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# NMCHT Ceramic Hydroxyapatite

Muti-mode Chromatography Media

## Product Information

# NMCHT

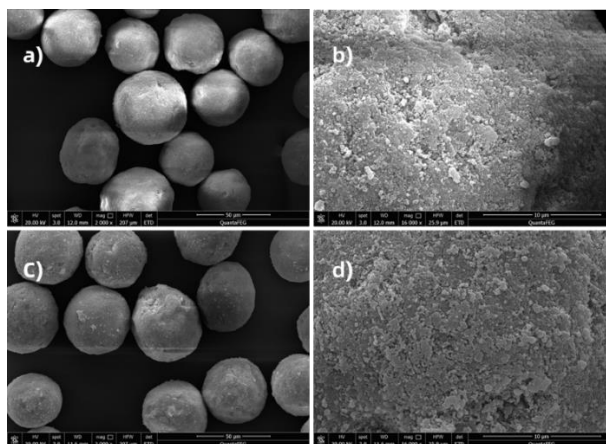
## Muti-mode chromatography media

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 particles, vaccines, recombinant proteins and nucleic acid, etc.

We produce hydroxyapatite with high-quality raw material through a proprietary process with stable microstructure (shown in Figure 1), enabling precise control over particle size, pore size, and porosity. The media has the following characteristics:

- Large pore size allows large molecules to be adsorbed and eluted in a short time, leading to a high purification efficiency and yield.
- Good mechanical strength enables a more uniform flow of fluids within the bed layer and reduces pressure drop at a higher column bed.
- Higher manufacturing productivity meets the purification needs of different biological products.

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, VLP particles, plasmids, etc. Both types are available in 40  $\mu\text{m}$ .



**Figure 1. SEM image of NMCHT Type I, 2000 $\times$ (a), 16000 $\times$ (b); SEM image of NMCHT Type II, 2000 $\times$ (c), 16000 $\times$ (d);**

**Table 1. Technical parameter for CHT media.**

Product name	NMCHT Type I	NMCHT Type II
Functional group	Ca <sup>2+</sup> , PO <sub>4</sub> <sup>3-</sup> , -OH	
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 $^{\circ}\text{C}$ , 20 min, phosphate buffer, pH 7.	
Storage*	0.1 M NaOH, room temperature	

\* Please store the product at room temperature in original packaging. Here are the recommended storage conditions once the package has been opened.