Hydrophobic interaction chromatography resins

UniHR series HIC resins

UniHR Butyl and UniHR Phenyl are the two major classes of NanoMicro's HIC resin products. Their supports are highly crosslinked polymethacrylate beads of uniform particle size and open pore structure. Through proprietary surface hydrophilization and HIC ligand coupling chemistries, these resins are enabled with low non-specific adsorption property. UniHR Butyl and UniHR Phenyl HIC resins have been used by many biopharmaceutical customers for varied application.

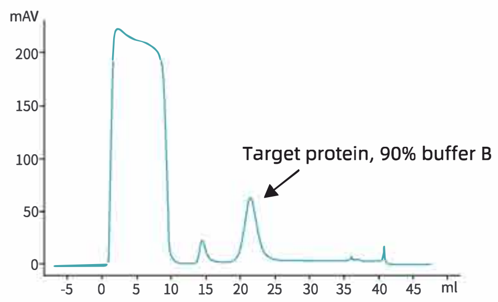
Characteristics of UniHR Butyl and UniHR Phenyl HIC resins

Product name	UniHR Butyl-30S	UniHR Butyl-30L	UniHR Butyl-60S	UniHR Butyl-80L	UniHR Phenyl-30S	UniHR Phenyl-30L	UniHR Phenyl-60S	UniHR Phenyl-80L
Matrix	Monodisperse highly crosslinked polymethacrylate beads							
Ligand	Butyl				Phenyl			
Particle size (μm)	~35	~32	~60	~80	~35	~32	~60	~80
Pore size (Å)	500	1000	500	1000	500	1000	500	1000
Dynamic binding capacity (mg/mL)	23	15	20	10	30	15	20	10
Operating pressure (MPa)	1.0	1.0	0.8	0.5	1.0	1.0	0.8	0.5
pH stability	2-12							
Storage	20% ethanol, 4-25 ℃							

* DBC (10% breakthrough) of resins is measured using lysozyme.

Application cases

Purification of a rotavirus vaccine by UniHR Phenyl-60L



CV: 1 mL
Sample: Eluent of UniGel-80Q AEX, dilute with 3M $(NH_4)_2SO_4$, pH 7.0
Flow rate: 2.5 mL/min
Buffer A: 1.5 M $(NH_4)_2SO_4$ +20 mM Tris-HCl, pH 7.0
Buffer B: 20 mM Tris-HCl, pH 7.0
Elution: 50% B, 10 CV; 100% B, 5 CV; 90% B, 10CV

After a one-step HIC, the purity of rotavirus increased from 85% to over 99%, with a yield exceeding 90%. In comparison to similar products available in the market, UniHR Phenyl-60L exhibits a higher DBC of 20 mg rotavirus/mL resin, superior resolution, and enhanced efficiency in removing impurities, resulting in a more cost-effective purification process.

Ordering information

Product name	Cat. No.	Package size
UniHR Phenyl-30S	06131-030050	30mL, 100mL, 500mL, 1L, 5L, 10L, 50L, 100L
UniHR Phenyl-30L	06131-030100	
UniHR Phenyl-60S	06131-060050	
UniHR Phenyl-80L	06131-080100	
UniHR Butyl-30S	06132-030050	
UniHR Butyl-30L	06132-030100	
UniHR Butyl-60S	06132-060050	
UniHR Butyl-80L	06132-080100	

NanoHR series HIC resins

NanoHR Butyl-15L and NanoHR Phenyl-15L are two types of NanoMicro's HIC resin products made with rigid PS/DVB beads of uniform particle size and open pore structure. Through polyhydroxyl surface modification, these HIC resins are enabled with low non-specific binding property. They are intended for high resolution polishing purification of small or medium size biomolecules.

Characteristics of NanoHR Butyl-15L and NanoHR Phenyl-15L HIC resins

Product name	NanoHR Butyl-15L	NanoHR Phenyl-15L
Matrix	Monodisperse PS-DVB bead	
Ligand	Butyl	Phenyl
Particle size (μm)	15	
Pore size (Å)	1000	
Dynamic binding capacity (mg/mL)	~25 (Lys)	~30 (Lys)
Operating pressure (MPa)	4.0	
pH stability	1-14	
Storage	20% ethanol, 4-25 ℃	

Ordering information

Product name	Cat. No.	Package size
NanoHR Phenyl-15L	06141-015100	30mL, 100mL, 500mL, 1L, 5L, 10L, 50L, 100L
NanoHR Butyl-15L	06142-015100	

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