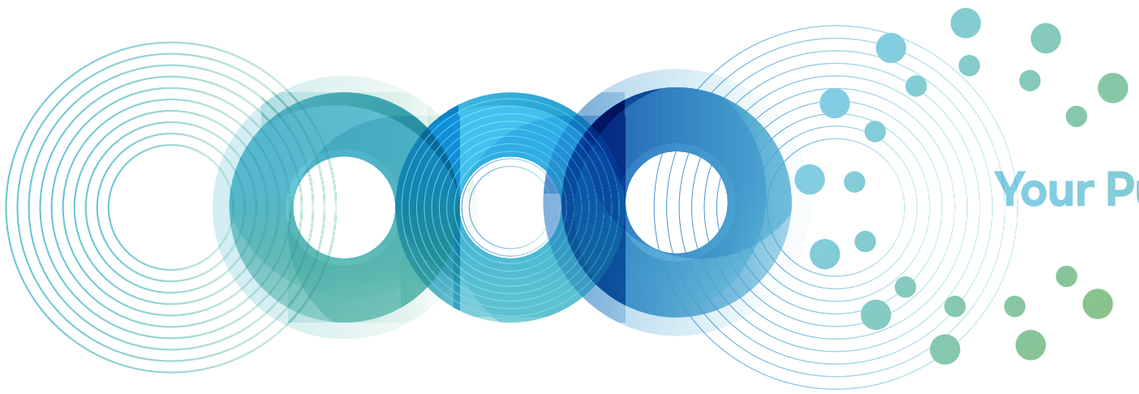
PURiOGEN

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Your Purification Companion

PURiOGEN

Company Profile

Founded in 2021 in Seoul, PurioGen Inc. is the first manufacturing company of chromatography resin in Korea. PurioGen develops and manufactures agarose-based resin products. PurioGen possesses R&D capabilities and production technology for the 3rd generation resins with superior mechanical strength and uniform size. PurioGen is continuously focusing on the discovery and development of chromatography resins for the purification a variety of biomolecules.

In 2024, PurioGen built a production plant that covers an area of 8,500 square meters in Yeosu National Industrial Complex, Yeosu. Currently, the manufacturing capacity of chromatography resins is 10,000 L/year. In 2026, we will plan to increase the production capacity to 50,000 L/year.



PURiOGEN

History

2024
Being qualified with ISO9001 quality management system
Complete Yeosu PG-1 Factory construction
Begin resin mass production

2023
Began Yeosu PG-1 Factory construction

2022
Designed factory layout
Signed investment agreement with Yeosu-si and Jeollanam-do local government

2021
Founded PurioGen Inc. and Established Seoul R&D Center
Launched resin research

Products

1. Affinity Chromatography
2. Ion Exchange Chromatography
3. Hydrophobic Interaction Chromatography
4. Immobilized Metal Ion Affinity Chromatography



PURiOGEN

Puriose®



Technology	Performance	Quality	Advantage
3rd GEN agarose resin	Top Class	Control	Customer Friendly
More Rigid Highly Porous Higher Flow Rate	Super Resolution Great Speed High Capacity	ISO 9001-2015 Qualified to GMP compliance	Sustainable Quality Fast Delivery Attractive Prices
01	02	03	04

Customer Friendly

Customized product supply through communication with customers

Fast Delivery

Meeting delivery deadlines through inventory management

Sustainable Quality

Ensuring stable quality through quality management based on ISO 9001 standards.

Puriose® | PurioPac®

Affinity — Affinity Chromatography
- ·Puriose ProA
- ·Puriose ProG
- ·Puriose ProL

IEX — Ion Exchange Chromatography
- ·Puriose S
- ·Puriose Q
- ·Puriose DEAE
- ·Puriose CM

HIC — Hydrophobic Interaction Chromatography
- ·Puriose Phenyl
- ·Puriose Butyl

IMAC — Immobilized Metal Ion Affinity Chromatography
- ·Puriose IDA
- ·Puriose Ni-IDA
- ·Puriose NTA
- ·Puriose Ni-NTA

Affinity Chromatography

Introduce

PurioGen Inc's Puriose® affinity chromatography resin is an agarose-based, Protein A and Protein G resins, to capture IgG-based molecules such as antibodies, monoclonal antibodies (mAbs), bi- or tri-specific antibodies, IgG fusion proteins, etc. Thanks to the PurioGen Inc's proprietary resin technology, it is "super-porous" with higher pore volume and surface area and yet exerts superior "rigidity" or mechanical strength, allowing higher linear velocity of the mobile phase.

Characteristics

- More uniform in bead size and its distribution than the competitors' products.
- Higher pore volume and controlled pore size distribution for higher surface area allowing maximum binding capacity.
- Excellent mechanical strength allowing higher throughput.
- Exhibits excellent alkaline stability against 1.0 M NaOH.

Products

Puriose® ProA HP-30

Puriose® ProA FF-30

Puriose® ProG FF-30

Puriose® ProA HP-30

Applications

Monoclonal Antibody Purification
Fc fusion protein Purification

Characteristics

Uniform particle size
High dynamic binding capacity 〉60 mg/mL
Alkaline stable resin
Superior pressure and flow rate performance
Easy column packing

Puriose® ProA HP-30

Matrix	Highly cross-linked agarose
Functional Group	Alkali-tolerant recombinant protein A expressed in E. coli using animal-free medium
Particle size (Dv50)	55 - 65 μm
Dynamic binding capacity (DBC)	〉60 mg human IgG/mL resin Maximum (Residence time : 6 min)
Recommended flow rate	300 cm/h (0.1 MPa, height 25 cm)
pH stability CIP	2~14
pH stability, operational	3~12
Chemical stability	1 M acetic acid, 1 M NaOH, 8 M urea, 6 M guanidine HCl, 30% Isopropanol, 70% Ethanol
Storage	2 to 8°C in 20% ethanol

Product	Pack size	Cat No.
Puriose® ProA HP-30	25 mL	B0201-025m
	100 mL	B0201-100m
	200 mL	B0201-200m
	1 L	B0201-001L
PurioPac® ProA HP-30	1 mL x 1	P0201-01X1
	1 mL x 5	P0201-01X5
	5 mL x 1	P0201-05X1
	5 mL x 5	P0201-05X5

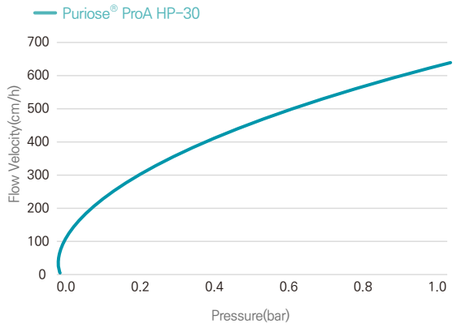


Fig 1. Puriose® ProA HP-30 Pressure Flow Velocity

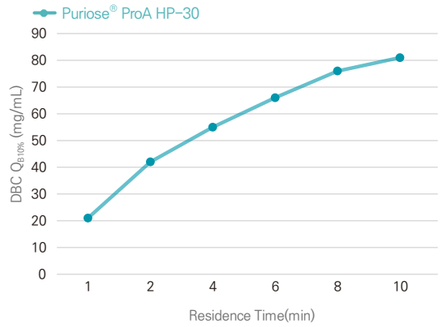


Fig 2. Dynamic Binding Capacity as a function of flow rate

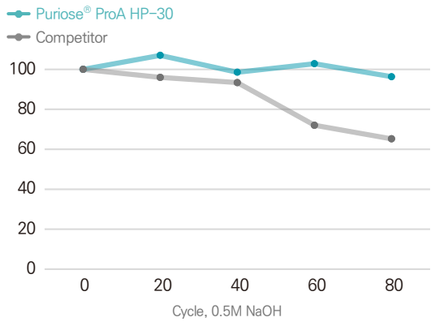


Fig 3. Relative dynamic binding capacity, QB10%, for Puriose® ProA HP-30 after CIP with 0.5 M NaOH for 80 cycles, 15 min contact time.

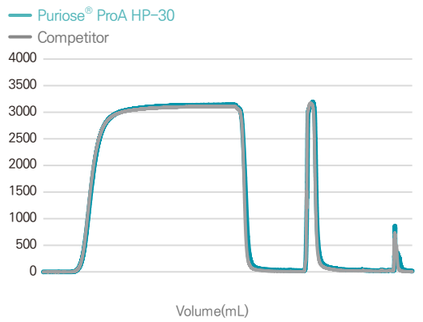


Fig 4. Chromatogram illustrating the separation and purification of mAbs from antibody-expressing CHO cell culture using Puriose® ProA HP-30

Puriose® ProA FF-30

Applications

Monoclonal Antibody Purification
Fc fusion protein Purification

Characteristics

Uniform particle size
High dynamic binding capacity 〉40 mg/mL
Alkaline stable resin
Superior pressure and flow rate performance
Easy column packing

Puriose® ProA FF-30	
Matrix	Highly cross-linked agarose
Functional Group	Alkali-tolerant recombinant protein A expressed in E. coli using animal-free medium
Particle size (Dv50)	80 – 100 μm
Dynamic binding capacity (DBC)	〉40 mg human IgG/mL resin Maximum (Residence time : 6 min)
Recommended flow rate	600 cm/h (0.1 MPa, height 25 cm)
pH stability CIP	2~14
pH stability, operational	3~12
Chemical stability	1 M acetic acid, 1 M NaOH, 8 M urea, 6 M guanidine HCl, 30% Isopropanol, 70% Ethanol
Storage	2 to 8˚C in 20% ethanol

Product	Pack size	Cat No.
Puriose® ProA FF-30	25 mL	B0202-025m
	100 mL	B0202-100m
	200 mL	B0202-200m
	1 L	B0202-001L
PurioPac® ProA FF-30	1 mL x 1	P0202-01X1
	1 mL x 5	P0202-01X5
	5 mL x 1	P0202-05X1
	5 mL x 5	P0202-05X5

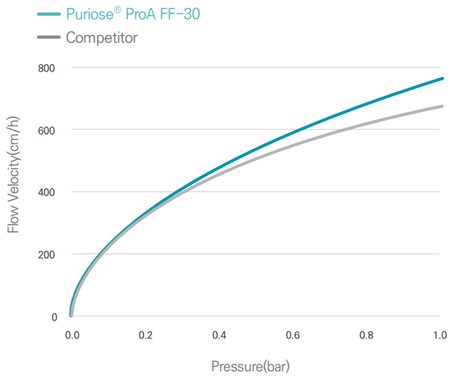


Fig 1. Puriose® ProA FF-30 Pressure Flow Velocity

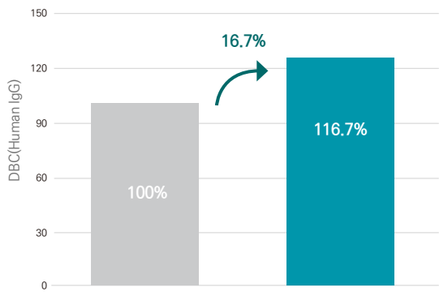


Fig 2. Puriose® ProA FF-30 Dynamic Binding Capacity

Puriose® ProG FF-30

Applications

Monoclonal Antibody Purification
Fc fusion protein Purification

Characteristics

Uniform particle size
High dynamic binding capacity 〉35 mg/mL
Superior pressure and flow rate performance
Easy column packing

Puriose® ProG FF-30	
Matrix	Highly cross-linked agarose
Functional Group	Recombinant protein G
Particle size (Dv50)	80 – 100 μm
Dynamic binding capacity (DBC)	〉35 mg human IgG/mL resin Maximum (Residence time : 6 min)
Recommended flow rate	600 cm/h (0.1 MPa, height 25 cm)
pH stability CIP	2~10
pH stability, operational	3~9
Chemical stability	1 M acetic acid, 1 M NaOH, 8 M urea, 6 M guanidine HCl, 30% Isopropanol, 70% Ethanol
Storage	2 to 8˚C in 20% ethanol

Product	Pack size	Cat No.
Puriose® ProG FF-30	25 mL	B0203-025m
	100 mL	B0203-100m
	200 mL	B0203-200m
	1 L	B0203-001L
PurioPac® ProG FF-30	1 mL x 1	P0203-01X5
	1 mL x 5	P0201-01X5
	5 mL x 1	P0203-05X1
	5 mL x 5	P0203-05X5

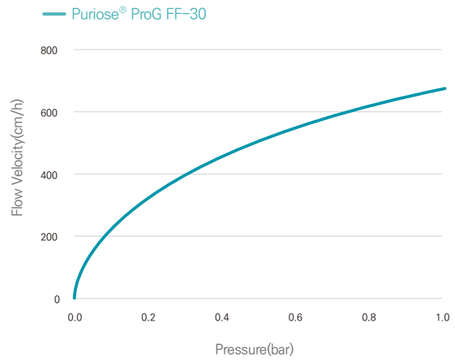


Fig 1. Puriose® ProG FF-30 Pressure Flow Velocity

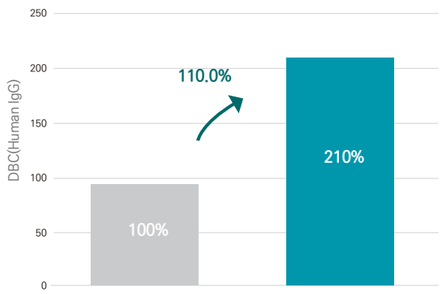


Fig 2. Puriose® ProG FF-30 Dynamic Binding Capacity

Ion Exchange Chromatography

Introduce

PurioGen's Puriose® Ion Exchange chromatography resin is an agarose-based ion exchange resins to capture proteins, peptides, and oligonucleotides, etc. PurioGen's technology enhances the durability of agarose and regulates pores to exhibit high purification efficiency even at elevated flow rates.

Characteristics

- More uniform in bead size and its distribution than the competitors' products.
- Higher pore volume and controlled pore size distribution for higher surface area allowing maximum binding capacity.
- Excellent mechanical strength allowing higher throughput.
- Exhibits excellent alkaline stability against 1.0 M NaOH

Products

Puriose® Q HP-1
Puriose® Q FF-1
Puriose® DEAE HP-1
Puriose® DEAE FF-1
Puriose® S HP-1
Puriose® S FF-1
Puriose® CM HP-30
Puriose® CM FF-30

Puriose® Q HP-1 & Q FF-1

Applications

Protein Purification
Peptide Purification
Oligonucleotide Purification

Characteristics

Uniform particle size
High dynamic binding capacity 〉40 mg/mL
Alkaline stable resin
Superior pressure and flow rate performance
Easy column packing

Puriose® Q HP-1

Matrix	Highly cross-linked agarose
Functional Group	Quaternary amine
Particle size (Dv50)	55 – 65 μm
Dynamic binding capacity (DBC)	〉40 mg BSA/mL resin Maximum (Residence time : 5 min)
Recommended flow rate	200 – 300 μmol Cl^-/mL resin
pH stability	300 cm/h (0.1 MPa, height 25 cm)
Chemical stability	2~14
Storage	2~12
Chemical stability	1 M acetic acid, 1 M NaOH, 8 M urea, 6 M guanidine HCl, 30% Isopropanol, 70% Ethanol
Storage	2 to 25°C in 20% ethanol

Product	Pack size	Cat No.
Puriose® Q HP-1	25 mL	B0403-025m
	100 mL	B0403-100m
	200 mL	B0403-200m
	1 L	B0403-001L
PurioPac® Q HP-1	1 mL x 1	P0403-01X1
	1 mL x 5	P0403-01X5
	5 mL x 1	P0403-05X1
	5 mL x 5	P0403-05X5

Puriose® Q FF-1

Matrix	Highly cross-linked agarose
Functional Group	Quaternary amine
Particle size (Dv50)	80 – 100 μm
Dynamic binding capacity (DBC)	〉40 mg BSA/mL resin Maximum (Residence time : 5 min)
Ionic capacity	200 – 300 μmol Cl^-/mL resin
Recommended flow rate	600 cm/h (0.1 MPa, height 25 cm)
pH stability CIP	2~14
pH stability, operational	2~12
Chemical stability	1 M acetic acid, 1 M NaOH, 8 M urea, 6 M guanidine HCl, 30% Isopropanol, 70% Ethanol
Storage	2 to 25°C in 20% ethanol

Product	Pack size	Cat No.
Puriose® Q FF-1	25 mL	B0404-025m
	100 mL	B0404-100m
	200 mL	B0404-200m
	1 L	B0404-001L
PurioPac® Q FF-1	1 mL x 1	P0404-01X1
	1 mL x 5	P0404-01X5
	5 mL x 1	P0404-05X1
	5 mL x 5	P0404-05X5

Puriose® S HP-1 & S FF-1

Applications

Protein Purification
Peptide Purification

Characteristics

Uniform particle size
High dynamic binding capacity 〉90 mg/mL
Alkaline stable resin
Superior pressure and flow rate performance
Easy column packing

Puriose® S HP-1

Matrix	Highly cross-linked agarose
Functional Group	Sulfonate
Particle size (Dv50)	55 – 65 μm
Dynamic binding capacity (DBC)	〉90 mg BSA/mL resin Maximum (Residence time : 5 min)
Ionic capacity	200 – 300 μmol H^+/mL resin
Recommended flow rate	300 cm/h (0.1 MPa, height 25 cm)
pH stability CIP	2~14
pH stability, operational	2~12
Chemical stability	1 M acetic acid, 1 M NaOH, 8 M urea, 6 M guanidine HCl, 30% Isopropanol, 70% Ethanol
Storage	2 to 25˚C in 100 mM sodium acetate + 20% ethanol

Product	Pack size	Cat No.
Puriose® S HP-1	25 mL	B0303-025m
	100 mL	B0303-100m
	200 mL	B0303-200m
	1 L	B0303-001L
PurioPac® S HP-1	1 mL x 1	P0303-01X1
	1 mL x 5	P0303-01X5
	5 mL x 1	P0303-05X1
	5 mL x 5	P0303-05X5

Puriose® S FF-1

Matrix	Highly cross-linked agarose
Functional Group	Sulfonate
Particle size (Dv50)	80 – 100 μm
Dynamic binding capacity (DBC)	〉90 mg BSA/mL resin Maximum (Residence time : 5 min)
Ionic capacity	200 – 300 μmol H^+/mL resin
Recommended flow rate	600 cm/h (0.1 MPa, height 25 cm)
pH stability CIP	2~14
pH stability, operational	2~12
Chemical stability	1 M acetic acid, 1 M NaOH, 8 M urea, 6 M guanidine HCl, 30% Isopropanol, 70% Ethanol
Storage	2 to 25˚C in 100 mM sodium acetate + 20% ethanol

Product	Pack size	Cat No.
Puriose® S FF-1	25 mL	B0304-025m
	100 mL	B0304-100m
	200 mL	B0304-200m
	1 L	B0304-001L
PurioPac® S FF-1	1 mL x 1	P0304-01X1
	1 mL x 5	P0304-01X5
	5 mL x 1	P0304-05X1
	5 mL x 5	P0304-05X5

Puriose® DEAE HP-1 & FF-1

Applications

Protein Purification
Peptide Purification
Oligonucleotide Purification

Characteristics

Uniform particle size
Alkaline stable resin
Superior pressure and flow rate performance
Easy column packing

Puriose® DEAE HP-1

Matrix	Highly cross-linked agarose
Functional Group	Diethylaminoethyl
Particle size (Dv50)	55 – 65 μm
Ionic capacity	150 – 250 μmol Cl^-/mL resin
Recommended flow rate	300 cm/h (0.1 MPa, height 25 cm)
pH stability, CIP	2~14
pH stability, operational	2~12
Chemical stability	1 M acetic acid, 1 M NaOH, 8 M urea, 6 M guanidine HCl, 30% Isopropanol, 70% Ethanol
Storage	2 to 25˚C in 20% ethanol

Product	Pack size	Cat No.
Puriose® DEAE HP-1	25 mL	B0407-025m
	100 mL	B0407-100m
	200 mL	B0407-200m
	1 L	B0407-001L
PurioPac® DEAE HP-1	1 mL x 1	P0407-01X1
	1 mL x 5	P0407-01X5
	5 mL x 1	P0407-05X1
	5 mL x 5	P0407-05X5

Puriose® DEAE FF-1

Matrix	Highly cross-linked agarose
Functional Group	Diethylaminoethyl
Particle size (Dv50)	80 – 100 μm
Ionic capacity	150 – 250 μmol Cl^-/mL resin
Recommended flow rate	600 cm/h (0.1 MPa, height 25 cm)
pH stability	2~14
pH stability, operational	2~12
Chemical stability	1 M acetic acid, 1 M NaOH, 8 M urea, 6 M guanidine HCl, 30% Isopropanol, 70% Ethanol
Storage	2 to 25˚C in 20% ethanol

Product	Pack size	Cat No.
Puriose® DEAE FF-1	25 mL	B0408-025m
	100 mL	B0408-100m
	200 mL	B0408-200m
	1 L	B0408-001L
PurioPac® DEAE FF-1	1 mL x 1	P0408-01X1
	1 mL x 5	P0408-01X5
	5 mL x 1	P0408-05X1
	5 mL x 5	P0408-05X5

Puriose® CM HP–30 & FF–30

Applications

Protein Purification
Peptide Purification

Characteristics

Uniform particle size
Alkaline stable resin
Superior pressure and flow rate performance
Easy column packing

Puriose® CM HP–30

Matrix	Highly cross–linked agarose
Functional Group	Carboxymethyl
Particle size (Dv50)	55 – 65 μm
Ionic capacity	100 – 120 μmol H^+/mL resin
Recommended flow rate	300 cm/h (0.1 MPa, height 25 cm)
pH stability	2~12
Chemical stability	1 M acetic acid, 1 M NaOH, 8 M urea, 6 M guanidine HCl, 30% Isopropanol, 70% Ethanol
Storage	2 to 25˚C in 20% ethanol

Product	Pack size	Cat No.
Puriose® CM HP–30	25 mL	B0305–025m
	100 mL	B0305–100m
	200 mL	B0305–200m
	1 L	B0305–001L
PurioPac® CM HP–30	1 mL x 1	P0305–01X1
	1 mL x 5	P0305–01X5
	5 mL x 1	P0305–05X1
	5 mL x 5	P0305–05X5

Puriose® CM FF–30

Matrix	Highly cross–linked agarose
Functional Group	Carboxymethyl
Particle size (Dv50)	80 – 100 μm
Ionic capacity	100 – 120 μmol H^+/mL resin
Recommended flow rate	600 cm/h (0.1 MPa, height 25 cm)
pH stability	2~12
Chemical stability	1 M acetic acid, 1 M NaOH, 8 M urea, 6 M guanidine HCl, 30% Isopropanol, 70% Ethanol
Storage	2 to 25˚C in 20% ethanol

Product	Pack size	Cat No.
Puriose® CM FF–30	25 mL	B0306–025m
	100 mL	B0306–100m
	200 mL	B0306–200m
	1 L	B0306–001L
PurioPac® CM FF–30	1 mL x 1	P0306–01X1
	1 mL x 5	P0306–01X5
	5 mL x 1	P0306–05X1
	5 mL x 5	P0306–05X5

Immobilized Metal Ion Affinity Chromatography

Puriose IDA resin is Immobilized Metal Ion Affinity Chromatography (IMAC) utilizing iminodiacetic acid (IDA) as a functional group. IDA is capable of binding to various metal ions such as Ni2+, Co2+, Cu2+, Zn2+, allowing for tailored applications. Metal ions bound to IDA can be used for purifying proteins with His–tags or proteins with affinity to metal ions. Typically, proteins possess some affinity towards positively charged metal ions due to amino acids carrying a negative charge on their surface, but the presence of amino acids like histidine, which can coordinate with metal ions, can enhance this affinity.

The protein binding affinity follows the order Cu2+ 〉 Ni2+ 〉 Zn2+ 〉 Co2+, meaning higher binding affinity results in higher protein yield, but also potentially lower purity due to increased nonspecific binding of impurities.

Applications

His–tag protein Purification

Characteristics

Uniform particle size
Superior pressure and flow rate performance
Easy column packing

Puriose® IDA FF–1

Matrix	Highly cross–linked agarose
Functional Group	Iminodiacetic acid
Particle size (Dv50)	80 – 100 μm
Capacity before charging with Cu^{2+}	40 – 70 umol Cu^{2+}/mL resin (Residence time : 5 min)
Recommended flow rate	600 cm/h (0.1 MPa, height 25 cm)
pH stability	2~12
Chemical stability	1 M acetic acid, 1 M NaOH, 8 M urea, 6 M guanidine HCl, 30% Isopropanol, 70% Ethanol
Storage	2 to 25˚C in 20% ethanol

Product	Pack size	Cat No.
Puriose® IDA FF–1	25 mL	B0504–025m
	100 mL	B0504–100m
	200 mL	B0504–200m
	1 L	B0504–001L
PurioPac® IDA FF–1	1 mL x 1	P0504–01X1
	1 mL x 5	P0504–01X5
	5 mL x 1	P0504–05X1
	5 mL x 5	P0203–05X5

Puriose® Ni–IDA FF–1

Matrix	Highly cross–linked agarose
Functional Group	Iminodiacetic acid
Particle size (Dv50)	80 – 100 μm
Capacity before charging with Ni^{2+}	40 – 70 umol Ni^{2+}/mL resin (Residence time : 5 min)
Recommended flow rate	600 cm/h (0.1 MPa, height 25 cm)
pH stability	2~12
Chemical stability	1 M acetic acid, 1 M NaOH, 8 M urea, 6 M guanidine HCl, 30% Isopropanol, 70% Ethanol
Storage	2 to 25˚C in 20% ethanol

Product	Pack size	Cat No.
Puriose® Ni–IDA FF–1	25 mL	B0505–025m
	100 mL	B0505–100m
	200 mL	B0505–200m
	1 L	B0505–001L
PurioPac® Ni–IDA FF–1	1 mL x 1	P0505–01X1
	1 mL x 5	P0505–01X5
	5 mL x 1	P0505–05X1
	5 mL x 5	P0505–05X5