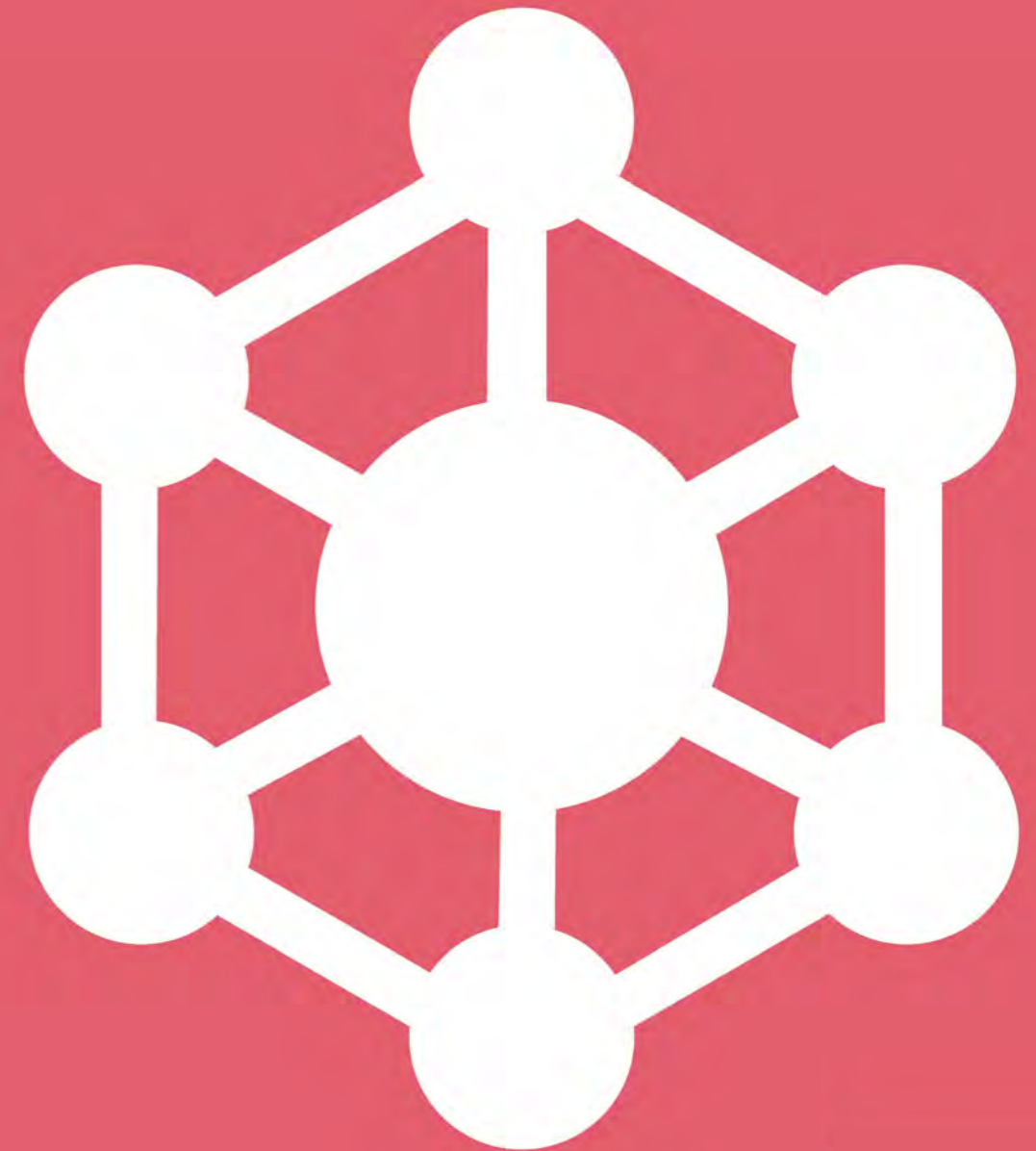


# Multimodal chromatography resins



## NW Rose Viral M and NW Rose Viral L multimodal resins >>>

NW Rose Viral M and NW Rose Viral L are chromatography resins that go by a multimodal of ion exchange, hydrophobic interaction, and size exclusion. These resins are specifically designed for the intermediate purification and polishing of large biomolecules, including virus-like particles and mRNA. The inert small pores within the resin microspheres serve to restrict the entry and adsorption of virus-like particles. Virus-like particles effortlessly traverse the gaps between the microspheres, while impurities such as HCP and nucleic acid fragments navigate into the pores of the microspheres and are subsequently captured by IEX and HIC groups within those pores. This process effectively achieves rapid virus isolation and purification.

The NW Rose Viral series multimodal resins elevate dynamic binding capacity (DBC) and sample loading volume, making them ideal for industrial downstream purification processes.

### Characteristics of NW Rose Viral M and NW Rose Viral L multimodal resins

Product name	NW Rose Viral M	NW Rose Viral L
Matrix	Highly crosslinked agarose bead	
Particle size (µm)	70-80	
Molecular Weight (MW) Cut-Off	400~450 KD	650~700 KD
Maximum flow rate (cm/h)	750	
Operating pressure (MPa)	0.3	
pH stability	2-12 (operational), 2-14 (CIP)	
Storage	20% ethanol, 4-30 °C	

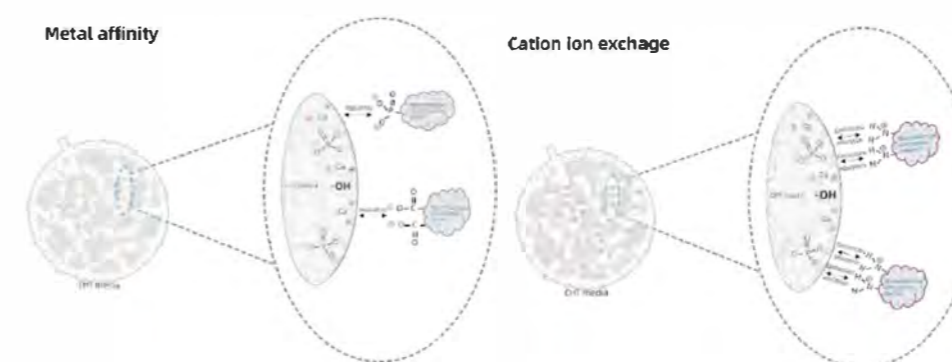
### Ordering information

Product name	Cat. No.	Package size
NW Rose Viral M	60053-372400	25mL, 100mL, 500mL, 1L, 5L, 10L
NW Rose Viral L	60053-548100	

## NMCHT Type I and NMCHT Type II multimodal media >>>

Ceramic hydroxyapatite (CHT) is a hydroxyapatite-based composite material with important application value as a chromatographic medium. It has a spherical appearance and macropores. Unlike traditional chromatographic media, CHT is a mixed-mode resin with both metal affinity and cation ion exchange capabilities offers a unique selectivity that can provide unique and effective purification solutions. CHT chromatography media can be used for the purification of various types of biomacromolecules, including: antibodies, virus-like particles, vaccines, recombinant proteins and nucleic acid, etc.

NMCHT Type I has a higher binding capacity and is suitable for small protein purification. NMCHT Type II has a larger pore size and is more suitable for the purification of macromolecules such as viruses, IgM, VLPs, plasmids, etc.



### Characteristics of NMCHT Type I and NMCHT Type II multimodal media

Product name	NMCHT Type I	NMCHT Type II
Functional group	Ca <sup>2+</sup> , PO <sub>4</sub> <sup>3-</sup> , -OH	
Particle size	40±4 µm	
Tap-settled density	0.72 g/ml	
DBC (IgG)	~35 mg/ml	~15 mg/ml
Recommended flow rate	50-1000 cm/h	
Sanitization	1-2 M NaOH	
pH stability	6.5-14, at least 1year in 1 M NaOH	
Regeneration	0.4 M sodium phosphate buffer pH 7-7.5 1 M trisodium phosphate pH 11-12 If a higher phosphate concentration is required, please use 0.4-1 M potassium phosphate buffer	
Autoclavability	121 °C, 20 min, phosphate buffer, pH 7	
Storage*	0.1 M NaOH, room temperature	

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

### Ordering information

Product name	Cat. No.	Package size
NMCHT Type I	80000-040001	10g, 100g, 1Kg, 5Kg
NMCHT Type II	80000-040002	