	60	40
40	60	40

Flow Rate: 1.0 mL/min

Temperature: 60 °C

Injection: 10 μ L

Detection: UV 254 nm

Sample: Long strands of RNA in vaccines (1000~2000 nt)

Order Information

	4.6 $\times$ 250mm	4.6 $\times$ 150mm	2.1 $\times$ 150mm	2.1 $\times$ 50mm
DNA RP	D301-050000-04625	D301-050000-04615	-	-
DNA 120-C18	D003-030020-04625	D003-030020-04615	D003-030020-02115	D003-030020-02105
DNA 1000-C18	D003-050100-04625	D003-050100-04615	D003-050100-02115	D003-050100-02105

Polysaccharide-Coated Chiral Column

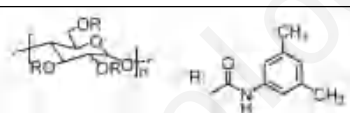
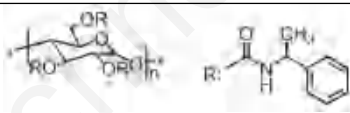
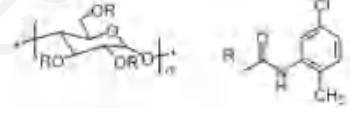
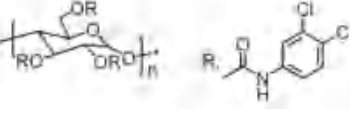
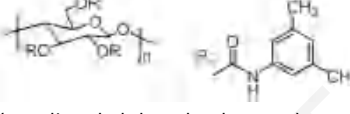
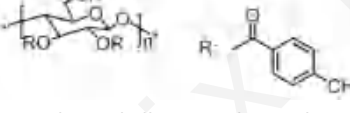
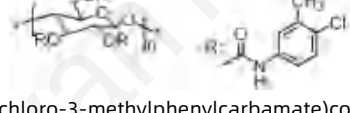
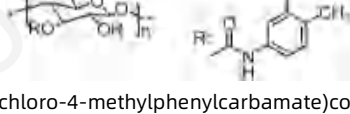
Biovanix coated chiral columns utilize high-purity spherical silica particles coated with polysaccharide derivatives –specifically amylose or cellulose derivatives–as the stationary phase. These columns offer an extensive array of chiral recognition sites, delivering robust selectivity and superior peak symmetry for both analytical and preparative applications. Our chiral stationary phases are available in particle sizes of 5 μm and 10 μm to accommodate diverse process requirements.

Operational Solvent Compatibility

Normal-Phase Mode: n-Hexane, Isopropanol (IPA), and Ethanol (EtOH).

Reversed-Phase Mode: Water (H_2O), Acetonitrile (CH_3CN), Ethanol (EtOH), Methanol (MeOH), Isopropanol (IPA).

Product Parameter

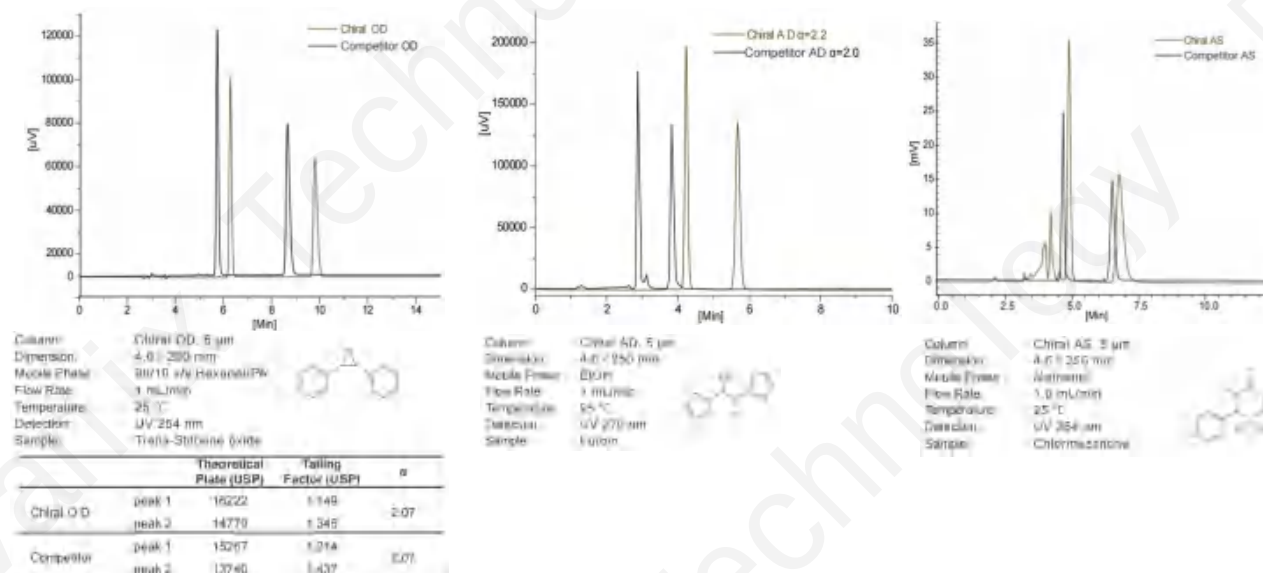
Normal-Phase	Reversed-Phase	Stationary Phase
AD (5/10 μm)	AD-R (5 μm)	 Amylose tris(3,5-dimethylphenylcarbamate)coated on silica gel
AS (5/10 μm)	AS-R (5 μm)	 Amylose tris[(S)- α -methylbenzylcarbamate]coated on silica gel
AY (5/10 μm)	AY-R (5 μm)	 Amylose tris(5-chloro-2-methylphenylcarbamate)coated on silica gel
AZ (5/10 μm)	AZ-R (5 μm)	 Amylose tris(3-chloro-4-methylphenylcarbamate)coated on silica gel
OD (5/10 μm)	OD-R (5 μm)	 Cellulose tris(3,5-dimethylphenylcarbamate)coated on silica gel
OJ (5/10 μm)	OJ-R (5 μm)	 Cellulose tris(4-methylbenzoate)coated on silica gel
OX (5/10 μm)	OX-R (5 μm)	 Cellulose tris(4-chloro-3-methylphenylcarbamate)coated on silica gel
OZ (5/10 μm)	OZ-R (5 μm)	 Cellulose tris(3-chloro-4-methylphenylcarbamate)coated on silica gel

* Please contact us for customization.

Product Parameter

Max. Pressure	5μm for 30MPa; 10μm for 10MPa
pH value	pH 2.0~9.0
Operation Temp.	0~40°C
Storage Solvent	n-Hexane/2-Propanol = 90/10 (v/v)

Application



Order Information

	5μm			10μm		
	4.6-100mm	4.6-150mm	4.6-250mm	4.6-100mm	4.6-150mm	4.6-250mm
AD	CAAD-050100-04610	CAAD-050100-04615	CAAD-050100-04625	CAAD-100100-04610	CAAD-100100-04615	CAAD-100100-04625
AS	CAAS-050100-04610	CAAS-050100-04615	CAAS-050100-04625	CAAS-100100-04610	CAAS-100100-04615	CAAS-100100-04625
AY	CAAY-050100-04610	CAAY-050100-04615	CAAY-050100-04625	CAAY-100100-04610	CAAY-100100-04615	CAAY-100100-04625
AZ	CAAZ-050100-04610	CAAZ-050100-04615	CAAZ-050100-04625	CAAZ-100100-04610	CAAZ-100100-04615	CAAZ-100100-04625
OD	CAOD-050100-04610	CAOD-050100-04615	CAOD-050100-04625	CAOD-100100-04610	CAOD-100100-04615	CAOD-100100-04625
OJ	CAOJ-050100-04610	CAOJ-050100-04615	CAOJ-050100-04625	CAOJ-100100-04610	CAOJ-100100-04615	CAOJ-100100-04625
OX	CAOX-050100-04610	CAOX-050100-04615	CAOX-050100-04625	CAOX-100100-04610	CAOX-100100-04615	CAOX-100100-04625
OZ	CAOZ-050100-04610	CAOZ-050100-04615	CAOZ-050100-04625	CAOZ-100100-04610	CAOZ-100100-04615	CAOZ-100100-04625
AD-R	CRAD-050100-04610	CRAD-050100-04615	CRAD-050100-04625	/		
AS-R	CRAS-050100-04610	CRAS-050100-04615	CRAS-050100-04625			
AY-R	CRAY-050100-04610	CRAY-050100-04615	CRAY-050100-04625			
AZ-R	CRAZ-050100-04610	CRAZ-050100-04615	CRAZ-050100-04625			
OD-R	CROD-050100-04610	CROD-050100-04615	CROD-050100-04625			
OJ-R	CROJ-050100-04610	CROJ-050100-04615	CROJ-050100-04625			
OX-R	CROX-050100-04610	CROX-050100-04615	CROX-050100-04625			
OZ-R	CROZ-050100-04610	CROZ-050100-04615	CROZ-050100-04625			

Prosep Protein A Affinity Column

Biovanix Prosep Protein A analytical column is engineered for the rapid titer determination of monoclonal antibodies (mAbs). Utilizing affinity chromatography, our column leverages the high-affinity binding between alkali-stable recombinant Protein A ligands and the Fc region of immunoglobulins, enabling precise capture and quantification of antibodies within complex fermentation broths. Unlike traditional agarose-based matrices, the Prosep series utilizes highly cross-linked, hydrophilic polystyrene-divinylbenzene (PS-DVB) particles.

Technical Excellence

- **Superior Mechanical Strength:** Enhanced pressure tolerance supports significantly higher flow rates without bed compression.
- **Optimized Mass Transfer:** High dynamic binding capacity (DBC) facilitates rapid kinetics, drastically shortening analysis cycle times.
- **Extended Service Life:** Exceptional physical and chemical robustness significantly reduces the cost per analysis.

Core Advantages

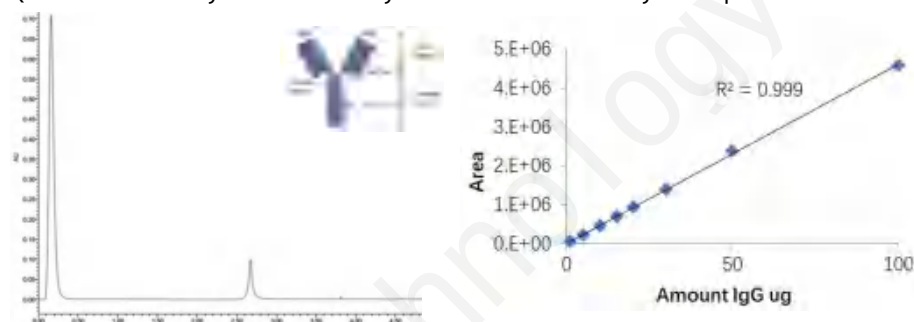
- ✓ **Seamless HPLC Integration:** Standard column formats ensure direct compatibility with conventional HPLC/UHPLC systems.
- ✓ **Rapid Analysis Cycles:** Enables single-run completion in just 2-5 minutes, maximizing high-throughput screening efficiency in upstream process development.
- ✓ **Broad Linear Range:** Maintains excellent linearity across a concentration range of 0.02-10 mg/mL, minimizing the need for manual sample dilution.
- ✓ **Negligible Non-Specific Adsorption:** Ensures high quantitative accuracy even in the presence of complex cell culture media components.
- ✓ **Excellent Alkali Tolerance:** Compatible with 0.1-0.5 M NaOH Clean-in-Place (CIP) protocols, effectively preventing cross-contamination and extending column longevity.

Product Parameter

	Prosep Protein A Column	Prosep Protein A Plus Column
Column Size	2.1mm ID × 30mm L; 4.6mm ID × 50mm L	
Column Tube Material	316L Stainless steel, PEEK	
Support Matrix	Polystyrene Divinylbenzene (PS-DVB)	
Ligand	Recombinant Protein A	
Particle Size	30µm	20µm
Shipping Solution	0.02 M sodium phosphate, pH 7.0, 0.02% sodium azide	
pH range	pH 2-10	
Maximum Pressure	1000 psi	
Cleaning Agents	0.1-0.5M NaOH	
Cycle Time	2-5 minutes	
Temperature Stability	4-40 °C	

Excellent Linearity

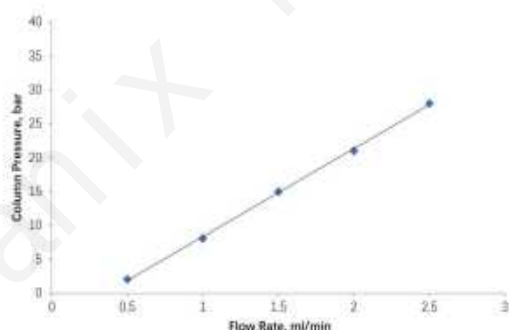
Quantitative analysis for antibody fermentation broth by Prosep Protein A column.



Column: Prosep A 2.1×30mm
 Eluent A: 20mM PB, 150mM NaCl, pH7.4
 Eluent B: 0.1%HCl, 150mM NaCl
 Gradient: 0% B for 1.0 min, 100% B for 2.0 min, 0% B for 2.0 min
 Flow rate: 1ml/min
 Sample: mAb

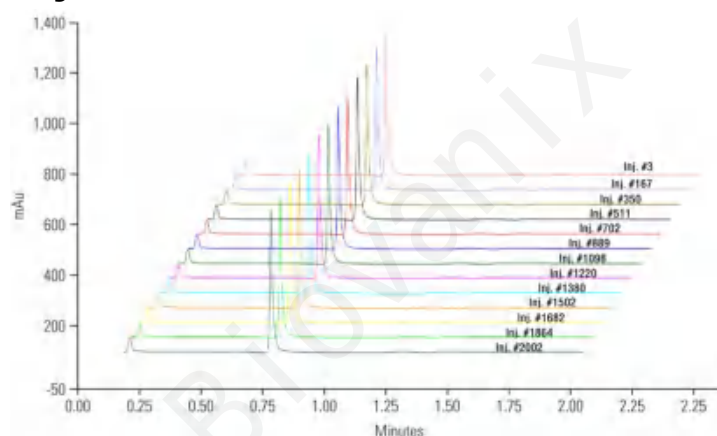
Flow Rate and Pressure

The operating flow rate is 0.5-3 ml/min as recommended for HPLC system.



Column: Prosep A, 2.1×30mm
 Eluent A: 20mM PB, 150mM NaCl, pH7.4
 Eluent B: 0.1%HCl, 150mM NaCl
 Temp: 25 °C
 System: Waters 1525 pump

Long Lifetime



Column	Prosep A, 2.1×30 mm
Eluent A	50 mM Sodium Phosphate, 150 mM NaCl, pH 7.0
Eluent B	0.1% HCl, 150 mM NaCl, pH 1.9
Flow Rate	2.0 ml/min
Gradient	0% B for 0.2 min, 100% B for 0.60 min, 0% B for 1.20 min
Temperature	25°C
Detection	280 nm
Injection volume	10 uL
Sample	hIgG, 1 mg/mL

Order Information

	Column Size	SS Column	PEEK Column
Prosep A	2.1*30mm	1107-30-02103S	1107-30-02103P
	4.6*50mm	1107-30-04605S	1107-30-04605P
Prosep A PLUS	2.1*30mm	1107-20-02103S	1107-20-02103P
	4.6*50mm	1107-20-04605S	1107-20-04605P

Prosep Glycated Hemoglobin Analytical Column

Prosep Glycated Hemoglobin Analytical Columns are specialized columns designed for glycated hemoglobin detection. The packing material consists of non-porous, highly cross-linked hydrophilic resin microspheres coated with a layer of nanospheres bearing ion-exchange functional groups, fabricated using a proprietary bonding technology. The product is characterized by low backpressure, high resolution, high column efficiency, and high recovery.

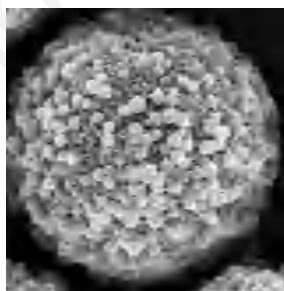


Figure 1. SEM image of filler material Product Performance

Prosep Glycated Hemoglobin Analytical Columns enable rapid and accurate detection of glycated hemoglobin HbA1c within 60 to 120 seconds, without interference from fetal hemoglobin HbF or common variant hemoglobins including HbC, HbD, HbE, HbS, etc.

It is suitable for the analysis of HbA1c and HbS.

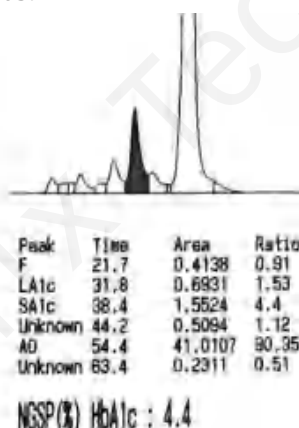


Figure 2. Chromatogram of glycosylated hemoglobin samples.

(Detection conditions: 4.6×30mm, X Company Glycation Detection System, 25°C, 415nm, 1.5ml/min, ternary mobile phase A-B-C-A elution mode)

Order Information

P/N	Products	Particle Size	Parameter
20422001	GHAC-3	3μm	4.6×20mm
20421001	GHAC-5	5μm	4.6×30mm
20420001	GHAC-8	8μm	4.0×30mm
20420002	GHAC-8	8μm	4.6×30mm

Silica-gel For HPLC Column

Biovanix pre-packed columns are high-performance, versatile liquid chromatography columns developed from premium, fully porous spherical silica. Designed for broad compatibility across both reversed-phase and normal-phase chromatography, this series leverages rigorous manufacturing standards and advanced chemical bonding to meet the stringent demands of precision analytical research and large-scale preparative applications.

Technical Excellence

- **Ultra-Pure Matrix:** Built on ultra-pure silica with a total metal ion content of less than 20 ppm. This eliminates interference from metallic impurities on polar compounds, significantly reducing peak tailing.
- **Superior Physical Structure:** Engineered with a high specific surface area and exceptional mechanical strength, ensuring a stable column bed and consistent separation performance during prolonged high-pressure operations.
- **Proprietary Bonding Technology:** Utilizes unique chemical bonding and surface modification processes to provide outstanding chemical stability and superior batch-to-batch reproducibility.

Core Advantages

- ✓ **Minimal Silanol Activity:** Comprehensive end-capping suppresses secondary retention effects, resulting in optimized peak shapes for basic compounds.
- ✓ **Uniform Ligand Bonding:** High-consistency surface modification of the stationary phase ensures stable and durable separation selectivity.
- ✓ **Ultra-Low Metal Content:** Minimizes non-specific interactions with analytes, enhancing analytical precision for complex and sensitive samples.
- ✓ **Narrow Particle Size Distribution:** A tightly controlled particle size range significantly boosts column efficiency while maintaining lower system back-pressure.
- ✓ **Enhanced Stability:** Excellent resistance to acidic and alkaline conditions coupled with an extended service life significantly lowers the total cost per analysis.

Product Parameter

Product	Ave. Particle Size	Pore Size	Surface Area	Carbon Content	pH Range
C18	5/10/20/30/50um	100/120Å	300m ² /g	16%	2-8
C8	5/10 um	100/120Å	300m ² /g	12%	2-8
Phenyl	5/10 um	120Å	300m ² /g	8%	2-8
SiO ₂	5/10/30/50 um	100/120Å	300m ² /g	-	2-8
NH ₂	5/10 um	120Å	300m ² /g	4%	2-8
CN	5/10 um	120Å	300m ² /g	7%	2-8
Diol	5/10 um	120Å	300m ² /g	8%	2-8

Biovanix provides specialized customization services to help clients overcome complex biochemical separation challenges through a tailored approach.

Isoplex HPLC Column Packing System

Leveraging a profound understanding of liquid chromatography column characteristics, Biovanix has independently developed the Isoplex High-Performance Column Packing System. This system utilizes compressed gas as its power source with a power-free design, offering a compact footprint and streamlined operation. By integrating high-pressure dynamics with precision control, the Isoplex system is designed to professionalize and standardize column packing for both laboratories and production lines.

The system's industrial design is protected under Chinese Design Patent (9838841). Specifically engineered for the packing of analytical, semi-preparative, and preparative columns, it serves as the core equipment for manufacturing high-performance chromatography columns.

Product Advantages

- ✓ **Power-Free Design:** Powered entirely by clean compressed air or nitrogen. The absence of electrical components eliminates the risk of sparks, ensuring safety in specialized environments.
- ✓ **Powerful Performance:** Delivers high output pressure and a stable drive system to ensure a dense, uniform column bed, significantly enhancing column efficiency.
- ✓ **Compact Footprint:** With dimensions of approximately 60 x 40 x 30 cm and a gross weight of 30 kg, the system is highly portable and can be easily placed on lab benches, industrial carts, or inside fume hoods.
- ✓ **Integrated Noise Reduction:** The entire system features noise-reduction engineering; no hearing protection is required during normal operation.
- ✓ **Broad Compatibility:** Accommodates column hardware with internal diameters (ID) ranging from 2.0 mm to 50 mm, providing flexibility for both R&D and production.
- ✓ **User-Friendly Operation:** Features a purely mechanical manual interface. The straightforward design is intuitive and accessible for beginners without requiring complex training.
- ✓ **Optimized Slurry Reservoirs:** Equipped with professionally designed slurry reservoirs to maintain physical stability of the slurry during packing, ensuring excellent column-to-column reproducibility.

Isoplex HPLC Column Packing System		Optional
Column I.D.	2.0-50 mm	Integrated Air Purification & Compression System
Max. Pressure	19000 psi	Homonate Tank
Flow Rate	3.3L/min	Column Connector (ID 10-50mm)
Output	2hp	Column Tubing/Silica-gel

Detailed Pictures



HPLC Column Packing System



Small Homonate Tanks



Big Homonate Tanks

Chromatography Hardware

Stainless Steel Column Tubing

Biovanix provides a variety of HPLC column tubing according to different application areas.

Product Parameter

- Inner Diameter: 2.1mm, 3.0mm, 4.0mm, 4.6mm, 7.8mm, 10mm, 20mm, 21.2mm, 30mm, 50mm
- Length: 20mm, 30mm, 50mm, 100mm, 150mm, 250mm, 300mm, 500mm (optional)
- Column Material: 316 L Stainless Steel



To meet diverse user needs, Biovanix developed three types of sieve plate connectors: sheet-type, PEEK-jacketed, and stainless steel hard-seal sieve plates. The sheet-type is the earliest generation design. The PEEK-jacketed is an optimized upgrade of the sheet-type: when the column head is tightened, the outer PEEK ring deforms under pressure, fills gaps between the metal connector and column tube to ensure a leak-free seal. The stainless steel hard-seal is designed for ultra-high-pressure chromatography columns, with a surface roughness of $R_a < 0.2$ on its hard-seal contact surface, overcoming PEEK material's insufficient pressure resistance.



Biovanix has developed threaded column tubes and flanged column tubes tailored for distinct application scenarios. Threaded column tubes feature convenient assembly and disassembly with rapid operability, making them suitable for small-diameter, medium-low pressure applications that require frequent maintenance in laboratory settings. Flanged column tubes, which achieve uniform stress distribution via multiple bolts, exhibit a high pressure-bearing capacity, minimal dead volume, and enhanced structural wear resistance. This type represents the dominant solution for industrial scale-up, large-diameter, and high-pressure preparative separation processes.



Guard Column for HPLC Column

Guard column column is selected based on the specifications of HPLC column. The available sizes are 4.6-10mm, 10-10mm and 20-10mm. The appearance of the 4.6-10mm size can be customized.



PEEK HPLC Column Tubing

Biovanix uses high-quality PEEK material to manufacture the inner walls of the liquid chromatography column tubes, which are smooth and clean. The frits are made of PE material. The entire column does not contain any metal ions.

- Inner Diameter: 2.1mm, 4.6mm
- Length: 50mm, 100mm, 150mm (optional)



Pre-column / In-line Frits

Biovanix provide pre-column / in-line filters for liquid chromatography systems, available in five sizes: 4.6mm, 10 mm, 20 mm, 30 mm, 50 mm, and 68 mm.



Chromatography Hardware

Biovanix uses high-quality PEEK, POM, and PE materials to manufacture gaskets, fittings, and plugs in various specifications.

Customization is available according to customer-provided drawings.



Piston Pump

High-pressure Precision Piston Pump

Optos Piston pumps are purpose-engineered for laboratories and industrial applications requiring precise flow regulation, with particular suitability for harsh high-pressure operating environments. This product series features exceptional configurability, enabling flexible adaptation to the specific requirements of customers. At present, three distinct models are commercially available to accommodate diverse application scenarios. To attain optimal operational efficiency, it is recommended that users prioritize the selection of pump models whose rated flow rate exceeds 50% of the maximum flow capacity. This selection criterion not only improves system performance but also prolongs the service life of the equipment and achieves optimized overall performance.

Flow and Performance: Wide range of flow rates for low-flow and precision dosing applications with high discharge pressure capability for challenging system conditions.

- 0.001 to 80mL/min
- Pressure up to 6000psi

Pump Head Material: Multiple pumphead and wetted material options and compatibility with a variety of process fluids.

- 316 Stainless Steel
- Hastelloy C
- PEEK

Check Valves and Sealing: Standard and specialty check valve configurations, optimized for heated, viscous, or sensitive fluids.

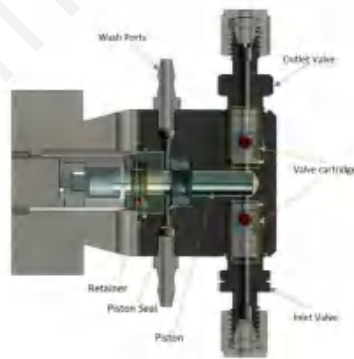
- PEEK, PTFE, UWHM-PE, Viton/FKM piston seal options
- Sapphire/ruby or ceramic check valve options

Typical Applications

Optos Series metering pumps are used across a wide range of precision fluid-handling applications, including:

- Instrumentation and laboratory systems
- Analytic and prep scale chromatography
- Chemical metering and dosing systems
- Peptide/protein synthesis
- High pressure reactor injection
- Flow chemistry
- Industrial process equipment

These pumps are commonly selected where precise flow control, minimal pulsation, and dependable performance are essential to system accuracy and repeatability.



Model Selection

	Material of Pump Head	Flow Rate (mL/min)	Max. Pressure (psi)	Piston Diameter (in.)	Piston Stroke (in.)	Model
Model 1	316 SS	0.002 - 2.5	6000	3/32	.125	1LM
		0.003 - 5	6000	1/8	.125	1SM
		0.01 - 20	3000	1/4	.125	1HM
	PEEK	0.002 - 2.5	4000	3/32	.125	1LI
		0.003 - 5	4000	1/8	.125	1SI
		0.01 - 20	3000	1/4	.125	1HI
	Hastelloy C	0.003 - 5	6000	1/8	.125	1SMH
		0.01 - 20	3000	1/4	.125	1HMH
Model 2	316 SS	0.003 - 5	6000	3/32	.250	2LM
		0.01 - 10	6000	1/8	.250	2SM
		0.02 - 40	1500	1/4	.250	2HM
	PEEK	0.003 - 5	4000	3/32	.250	2LI
		0.01 - 10	4000	1/8	.250	2SI
		0.02 - 40	1500	1/4	.250	2HI
	Hastelloy C	0.01 - 10	6000	1/8	.250	2SMH
		0.02 - 40	1500	1/4	.250	2HMH
Model 3	316 SS	0.01 - 10	3000	3/32	.500	3LM
		0.01 - 20	1500	1/8	.500	3SM
		0.04 - 80	750	1/4	.500	3HM
	PEEK	0.01 - 10	3000	3/32	.500	3LI
		0.01 - 20	1500	1/8	.500	3SI
		0.04 - 80	750	1/4	.500	3HI
	Hastelloy C	0.01 - 20	1500	1/8	.500	3SMH
		0.04 - 80	750	1/4	.500	3HMH
PLUS Version	316 SS	0.002 - 2.5	6000	3/32	.125	1LMP
		0.003 - 5	6000	1/8	.125	1SMP
	PEEK	0.002 - 2.5	4000	3/32	.125	1LIP
		0.003 - 5	4000	1/8	.125	1SIP

Accessories and Enhancements

- Heating accessory for temperature-sensitive applications.
- Pressure transducers for enhanced monitoring and control.
- Pulsation dampener to minimize flow and pressure fluctuation.

Double-Piston Pump

BioVanix Double Plunger Pumps are engineered to address the critical need for highly accurate and stable liquid transfer in demanding analytical and industrial environments. This system integrates advanced mechanics with intelligent software, setting a new standard for precision, reliability, and user interaction.



High-Precision Liquid Handling

- The core double plunger design inherently minimizes pulsation, ensuring a smooth and consistent flow stream. This mechanical advantage is further enhanced by the multi-point flow correction feature, which guarantees exceptional volumetric accuracy and stability across the operational flow range, crucial for demanding applications like chromatography and quantitative dosing.

Intuitive and Modern Interface

- **Touchscreen Design:** The pump features an intuitive touchscreen design and a humanized interface, streamlining setup, monitoring, and parameter adjustment. This modern approach reduces the learning curve and improves operational efficiency.

Enhanced Connectivity and Data Integrity

- **Stable Data Transfer:** Equipped with RS232 and LAN connections, the system facilitates robust and stable data transfer. This capability is essential for seamless integration into Laboratory Information Management Systems (LIMS) and for reliable remote control.
- **Firmware Updates:** The system supports firmware program updates, ensuring that the device benefits from the latest performance optimizations, security enhancements, and new features throughout its lifespan.

Safety and Reliability Protocols

- **Power-Off Protection:** Integrated power-off protection safeguards crucial operational settings and data in the event of an unexpected power interruption, ensuring process continuity and data integrity.
- **Intelligent Alert System:** The pump is equipped to alarm in time according to set procedures. In critical situations, this protocol mandates an automatic pump stop, thereby preventing potential damage to the system or compromising the integrity of the ongoing process.

	Stainless Steel Head	Hastelloy C Head	PEEK Head	PTFE Head
10ml/min	√	√	√	√
50ml/min	√	√	√	√
100ml/min	√		√	√
200ml/min	√		√	√
500ml/min	√			
1000ml/min	√			
3000ml/min	√			

10-50ml Pump

Type	P0010	P0010-C	P0010-PEEK	P0010-PTFE
Pump Material	Stainless Steel 316L	Hastelloy C	PEEK	PTFE
Mode	dual plunger series	dual plunger series	dual plunger series	dual plunger series
Inlet Connector	1/8"	1/8"	1/8"	1/8"
Outlet connector	1/16"	1/16"	1/16"	1/16"
Increment	0.001ml / min	0.001ml / min	0.001ml / min	0.001ml / min
Flow rate range	(0 ~ 9.999)mL/min	(0 ~ 9.999)mL/min	(0 ~ 9.999)mL/min	(0 ~ 9.999)mL/min
Max. Pressure	42Mpa	42Mpa	20Mpa	4Mpa
Pulsation	0.5%, at 10Mpa, 1ml/min	0.5%, at 10Mpa, 1ml/min	0.5%, at 10Mpa, 1ml/min	0.5%, at 10Mpa, 1ml/min
Accuracy	±0.15%	±0.15%	±0.5%	±0.5%
Precision (RSD)	0.1%	0.1%	0.1%	0.1%
Control	RS232 or LAN	RS232 or LAN	RS232 or LAN	RS232 or LAN
Display	5.0-inch Touch screen			
Power	75W	75W	75W	75W
Dimension (L*W*H)	368*260*140mm	368*260*140mm	368*260*140mm	368*260*140mm
Net Weight	6.9kg	6.9kg	6.9kg	6.9kg

50ml Pump

Type	P0050	P0050-C	P0050-PEEK	P0050-PTFE
Pump Material	Stainless Steel 316L	Hastelloy C	PEEK	PTFE
Mode	dual plunger series	dual plunger series	dual plunger series	dual plunger series
Inlet Connector	1/8"	1/8"	1/8"	1/8"
Outlet connector	1/16"	1/16"	1/16"	1/16"
Increment	0.001ml / min	0.001ml / min	0.001ml / min	0.001ml / min
Flow rate range	(0 ~ 49.999)mL/min	(0 ~ 49.999)mL/min	(0 ~ 49.999)mL/min	(0 ~ 49.999)mL/min
Max. Pressure	30Mpa	30Mpa	15Mpa	4Mpa
Pulsation	0.5%, at 10Mpa	0.5%, at 10Mpa	0.5%, at 10Mpa	0.5%, at 10Mpa
Accuracy	±0.15%	±0.15%	±0.5%	±0.5%
Precision (RSD)	0.1%	0.1%	0.5%	0.5%
Control	RS232 or LAN	RS232 or LAN	RS232 or LAN	RS232 or LAN
Display	5.0-inch Touch screen			
Power	150W	150W	150W	150W
Dimension (L*W*H)	368*260*140mm	368*260*140mm	368*260*140mm	368*260*140mm
Net Weight	6.9kg	6.9kg	6.9kg	6.9kg

100ml Pump

Type	P0100	P0100-PEEK	P0100-PTFE
Pump Material	Stainless Steel 316L	PEEK	PTFE
Mode	dual plunger series	dual plunger series	dual plunger series
Inlet Connector	4mm	4mm	4.76mm
Outlet connector	1/16"	1/16"	1/8"
Increment	0.01ml / min	0.01ml / min	0.01ml / min
Flow rate range	(0 ~ 99.99)mL/min	(0 ~ 99.99)mL/min	(0.01 ~ 100)mL/min
Max. Pressure	25Mpa	10Mpa	4Mpa
Pulsation	1%	1%	1%
Accuracy	±0.5%	±0.5%	±0.5%
Precision (RSD)	0.2%	0.5%	0.5%
Control	RS232 or LAN	RS232 or LAN	RS-232/485/LAN interface, 3 communication interfaces, 4 communication protocols, can be switched
Display	5.0-inch Touch screen	5.0-inch Touch screen	LCD 2x8 screen
Power	150W	150W	150W
Dimension (L*W*H)	368*260*140mm	368*260*140mm	180*140*260mm
Net Weight	8.5kg	8.5kg	3.2kg

200ml Pump

Type	P0200	P0200-PEEK	P0200-PTFE
Pump Material	Stainless Steel 316L	PEEK	PTFE
Mode	dual plunger series	dual plunger series	dual plunger series
Inlet Connector	4mm	4mm	4.76mm
Outlet connector	1/16"	1/16"	1/8"
Increment	0.01ml / min	0.01ml / min	0.01ml / min
Flow rate range	(0 ~ 199.99)mL/min	(0 ~ 199.99)mL/min	(0.01 ~ 200)mL/min
Max. Pressure	20Mpa	10Mpa	4Mpa
Pulsation	1%	1%	1%
Accuracy	±0.5%	±0.5%	±0.5%
Precision (RSD)	0.2%	0.5%	0.5%
Control	RS232 or LAN	RS232 or LAN	RS-232/485/LAN interface, 3 communication interfaces, 4 communication protocols, can be switched
Display	5.0-inch Touch screen	5.0-inch Touch screen	LCD 2x8 screen
Power	150W	150W	150W
Dimension (L*W*H)	368*260*140mm	368*260*140mm	180*140*260mm
Net Weight	8.5kg	8.5kg	3.2kg

500-3000ml Pump

Type	P0500	P1000	P3000
Pump Material	Stainless Steel 316L	Stainless Steel 316L	Stainless Steel 316L
Mode	dual plunger series	dual plunger series	dual plunger series
Inlet Connector	1/4"	10mm	10mm
Outlet connector	1/8"	1/8"	6mm
Increment	0.01ml / min	0.01ml / min	0.1ml / min
Flow rate range	(0 ~ 499.99)mL/min	(0 ~ 999.99)mL/min	(0 ~ 2999.9)mL/min
Max. Pressure	15Mpa	15Mpa	10Mpa
Accuracy	±0.5%	±0.5%	±1%
Precision (RSD)	0.3%	0.3%	0.3%
Control	RS232 or LAN	RS232 or LAN	RS232 or LAN
Display	5.6-inch Touch screen	5.6-inch Touch screen	5.6-inch Touch screen
Power	750W	1000W	1500W
Dimension (L*W*H)	488*380*215mm	488*380*215mm	610*460*275mm
Net Weight	27.2kg	27.2kg	73kg

Head Materials



Hastelloy C



PEEK



PTFE

Stainless Steel

TPP Three-Piston Metering Pump

TPP three-piston metering pumps are specially developed for industrial liquid chromatography, pilot-scale manufacturing, and precision chemical processes. This series spans a broad flow rate range of 3-80 L/min and is built to deliver top-tier stability and reliability for the conveying of high-value fluids.

Application Area

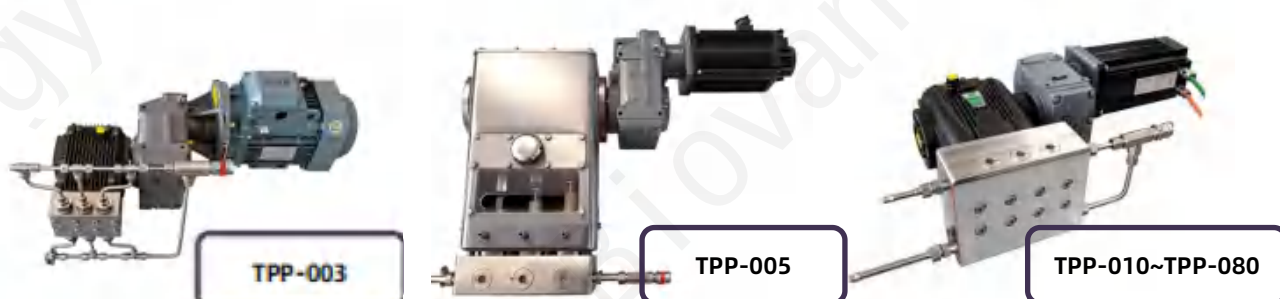
- Industrial-grade liquid chromatography
- Pilot-scale and commercial production
- Fluid process system integration

Design Advantage

- **Pulsation Control:** Three-piston overlapping design with servo-driven dynamic compensation delivers ultra-low pulse output.
- **Durability:** 316L stainless steel head, ceramic pistons, self-lubricating seals, and backflush system ensure long-term reliability under high loads.
- **Hydraulic Performance:** Optimized valves with low NPSH prevent cavitation and maintain accuracy across varying fluid properties.
- **Intelligent Control & Compliance:** Modbus-supported closed-loop control with millisecond response; full data traceability and audit trails meet biopharmaceutical regulatory standards.

	TPP-003	TPP-005	TPP-010	TPP-040	TPP-060	TPP-080
Head Material	316L Stainless Steel					
Piston Material	Ceramics (zirconia)					
Flow Range	0.1-3L	0.1-5L	0.1-10L	1-40L	1-60L	1-80L
Check valve Material	Zirconia/Silicon Nitride, PEEK, 316L Stainless Steel					
Infusion Mode	Three pistons, in series					
Max. Work Pressure	≤10MPa					
Step Size	0.1 L/min					
Pressure Pulsation	≤0.5MPa					
Flow Precision	±1.5%					
Repeatability RSD	≤1%					
Pulse Damper	optional					
Control Model	RS232 or LAN or RS485					
Inlet Diameter	Φ6	Φ10	Φ12	Φ20	Φ26	Φ32
Outlet Diameter	Φ6	Φ8	Φ10	Φ18	Φ24	Φ30
Power	1.1KW	1.5KW	3KW	11KW	15KW	22KW
Size	240×360×360mm	320×370×170mm	550×460×300mm	770×550×320mm	820×550×320mm	950×630×400mm

Appearance



Testing Data

5L Piston Pump

No.	Setup	Runtime	0MPa	6MPa		Tolerance
				Data	Deviation	
1	300r	2min	2099	2080	0.91%	±1.5%
2	500r	2min	4190	4155	0.84%	±1.5%
3	800r	2min	6259	6216	0.69%	±1.5%
4	1200r	2min	8280	8232	0.58%	±1.5%
5	1500r	2min	10246	10164	0.80%	±1.5%

10L Piston Pump (Siemens frequency converters; ABB explosion-proof motors)

No.	Setup	Runtime	0MPa	3MPa		5MPa		8MPa		Tolerance
				Data	Deviation	Data	Deviation	Data	Deviation	
1	10Hz	2min	4467	4446	0.47%	4434	0.74%	4426	0.92%	±1.5%
2	20Hz	2min	8928	8895	0.37%	8864	0.72%	8837	1.02%	±1.5%
3	30Hz	2min	13524	13490	0.25%	13473	0.38%	13435	0.66%	±1.5%
4	40Hz	2min	18020	18005	0.08%	17984	0.20%	17899	0.67%	±1.5%
5	50Hz	1min	11227	11221	0.05%	11146	0.72%	11124	0.92%	±1.5%

10LPiston Pump (Hutchison drives; servo motors)

No.	Setup	Runtime	0MPa	3MPa		5MPa		8MPa		Tolerance
				Data	Deviation	Data	Deviation	Data	Deviation	
1	30r	2min	460	458	0.43%	456	0.87%	454	1.30%	±1.5%
2	130r	2min	1982	1978	0.20%	1975	0.35%	1969	0.66%	±1.5%
3	300r	2min	4515	4506	0.20%	4502	0.29%	4492	0.51%	±1.5%
4	500r	2min	7557	7543	0.19%	7520	0.49%	7505	0.69%	±1.5%
5	900r	2min	13515	13508	0.05%	13475	0.30%	13443	0.53%	±1.5%
6	1200r	2min	17929	17918	0.06%	17875	0.30%	17864	0.36%	±1.5%

Liquid Chromatography System

Biovanix liquid chromatography system is designed for high-precision, high-stability liquid chromatography analysis. It integrates advanced fluid dynamics and intelligent control, delivering leading pumping performance and high cost-effectiveness.

Core Pumping & Fluidics System

- **Dual-Plunger Series Configuration:** Dual-plunger series architecture with floating plunger design reduces seal wear, lowers micro-leakage risks, and extends pump seal lifespan.
- **Advanced Pump Drive:** Equipped with advanced servomotor pump drive to improve mechanical transmission precision and long-term operational stability.
- **Dynamic Pulsation Compensation & Flow Calibration:** Integrates proprietary electronic pulse compensation and multi-point flow calibration algorithms, reducing baseline pulsation and ensuring flow accuracy for reproducible retention times.

Key Features

- **Intuitive HMI:** High-resolution touchscreen Human-Machine Interface (HMI) with user-centric design for simplified workflow navigation.
- **Digital Flow Calibration:** Built-in multi-point flow correction enables precise calibration across flow rate segments, guaranteeing wide-range linearity.
- **System Maintenance & Safety:** Supports online firmware updates for software upgrades and feature expansion. Offers power-off protection that automatically saves system parameters and configurations during unexpected power outages.
- **High-Speed Connectivity:** Uses LAN for data transmission, ensuring stable, high-throughput, interference-free communication with chromatography data system (CDS).
- **Automated Safety Protocols:** Integrated real-time alarm and automatic pump shutdown. The system triggers alerts and executes safety shutdown when detecting anomalies like overpressure or leaks.

Smart Technology & Predictive Diagnostics

- **Automated Time Programming:** Supports time-programmed HMI interaction, enabling automation of methods, gradient elution, system flushing and equilibration.
- **Asset Management & Diagnostics:** Equipped with full equipment status monitoring, predictive fault warning (diagnostics) and online assistance to maximize instrument uptime and simplify laboratory troubleshooting.



BV10 HPLC System			
Isocratic System		Gradient System	
high-pressure pump, 10 ml pump head	1 set	high-pressure pump, 10 ml pump head	2 set
Analysis variable dual-wavelength UV/VIS detector	1 set	Analysis variable dual-wavelength UV/VIS detector	1 set
Flow cell 10 mL	1 set	Flow cell 10 mL	1 set
Manual injection valve 7725i	1 set	Manual injection valve 7725i	1 set
Workstation (SuperDog)	1 set	Workstation (SuperDog)	1 set
Solvent tank	1 set	Solvent tank	1 set
Tool kits	1 set	Tool kits	1 set
Optional: Oscillometric refractive detector (Knauer/Shimadzu, software with digital-to-analogue converter) Evaporative light photodetector (Unimicro; software requires an additional digital-to-analog converter) Fluorescence detector (Shimadzu; software requires an additional analog-to-digital converter) Autosampler (optional Dutch Spark) C18 5µm 4.6-250mm HPLC column			
Hardware: Analytical High Pressure Seals Analytical Low Pressure Seal Ring Double pump head analyzing finished plunger 3.175x42 Check valve (Switzerland) Detector deuterium lamp			

BV50 HPLC System			
Isocratic System		Gradient System	
high-pressure pump, 50 ml pump head	1 set	high-pressure pump, 50 ml pump head	2 sets
Analysis variable dual-wavelength UV/VIS detector	1 set	Analysis variable dual wavelength UV/VIS detector	1 set
Flow cell 50 mL	1 set	Flow cell 50 mL	1 set
Manual injection valve 7725i	1 set	Manual injection valve 7725i	1 set
Workstation (SuperDog)	1 set	Workstation (SuperDog)	1 set
Solvent tank	1 set	Solvent tank	1 set
Tool kits	1 set	Tool kits	1 set
Options: Oscillometric refractive detector (Knauer/Shimadzu, software with digital-to-analogue converter) Injection loop (1ml/2ml/5ml/10ml) 10-250 mm HPLC column (including analytical flow cell, backpressure tube) 20-250 mm HPLC column 30-250 mm HPLC column			
Hardware: Seal ring 6.35 Plunger 6.35 x 43 Low pressure seal 6.35 Detector deuterium lamp			

BV100 HPLC System			
Isocratic System		Gradient System	
high-pressure pump, 100 ml pump head	1 set	high-pressure pump, 100 ml pump head	2 sets
Preparative variable dual wavelength UV/VIS detector	1 set	Preparative variable dual wavelength UV/VIS detector	1 set
Flow cell 100 mL	1 set	Flow cell 100 mL	1 set
Workstation (SuperDog)	1 set	Workstation (SuperDog)	1 set
Tool kits	1 set	Dynamic mixer	1 set
		Tool kits	1 set
Optional: Injector pump: High-pressure pump 100 ml / High-pressure pump 50 ml Preparation manual injection valve Injection loop (1ml/2ml/5ml/10ml/20ml) 20-250mm HPLC column, 30-250mm HPLC column, 50-250mm HPLC column			
Hardware: Seal ring 6.35 Plunger 6.35 x 43 Low pressure seal 6.35 Detector deuterium lamp			

BV200 HPLC System			
Isocratic System		Gradient System	
high-pressure pump, 200 mL pump head	1 set	high-pressure pump, 200 mL pump head	2 sets
Preparative variable dual-wavelength UV/VIS detector	1 set	Preparative variable dual wavelength UV/VIS detector	1 set
Flow cell 200 mL	1 set	Flow cell 200 mL	1 set
Workstation (SuperDog)	1 set	Workstation (SuperDog)	1 set
Tool kits	1 set	Dynamic mixer	1 set
		Tool kits	1 set
Optional: Injector pump: High-pressure pump 200 ml / High-pressure pump 100 ml / High-pressure pump 50 ml Preparation manual injection valve Injection loop (1ml/2ml/5ml/10ml/20ml) 20-250 mm HPLC column; 30-250 mm HPLC column; 50-250 mm HPLC column DAC-50 System DAC-80 System			
Hardware: High pressure seal / Low pressure seal for 200 mL pump 200 mL one-way valve Detector deuterium lamp			

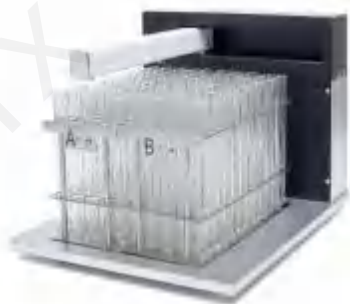
BV500 HPLC System			
Isocratic System		Gradient System	
high-pressure pump, 500 ml pump head	1 set	high-pressure pump, 500 ml pump head	2 sets
Preparative variable dual-wavelength UV/VIS detector	1 set	Preparative variable dual-wavelength UV/VIS detector	1 set
Flow cell 500 mL	1 set	Flow cell 500 mL	1 set
Workstation (SuperDog)	1 set	Workstation (SuperDog)	1 set
Tool kits	1 set	Dynamic mixer	1 set
		Tool kits	1 set
Optional: Injector pump: High-pressure pump 500 ml / High-pressure pump 200 ml / High-pressure pump 100 ml Preparation manual injection valve Injection loop (1ml/2ml/5ml/10ml/20ml) DAC-100 System			
Hardware: High-pressure seal / Low-pressure seal for 500 mL pump 500 mL one-way valve Detector deuterium lamp			

BV1000 HPLC System			
Isocratic System		Gradient System	
high-pressure pump, 1000 ml pump head	1 set	high-pressure pump, 1000ml pump head	3 set
preparative variable dual-wavelength UV/VIS detector	1 set	Preparative variable dual-wavelength UV/VIS detector	1 set
Flow cell 1000 mL	1 set	Flow cell 1000 mL	1 set
Workstation (SuperDog)	1 set	Workstation (SuperDog)	1 set
Three-way ball valve, 6mm I.D. (sample injection)	1 set	Dynamic mixer	1 set
Tool kits	1 set	Tool kits	1 set
Optional: Injector pump: High-pressure pump 1000 ml / High-pressure pump 500 ml / High-pressure pump 200 ml Preparation manual injection valve DAC-100 System DAC-150 System			
Hardware: High pressure seal / Low pressure seal for 1000 mL pumps 1000 mL one-way valve Detector deuterium lamp			

BV3000 HPLC System			
Isocratic System		Gradient System	
high-pressure pump, 3000 ml pump head	1 set	high-pressure pump, 3000 ml pump head	3 sets
Preparative variable dual wavelength UV/VIS detector	1 set	Preparative variable dual wavelength UV/VIS detector	1 set
Flow cell 3000 mL	1 set	Flow cell 3000 mL	1 set
Workstation (SuperDog)	1 set	Workstation (SuperDog)	1 set
Tool kits	1 set	Static Mixer	1 set
		Tool kits	1 set
Optional: Injector pump: High-pressure pump 3000 ml / High-pressure pump 1000 ml / High-pressure pump 500 ml Preparation manual injection valve DAC-200 System DAC-300 System			
Hardware: High-pressure seal / Low-pressure seal for 3000 mL pumps 3000 mL one-way valve Detector deuterium lamp			

Distillate Collector

Type	FC200 Distillate Collector	
Flow Ranges	0-3000 ml/min	
Sample Channel	8 channels (1 for waste liquid, 7 for collection)	
Collection Method	Time/Peak/Slope	
Size (LWH)	488*380*215mm	
Control Mode	RS232 or LAN	
Power	75W	
Weight	10Kg	

Type	FC100 Distillate Collector	
Flow Ranges	0.001-200 ml/min	
Collection Mode	Automatic/Semi-Automatic	
Collection Condition	Time/Volume/Slope/Peak	
Sample Volume (1 as standard)	120 positions (Φ15 × 150 mm, 15 mL glass test tube) 88 positions (Φ17 × 120 mm, 15 mL centrifuge tube) 42 bits (Φ28 × 115 mm, 50 mL centrifuge tube)	
Control Mode	RS232 or LAN	
Size (LWH)	260*240*350 mm (W*H*D)	
Power	150W	
Weight	7.6kg	

Variable Dual Wavelength UV/VIS Detector

Biovanix dual wavelength UV/VIS detectors are an essential part of high-performance liquid phase purification systems. This detector adopts digital data processing and control, reducing baseline noise and drift. Its digital output function allows direct connection to a computer via serial port without a data acquisition unit. The system matches different flow cell units to different flow rates, and supports direct flow detection without flow diversion.



Features

- Stable high-energy deuterium lamp.
- Flow cells of different sizes for direct detection, selectable by flow rate.
- Built-in digital signal processing and control system.
- Integrated stable power supply, suitable for explosion-proof use.
- Latest ARM system program control with higher accuracy.

Type	PUD0010	PUD0100/PUD0200	PUD0500/PUD1000	PUD3000
Flow Cell	Analysis flow cell, SST or PEEK 10 mm optical range	Preparative flow cells, variable optical range in SST or PEEK		
Connector	1/16	1/16 / 1/8	1/8	6mm
Wavelength Range & Light Source	190-400 nm deuterium lamp, 400-700 nm tungsten lamp			
Bandwidth	8nm			
Wavelength Accuracy	±0.75nm		±1nm	
Wavelength Repeatability	0.2nm	0.3nm		
Baseline Noise (Static)	1*10-5 AU			
Baseline Drift (Static)	1*10-4 AU/h	1*10-4 AU/h	1*10-4 AU/h	1*10-4 AU/h
Detection Range	(0~5) AU			
Min detection limit	≤4*10-9g/mL	≤4*10-8g/mL	≤4*10-7g/mL	≤4*10-5g/mL
Control Mode	RS232 or LAN			
Display	5.0-inch touch screen			
Size	368*260*140(LWH)			
Wattage	75W			
Weight	6.9kg			

Optical fiber detector and optical fiber flow cells are also available.

Optical fiber detector: 190-700 nm, variable dual-wavelength UV/VIS detector with fiber optics

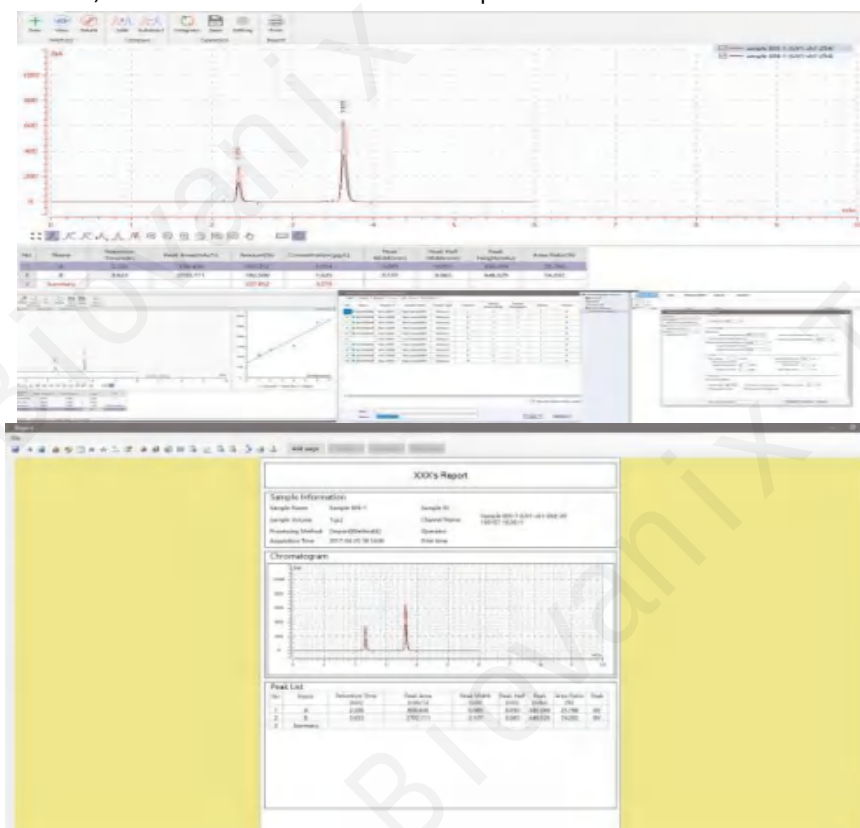


	Optical Fiber Detector	Optical Fiber Flow Cells
PUD0010	190-700 nm optical fiber detector	10 mm path length, 1/16", 10 µl volume stainless steel
PUD0050	190-700 nm optical fiber detector	3 mm path length, 1/16", 2 µl volume
PUD0100	190-700 nm optical fiber detector	3 mm path length, 1/16", 2 µl volume
PUD0200	190-700 nm optical fiber detector	3 mm path length, 1/16", 2 µl volume
PUD0500	190-700 nm optical fiber detector	3 mm path length, 1/8", 1.9 µl volume
PUD1000	190-700 nm optical fiber detector	3 mm path length, 1/8", 1.9 µl volume
PUD3000	190-700 nm optical fiber detector	2 mm path length, 1/16", 6.28 µl volume

LabChrom Chromatography Software

LabChrom is a chromatographic data analysis software based on the latest architecture and supports database management. Powerful, advanced performance, high stability, integrated instrument control and maintenance, method editing, data analysis, and sample management.

report editing, user rights management, audit tracking, digital signature, and database and other functions. In full compliance with cGMP, FDA 21 CFR Part 11 certification specifications.



Dynamic Axial Compression Column System

Biovanix Dynamic Axial Compression (DAC) column system represents the most well-established segment of preparative chromatography that employs column packing technology. This DAC column sustains internal pressure independently, enables automatic discharge of packing materials, and integrates the capabilities of both high-performance liquid chromatography and column packing equipment. Utilizing the DAC system fully ensures continuity, uniformity, stability, and tightness of the column bed while eliminating issues caused by bed collapse. It is extensively applied in industrial purification processes, including peptide purification and natural product isolation.

Core Technology

- Operate with an independent design team to fulfill diverse equipment requirements.
- We manufacture liquid chromatography resins, offering multiple resin types tailored for various applications.
- We provide comprehensive technical solutions for biochemical separation and purification.
- Superior after-sales service is guaranteed, including installation, training, and spare parts supply.
- Supporting equipment and integrated system solutions are also available.

Key Advantages

- Truss grinding applied inside the column tube enhances the service life of the high-pressure sealing ring.
- High-quality screen plates are provided, accompanied by certification.
- Large preparative column sieve plates facilitate easy loading and unloading, ensuring excellent sealing performance and efficient forced distribution.
- The hydraulic cylinder is designed and produced by top-tier manufacturers, ensuring quality assurance.
- Multiple material options are available for fluid-contact components: 316 Stainless Steel, PTFE, or PEEK.



Parameter

ID 50/650		
Column Diameter	50mm	
Column Length	650mm	
Work Pressure	10MPa	
Liquid Contact Material	316L/PTFE	
Sieve	316L\3um	
Sealing Ring	316L	
Working Temperature	5-60°C	
Size	500*500*1825mm	
Distribution Form	Forced Distribution	

ID 80/650		
Column Diameter	80mm	
Column Length	650mm	
Work Pressure	10MPa	
Liquid Contact Material	316L/PTFE	
Sieve	316L\3um	
Sealing Ring	316L	
Working Temperature	5-60°C	
Size	500*500*1825mm	
Distribution Form	Forced Distribution	

ID 100/650		
Column Diameter	100mm	
Column Length	650mm	
Work Pressure	10MPa	
Liquid Contact Material	316L/PTFE	
Sieve	316L\3um	
Sealing Ring	316	
Working Temperature	5-60°C	
Size	500*500*1825mm	
Distribution Form	Forced Distribution	

ID 150/650		
Column Diameter	150mm	
Column Length	650mm	
Work Pressure	10MPa	
Liquid Contact Material	316L/PTFE	
Sieve	316L\3um	
Sealing Ring	316L	
Working Temperature	5-60°C	
Size	610*680*2400mm	
Distribution Form	Forced Distribution	

ID 200/650		
Column Diameter	200mm	
Column Length	650mm	
Work Pressure	10MPa	
Liquid Contact Material	316L/PTFE	
Sieve	316L\3um	
Sealing Ring	316L	
Working Temperature	5-60 °C	
Size	710*830*2500mm	
Distribution Form	Forced Distribution	

ID 300/650		
Column Diameter	300mm	
Column Length	650mm	
Work Pressure	10MPa	
Liquid Contact Material	316L/PTFE	
Sieve	316L\3um	
Sealing Ring	316L	
Working Temperature	5-60 °C	
Size	880*924*2770mm	
Distribution Form	Forced Distribution	

Customization Chromatography Column & Controller

Based on the specific and often complex requirements of our customers in their actual purification processes, we offer highly flexible and tailored customized solutions. This comprehensive approach encompasses the provision of low-pressure stainless steel chromatography columns, which are specifically engineered and optimized for demanding industrial separation and purification scenarios. Each solution is further enhanced by the integration of sophisticated, accompanying intelligent control systems. These advanced systems are designed with dual core advantages. On one hand, the premium material selection guarantees outstanding corrosion resistance, exceptional structural strength, and a predictably long operational service life. On the other hand, by leveraging precise, fine-tuned parameter adjustments and meticulously optimized process designs, they enable the highly efficient and remarkably stable separation of even the most complex mixtures. The synergistic result of this integrated offering is a substantial and measurable improvement in our customers' overall production line efficiency and the final purity grade of their products, directly addressing their core operational goals.





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