Seplife® Agarose and Dextran Chromatography Resins

SEPLIFE

Driving the innovation

SUNRESIN

STOCK CODE SZ 300487

About Sunresin

- Market Value: **$4 Billion**

  We're Asia's largest manufacturer of ion exchange and adsorbent resins and an A-listed company in China, employing over 1400 people worldwide.

- Driven by **Innovation**

  With 30% of our workforce dedicated to R&D, we lead the way in developing cutting-edge solutions for the most complex challenges.

- **Top 3** in the World

  An internationally-recognized innovation leader in separation, purification and extraction technologies for highly-regulated global industries.

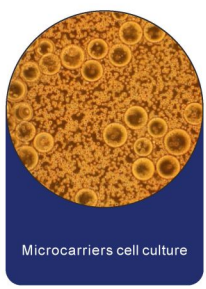
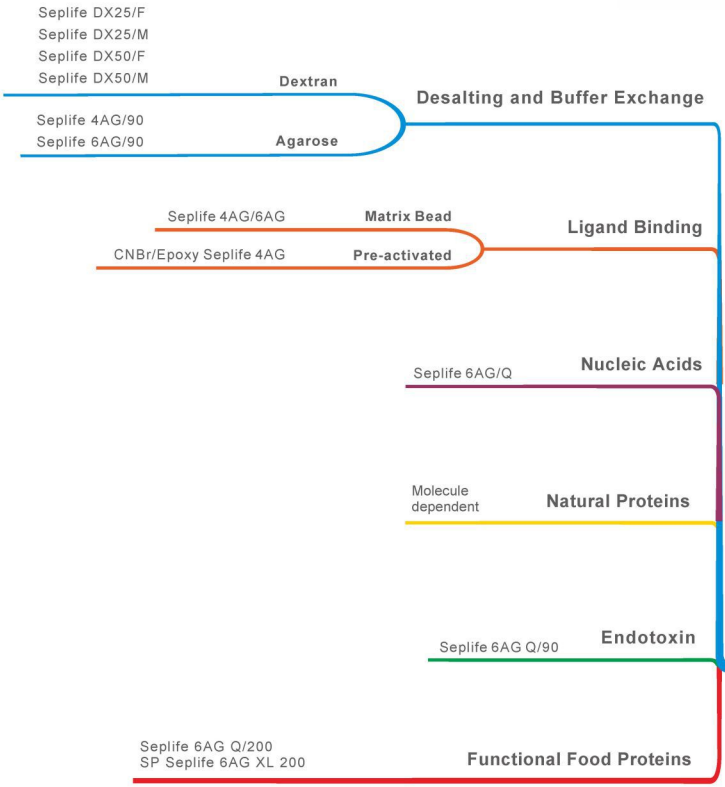


Table of Contents

SEPLIFE

Selection Guide



Acronyms and Abbreviations:

Seplife : Trademark of Sunresin

6AG: 6% high flow rate agarose matrix, particle size range 45-165μm, average particle size 90μm

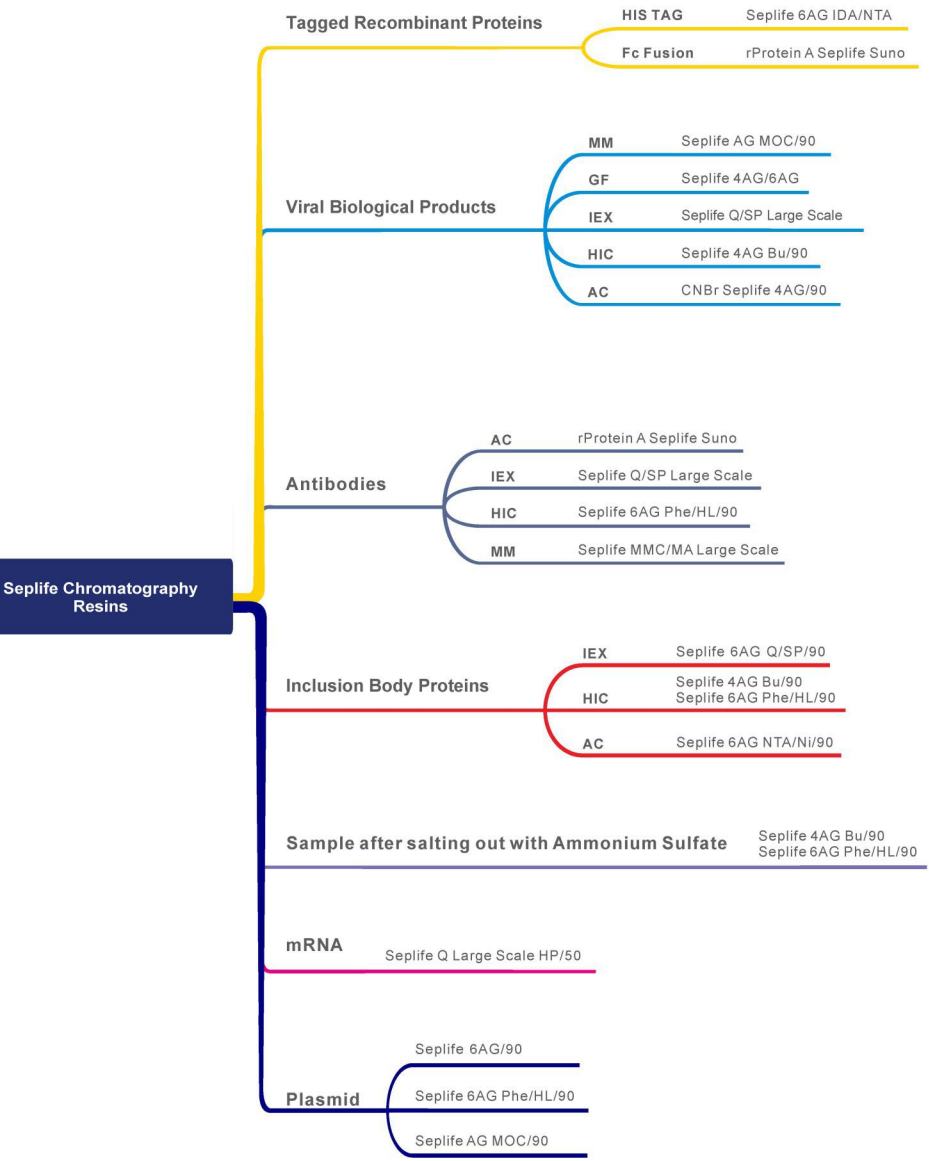
4AG: 4% high flow rate agarose matrix, particle size range 45-165μm, average particle size 90μm

Large Scale: High rigidity agarose matrix, particle size range 45-165μm, average particle size 90μm

Large Scale HP: High rigidity and high resolution agarose matrix, particle size range 40-70μm, average particle size 50μm

cm/h: Linear flow rate (cm/h) = flow rate (ml/min) x 60 / (π x column radius (cm) ^{2})

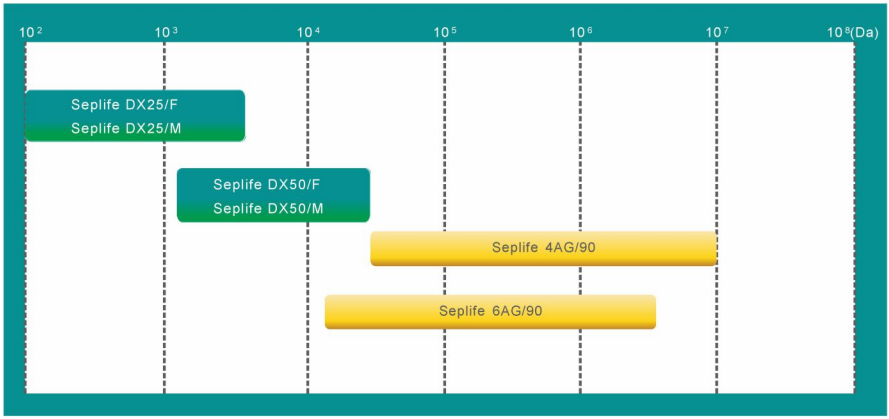
Selection Guide



SEPLIFE

Gel Filtration (GF) Chromatography Resins

Sunresin provides gel filtration chromatography resins made of agarose and dextran polymers. The two product ranges are complementing each other, providing the tools to separate biomolecules with sizes ranging from 10^2 to 10^7Da.



Agarose Gel Filtration Resins

Gel beads with good physical stability and chromatographic properties are obtained by cross linking agarose. The different percentage agarose leads to beads with well controlled porosity and surface area and minimal non-specific interaction. Seplife Agarose Gel Filtration resins are an excellent medium for the chromatographic separation of biomolecules based on their size and are suitable for use at process scale. Currently, Sunresin produces two agarose gel filtration resins:

- Seplife 4AG/90 with 4% crosslinked agarose.
- Seplife 6AG/90 with 6% crosslinked agarose.

The main characteristics of these products are:

1. The hydrophilic agarose matrix ensures very low levels of non-specific adsorption with high recovery rate.
2. High alkaline stability for efficient cleaning and sanitization using up to 1.0 M NaOH.
3. Good flow properties enabling rapid processing of bio-molecules separation.

A Regulatory Support File (RSF) is available for Seplife Agarose Gel Filtration Resins.

- Physical and chemical characteristics of Seplife agarose gel filtration resins

Product	Size exclusion (Da)	Particle size (μm)	Max. Flow rate (cm/h)	Max. Pressure (MPa)	pH Stability	Stability
Seplife 4AG/90	Designed to fractionate biomolecules of 4×10^4 – 3×10^7	45-165	420	0.3	3-13 (Operational) 2-14 (CIP)	Stable in all common aqueous buffers; 1M sodium hydroxide; 8M urea; 6M guanidine hydrochloride; 70% ethanol
Seplife 6AG/90	Designed to fractionate biomolecules of 1×10^4 – 4×10^6		750	0.3		

- Ordering information

Product name	Product code	Quantity
Seplife 4AG/90	A1003102	25ml
	A1003103	100ml
	A1003104	500ml
	A1003105	1L
	A1003106	5L
	A1003107	10L
Seplife 6AG/90	A1003202	25ml
	A1003203	100ml
	A1003204	500ml
	A1003205	1L
	A1003206	5L
	A1003207	10L

Dextran Gel Filtration Resins

Sunresin's Seplife dextran gel filtration resins are hydrophilic inert media with controlled pore size distribution, synthesized from specially selected dextran and cross-linked by cross-linking agents. The dextran concentration and the degree of cross- linking during the synthesis of the resins is controlled to produce different swelling properties and pore size distributions, resulting in differences in the molecular size range of the separation. Seplife Dextran Gel Filtration resins are used in a wide range of industrial applications such as buffer exchange, desalting, removal of small molecules and separation of substances of different molecular sizes.

- Physical and chemical characteristics of Seplife dextran gel filtration resins

Product name	Particle Size (micron, dry)	Swelling Property in Water (ml/g)	Exclusion range (globular proteins Da)	Max. Flow rate (cm/h)	pH Stability
Seplife DX25/F	20-80	4.5-6.5	100-5000	180	3-10 (Operational) 2-13 (CIP)
Seplife DX25/M	50-150	4.5-6.5	100-5000	650	
Seplife DX50/F	20-80	9-13	1500-30000	150	
Seplife DX50/M	50-150	9-13	1500-30000	180	

- Ordering information

Product name	Product code	Quantity
Seplife DX25/F	D1007210F	25g
	D1007211F	100g
	D1007212F	500g
	D1007213F	1kg
	D1007214F	5kg
	D1007215F	10kg
Seplife DX25/M	D1007210M	25g
	D1007211M	100g
	D1007212M	500g
	D1007213M	1kg
	D1007214M	5kg
	D1007215M	10kg

Product name	Product code	Quantity
Seplife DX50/F	D1007310F	25g
	D1007311F	100g
	D1007312F	500g
	D1007313F	1kg
	D1007314F	5kg
	D1007315F	10kg
Seplife DX50/M	D1007310M	25g
	D1007311M	100g
	D1007312M	500g
	D1007313M	1kg
	D1007314M	5kg
	D1007315M	10kg

Ion Exchange Chromatography Resins (IEX)

Ion Exchange Chromatography is a widely used chromatographic method for the separation and purification of different biomolecules based on the nature and amount of charges they carry in a specific buffer system.

Seplife IEX resins are porous spherical media with dissociable ion-exchange functional groups bonded to the polymer backbone matrix. According to the nature of the dissociable ion groups, they are divided into strong acid cation exchange (Sulfonate-SP), weak acid cation exchange (Carboxymethyl - CM), strong base anion exchange (Quaternary amine - Q) and weak base anion exchange (Diethylaminoethyl - DEAE).

Ion Exchange Chromatography can be used for the capture as well as for the intermediate purification and polishing of the target biomolecule and currently it is one of the most used technique in the field of biological separation and purification.
IEX chromatographic media is characterized by:

1. High adsorption loading and high yield.
2. Easy operation and low cost of mobile phase.
3. Good physical and chemical stability.

Seplife Agarose IEX Resins

The Seplife agarose IEX product range can be classified in two major groups each one containing products with various particle size distribution, functional groups and capacities.

- The 6AG line of IEX agarose resins is based on the 6AG Gel Filtration chromatography resins, a highly crossed link 6% agarose base beads. Through well-defined specific methods, ion exchange functional ligands with different properties are covalently bonded on the agarose matrix to provide the IEX properties of the final chromatographic media. This line of products is available in different IEX functionalities and different mean diameter particle sizes. These characteristics are included in the product name.
- The Large Scale line of IEX agarose resins is based on base beads with high mass transfer properties. Depending on the particle size distribution, this product line is further split in high-rigidity and high-velocity resins (Large Scale) and high-rigidity and high-resolution resins (Large Scale HP). The IEX functional group and particle mean diameter are included in the product name.

- Characteristics of the IEX Agarose resins:

- Hydrophilic base matrix ensures very low levels of non-specific adsorption and high recovery rate.
- Seplife Agarose IEX resins are based on highly cross-linked 6% agarose.
- The particle size distribution of the IEX agarose chromatographic resins is covering the entire range from 200 microns mean diameter to 35 microns mean diameter making the product range suitable to applications covering high flow industrial viscous feed large scale purification, capture and intermediate purification as well as polishing processes.
- All products have good stability to alkaline CIP up to 1M NaOH.
- Regulatory Support File (RSF) available.

- Physical and chemical characteristics of Seplife agarose IEX resins

Products	Ion Exchange Capacity (μmol/ml)	Particle Size (micron)	Max. Flow (cm/h)	Pressure Resistance (MPa)	pH Stability	Applications
SP Seplife 6AG XL 200	0.18-0.25 (H^+)	100-300	1800	0.3	4-12 (Operational) 3-14 (CIP)	Designed for industrial applications, viscous feed (food) and high flow
Seplife 6AG SP/90	0.18-0.25 (H^+)	45-165	750			Fast elution of proteins and mAbs
Seplife 6AG SP/35	0.15-0.20 (H^+)	30-50	150			Polishing steps in proteins and mAbs
Seplife S Large Scale/90	0.11-0.14 (H^+)	45-165	500			High flow and high DBC for proteins and mAbs purification
Seplife SP Large Scale HP/50	0.13-0.16 (H^+)	40-70	400			Intermediate and polishing in proteins and mAbs
Seplife 6AG CM/90	0.09-0.13 (H^+)	45-165	750		4-13 (Operational) 2-14 (CIP)	Fast elution of proteins and mAbs
Seplife 6AG Q/200	0.18-0.25 (Cl^-)	100-300	1800		2-12 (Operational) 2-14 (CIP)	Designed for industrial applications, viscous feed (food) and high flow
Seplife 6AG Q/90	0.18-0.25 (Cl^-)	45-165	750			Fast elution of proteins and mAbs
Seplife 6AG Q/35	0.14-0.20 (Cl^-)	30-50	150			Polishing steps in proteins, mAbs and nucleic acids
Seplife Q Large Scale/90	0.16-0.22 (Cl^-)	45-165	1000			High flow and high DBC for proteins and mAbs purification
Seplife Q Large Scale HP/50	0.15-0.18 (Cl^-)	40-70	400			Intermediate and polishing in proteins, mAbs and nucleic acids
Seplife 6AG DEAE/90	0.11-0.16 (Cl^-)	45-165	750		4-12 (Operational) 3-14 (CIP)	Fast elution of proteins and mAbs

- Ordering information

Product name	Product code	Quantity
SP Seplife 6AG XL 200	A2036402	25ml
	A2036403	100ml
	A2036404	500ml
	A2036405	1L
	A2036406	5L
	A2036407	10L
Seplife 6AG Q/200	A2036302	25ml
	A2036303	100ml
	A2036304	500ml
	A2036305	1L
	A2036306	5L
	A2036307	10L
Seplife Q Large Scale/90	A2036302	25ml
	A2036303	100ml
	A2036304	500ml
	A2036305	1L
	A2036306	5L
	A2036307	10L
Seplife S Large Scale/90	A2046302	25ml
	A2046303	100ml
	A2046304	500ml
	A2046305	1L
	A2046306	5L
	A2036307	10L

Product name	Product code	Quantity
Seplife 6AG SP/90	A2043202	25ml
	A2043203	100ml
	A2043204	500ml
	A2043205	1L
	A2043206	5L
	A2043207	10L
Seplife 6AG Q/90	A2033202	25ml
	A2033203	100ml
	A2033204	500ml
	A2033205	1L
	A2033206	5L
	A2033207	10L
Seplife 6AG CM/90	A20203202	25ml
	A20203203	100ml
	A20203204	500ml
	A20203205	1L
	A20203206	5L
	A20203207	10L
Seplife 6AG DEAE/90	A2013202	25ml
	A2013203	100ml
	A2013204	500ml
	A2013205	1L
	A2013206	5L
	A2013207	10L

Product name	Product code	Quantity
Seplife 6AG SP/35	A2050402	25ml
	A2050403	100ml
	A2050404	500ml
	A2050405	1L
	A2050406	5L
	A2050407	10L
Seplife 6AG Q/35	A2050302	25ml
	A2050303	100ml
	A2050304	500ml
	A2050305	1L
	A2050306	5L
	A2050307	10L
Seplife Q Large Scale HP/50	A2066302	25ml
	A2066303	100ml
	A2066304	500ml
	A2066305	1L
	A2066306	5L
	A2066307	10L
Seplife SP Large Scale HP/50	A2066402	25ml
	A2066403	100ml
	A2066404	500ml
	A2066405	1L
	A2066406	5L
	A2066407	10L

Seplife Dextran IEX Resins

Dextran IEX resins are hydrophilic ion exchange media with controlled pore size distribution used in industrial applications.

- The matrix of the dextran IEX chromatography resins is based on the gel filtration Seplife DX range of products with DEAE or CM functional groups bonded to the crossed linked molecular backbone making them stable IEX chromatography resins.
- Products are designed for the chromatographic purification of biomolecules.
- Dextran IEX chromatographic resins are provided in dry form.
- Regulatory support file is available.

The Seplife Dextran IEX resins are ion exchange chromatographic media based on crosslinked dextran functionalized with weak base anion (DEAE) or weak acid cation (CM) functional groups and a particle size range of 40-120 micron.

The IEX functional group is included in the name of the product and the last digits correspond to the dextran composition.

• Physical and chemical characteristics of Seplife Dextran IEX Resins

Products	Ion Exchange Capacity (mmol/g)	Particle Size (micron dry)	Max. Flow (cm/h)	pH Stability	Application
Seplife DX DEAE 25/80	3.0-4.0 (Cl^-)	40-120	480	2-9 (Operational) 2-13 (CIP)	Suitable for smaller molecules and proteins (up to 30KDa) separation in column mode.
Seplife DX DEAE 50/80	3.0-4.0 (Cl^-)	40-120	60		Suitable for large proteins (up to 100KDa) separation in batch mode.
Seplife DX CM 25/80	4.0-5.0 (H^+)	40-120	600	6-10 (Operational) 2-13 (CIP)	Suitable for smaller molecules and proteins (up to 30KDa) separation in column mode.

• Ordering Information

Product name	Product code	Amount
Seplife DX DEAE 25/80	D1007210F	25g
	D1007211F	100g
	D1007212F	500g
	D1007213F	1Kg
	D1007214F	5kg
	D1007215F	10kg
Seplife DX DEAE 50/80	D1007210M	25g
	D1007211M	100g
	D1007212M	500g
	D1007213M	1kg
	D1007214M	5Kg
	D1007215M	10kg

Product name	Product code	Amount
Seplife DX CM 25/80	D1007310F	25g
	D1007311F	100g
	D1007312F	500g
	D1007313F	1kg
	D1007314F	5kg
	D1007315F	10kg

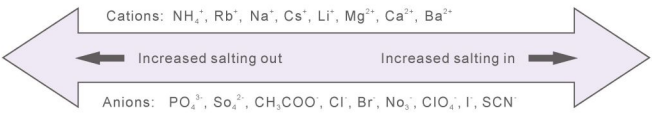
Hydrophobic Interaction Chromatography Resins (HIC)

Hydrophobic Interaction Chromatography (HIC) is a method of protein separation based on the difference in the interaction between different proteins and hydrophobic surfaces of the media. In general, the higher the ionic strength (salt concentration), the stronger the hydrophobic bond formed between the resin and molecules. Factors influencing the hydrophobic interactions include salt concentration, temperature, pH, surface activators and organic solvents.

Sunresin proposes two types of commonly used HIC resins. Butyl and Phenyl groups are covalently bonded to Seplife AG-based matrix via a short linker.

Basic Operations of Hydrophobic Interactions

Despite the purification advantages offered by HIC, selecting the optimal operating conditions and appropriate media can be complex. Out of all the operational conditions that can influence a HIC purification process, the one that relatively constant is the effect of cations and anions in the buffer solution on the molecule and media hydrophobicity.



Additionally, changes in buffer pH can influence the charge, hydrophilicity, and hydrophobicity of biomolecules as the pH increases, as hydrophobicity decreases and hydrophilicity increases accordingly due to an increased number of charges being neutralized. Proteins that do not bind to hydrophobic resins at neutral pH conditions can bind at acidic pH conditions.

Biomolecules elution from HIC resins is achieved by reducing the salts and buffers concentrations and when necessary, adding low concentrations of ethanol or surfactants.

- Physical and chemical characteristics of Seplife hydrophobic interaction chromatography (HIC) resins

Product	Functional group	Particle Size (micron)	Max. Flow (cm/h)	Pressure Resistance (MPa)	pH Stability
Seplife 6AG Phe/HL/90	Phenyl	45-165	750	0.3	3-13 (Operational) 2-14 (CIP)
Seplife 4AG Bu/90	Butyl	45-165	420	0.3	3-13 (Operational) 2-14 (CIP)

- Ordering information

Product name	Product code	Quantity
Seplife 6AG Phe/HL/90	A3023202	25ml
	A3023203	100ml
	A3023204	500ml
	A3023205	1L
	A3023206	5L
	A3023207	10L

Product name	Product code	Quantity
Seplife 4AG Bu/90	A3033102	25ml
	A3033103	100ml
	A3033104	500ml
	A3033105	1L
	A3033106	5L
	A3033107	10L

SEPLIFE

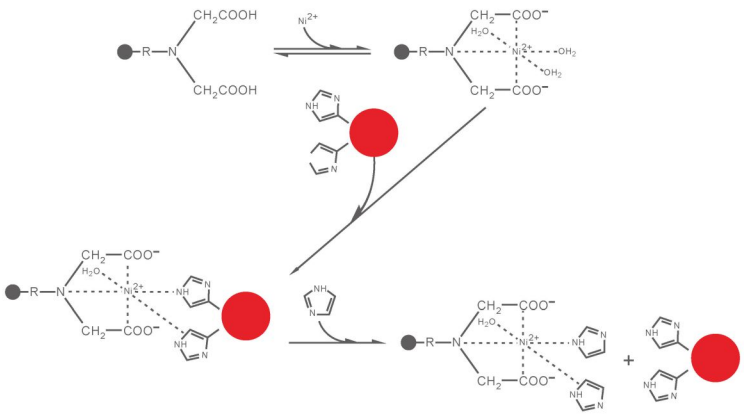
Affinity Chromatography

Affinity chromatography is a chromatographic method for separating proteins based on specific interactions between biomolecules, such as enzymes and substrates, receptors and ligands, antibodies and antigens. This interaction is specific and reversible, and protein purification is achieved through the reversible binding and separation.

- Characteristics of Affinity Chromatography
  - High selectivity and efficiency, high purification fold based on the specific affinity between ligand and macromolecule to be separated.
  - Ability to complete separation that is otherwise difficult to complete in one step, such as denatured and undenatured proteins with different functions.
  - Typically over 90% purity can be achieved in one step.
  - Fast and easy capture purification step.

Metal Chelate Affinity Resins

Sunresin is offering two ranges of products for metal affinity purification of His-tag modified proteins. The resins are made using the Seplife® 6AG base bead and functionalized with Iminodiacetic acid (IDA) or Nitrilotriacetic acid (NTA) attached to the agarose by stable covalent bonds. Each group of products is supplied in Na^+ and Ni^{2+} form and can be modified with other metal ions depending on the needs. The metal capacity of the resins is varying as follows: $Cu^{2+}>Ni^{2+}>Zn^{2+}>Co^{2+}$.



Ni^{2+} affinity resin is one of the most widely used metal chelate chromatography resin in purification experiments. Depending on the binding group, it can also be divided into Ni-IDA and Ni-NTA. Ni^{2+} has six chelating valencies, of which Ni-IDA chelates the trivalent and Ni-NTA the tetravalent. The Ni-IDA has the highest binding capacity while the Ni-NTA has highest stability to higher reducing agents concentrations. Such as, Seplife® 6AG IDA/Ni/90 has a 10% DBC of ≥45 mg/ml His-tag protein while the Seplife® 6AG NTA/Ni/90 has a 10% lower DBC but a higher stability to higher NaOH concentrations and other reducing agents.
The interaction of the metal ion on the resin with the His-Tag group on the protein is taking place in low molarity buffers and in presence of small concentration of imidazole (approx. 0.1M), while the protein elution is taking place in the presence of higher concentration of imidazole due to competitive interaction with the metal ion.

- Physical and chemical characteristics of Seplife metal affinity agarose resins

Product	Particle Size (micron)	Max. Flow (cm/h)	Characteristics	pH Stability	Pressure Resistance (MPa)
Seplife 6AG IDA/Ni/90	45-165	750	Purification of His-tagged proteins. High binding capacity. Preloaded with Ni^{2+}	2-14 (CIP) 3-12 (Operational)	0.3
Seplife 6AG NTA/Ni/90	45-165	750	Purification of His-tagged proteins. High stability. Preloaded with Ni^{2+}		
Seplife 6AG IDA/90	45-165	750	Purification of His-tagged proteins. High binding capacity. Can load metals as Ni^{2+}, Zn^{2+}, Cu^{2+}, Fe^{2+}, Co^{2+}	2-14 (CIP) 3-13 (Operational)	
Seplife 6AG NTA/90	45-165	750	Purification of His-tagged proteins. High stability. Can load metals as Ni^{2+}, Zn^{2+}, Cu^{2+}, Fe^{2+}, Co^{2+}		

- Ordering information

Product name	Product code	Quantity
Seplife 6AG IDA/Ni/90	A4013202	25ml
	A4013203	100ml
	A4013204	500ml
	A4013205	1L
	A4013206	5L
	A4013207	10L
Seplife 6AG NTA/90	A4003022	25ml
	A4003023	100ml
	A4003024	500ml
	A4003025	1L
	A4003026	5L
	A4003027	10L

Product name	Product code	Quantity
Seplife 6AG NTA/Ni/90	A4023202	25ml
	A4023203	100ml
	A4023204	500ml
	A4023205	1L
	A4023206	5L
	A4023207	10L
Seplife 6AG IDA/90	A4003012	25ml
	A4003013	100ml
	A4003014	500ml
	A4003015	1L
	A4003016	5L
	A4003017	10L

AC

Affinity Resins for Antibody Purification

The rProtein A Seplife® Suno specifically binds to the Fc region of antibodies and Fc-containing recombinant proteins and is used for their isolation and purification. In one single capture step, high purity biomolecules can be obtained from complex samples such as serum or fermentation broth.

Key Features:

- Protein A sequence with six binding domains
- Highly cross-linked 4% agarose (average particle size 70 micron)
- High DBC: ≥70mg IgG/ml at 5min residence time
- High alkaline stability: up to 1.0M NaOH
- Low ligand leaching: ~5ppm
- Regulatory supporting documents: RSF, TSE/BSE, DMF (Type IV, 37326)
- IP on Sunresin recombinant protein A: Patent CN 115850408A, 2022

- Physical and chemical characteristics of Seplife affinity resins for antibody purification and Fc-containing recombinant proteins

Product	Particle Size (micron)	Dynamic Binding Capacity (mg/mL)	Max. Flow Velocity (cm/h)	Pressure Resistance (MPa)	pH Stability
rProtein A Seplife Suno	40-100	≥70mg IgG	420	0.3	3-13 (Operational) 2-14 (CIP)

- Ordering information

Product name	Product code	Quantity
rProtein A Seplife Suno	A4093101	5ml
	A4093102	25ml
	A4093103	100ml
	A4093104	500ml
	A4093105	1L
	A4093106	5L
	A4093107	10L

Pre-activated Chromatography Resins

Epoxy Seplife 4AG/90 is a reactive intermediate formed by bonding epoxy groups to the agarose Seplife 4AG/90 matrix. Ligands containing -NH_2, -SH or -OH groups can be directly coupled to the epoxy groups to prepare various separation media for the purification of biomolecules.

CNBr Seplife 4AG/90 is a reactive intermediate agarose resin containing CNBr groups. Antibodies, proteins, peptides and other biomolecules containing -NH_2 groups can be coupled to the matrix by a rapid spontaneous multipoint attachment reaction.

- Physical and chemical characteristics of Seplife pre-activated resins

Product	Particle Size (micron)	Max. Flow Velocity (cm/h)	Pressure Resistance (MPa)	Application
Epoxy Seplife 4AG/90	45-165	420	0.3	Ligand coupling to form stable covalent bond; immobilization of sugars, small molecules, proteins or peptides.
CNBr Seplife 4AG/90	45-165	420	0.3	Ligand coupling to form stable covalent bond; Immobilization of proteins, peptides and nucleic acids

These products are supplied in dry form due to their reactivity in normal ambient conditions.

- Ordering information

Product name	Product code	Quantity
Epoxy Seplife 4AG/90	A4101108	25g
	A4101109	100g
	A4101110	500g
	A4101111	1kg
	A4101112	5kg
	A4101113	10kg

Product name	Product code	Quantity
CNBr Seplife 4AG/90	A4031008	25g
	A4031009	100g
	A4031010	500g
	A4031011	1kg
	A4031012	5kg
	A4031013	10kg

Multimodal Chromatography Resins (MM)

Multimodal chromatography, also called mixed-mode chromatography, separates biomolecules based on synergetic effect of several different interactions between biomolecules and the chromatographic media.

Features:

- Combines complementary chromatography interactions on the same resin;
- Can load samples at higher salt concentration, when the loading conductivity is too high for a traditional ion exchange chromatography;
- Reduce the total number of purification steps;
- Binding and elution are controlled and optimized by the parameters relevant to each mode - salt for hydrophobic interactions and ionic strength for ionic interactions.

Sunresin is supplying three different MM resins based on the Seplife® 6AG base bead.

Seplife AG MOC/90 is a 6% cross-linked agarose microsphere with bonded octylamine functional groups. The outside of the agarose microspheres is a non-functionalized shell with size exclusion limit of 700kDa. Under the condition of high conductivity, the target substance larger than 700KDa flows through the gap between the beads, and the target substance penetrate the beads and is purified by the principle of gel filtration. Impurities smaller than 700kDa enter the core of the beads and interact with the octylamine functional groups inside the microspheres. Through multi-mode actions, impurities such as host cell proteins are removed from the target molecules.

Seplife MA Large Scale/75 is a multimodal resin that has strong anion exchange, hydrophobic interaction and hydrogen bonding capabilities at the same time, and it is designed specifically for the intermediate /polishing purification of mAbs.

Seplife MMC Large Scale/75 is a multimodal resin that has weak acid cation exchange, hydrophobic interaction and hydrogen bonding capabilities at the same time. Due to the combined IEX and hydrophobic groups, it can bind to proteins under higher salt conditions so that sometimes samples can be loaded directly after the previous chromatographic step, without further dilution.

- Physical and chemical characteristics of Seplife multimodal chromatography resins

Product	Ligand type	Ion Exchange Capacity (mmol/mL)	Particle Size (micron)	Max. Flow Velocity (cm/h)	pH Stability	Application
Seplife AG MOC/90	Size exclusion and octylamine	0.04-0.085	45-165	1000	3-13(Operational) 2-14(CIP)	Purification of biomolecules based on a combination of size exclusion and ion exchange mode
Seplife MMC Large Scale/75	Multimodal Weak Acid Cation	0.07-0.09	45-125	1000	3-12(Operational) 2-14(CIP)	Purification of biomolecules based on a combination of hydrophobic and weak acid ion exchange interactions
Seplife MA Large Scale/75	Multimodal Strong Base Anion	0.09-0.12	45-125	1000	3-12(Operational) 2-14(CIP)	Purification of biomolecules based on a combination of hydrophobic and strong base ion exchange interactions

- Ordering information

Product name	Product code	Quantity
Seplife AG MOC/90	A1008101	25ml
	A1008102	100ml
	A1008103	500ml
	A1008104	1L
	A1008105	5L
	A1008106	10L

Product name	Product code	Quantity
Seplife MMC Large Scale/75	A5016302	25ml
	A5016303	100ml
	A5016304	500ml
	A5016305	1L
	A5016306	5L
	A5016307	10L

Product name	Product code	Quantity
Seplife MA Large Scale/75	A5026302	25ml
	A5026303	100ml
	A5026304	500ml
	A5026305	1L
	A5026306	5L
	A5026307	10L

SEPLIFE

Sunresin New Materials Co. Ltd.

Add: Sunresin Park,135 Jinye Rd, Xi'an Hi-tech Industrial Development Zone,Shaanxi 710076 China.
Web: www.sunresinlifesciences.com
Email: info.lifescience@sunresin.com

SR2409431