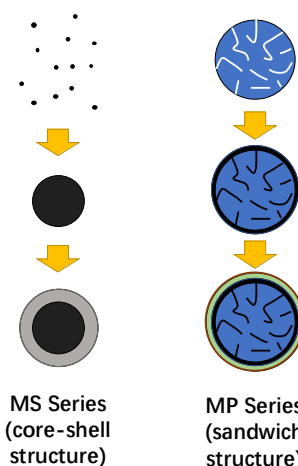


**MagneStar<sup>®</sup>** magnetic beads, developed by *NanoMicro Technology Co. Ltd.*, are high-quality superparamagnetic microspheres with the following properties: highly uniform size, rapid magnetic response, low non-specific adsorption and high binding capacity of bioligands. Magnetic beads bear unique advantages in analyzing and purifying biomaterials. Magnetic-bead-assisted techniques avoid possible denaturation of biomaterials caused by conventional purification techniques, thus are widely used in different areas related to in-vitro diagnostics (IVD). Besides, magnetic beads are also ideal options for rapid purification of small-scale biological samples.

**MagneStar<sup>®</sup>** magnetic bead product series includes silica magnetic beads, hydroxyl magnetic beads, amine magnetic beads and carboxyl magnetic beads. Based on the difference of structure and surface coating materials, MagneStar<sup>®</sup> magnetic beads are divided into two categories: **MS series** (sub-micron size) and **MP series** (multi-micron size).

## Key Features

- Multiple sizes available from 300 nm to 5  $\mu\text{m}$
- Excellent size uniformity, CV < 10%
- Rapid magnetic response, complete separation within 20 sec
- Perfect dispersity in aqueous buffer media
- Unique multilayer surface coating with minimal non-specific adsorption
- Various surface functionalities for covalent binding of bioligands
- Professional custom synthesis in answer to user-specific requests



## Characteristics

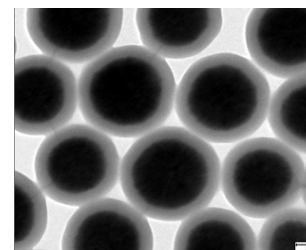
	MS Series	MP Series
<b>Structure</b>	Core-shell type	Sandwich type
<b>Particle Size</b>	300 nm, 500 nm, 1000 nm	1 $\mu\text{m}$ , 3 $\mu\text{m}$ , 5 $\mu\text{m}$ *
<b>Ferrite Content **</b>	50 – 80 wt. %	10 – 20 wt. %
<b>Saturation Magnetization</b>	> 40 emu/g	5 – 20 emu/g
<b>Type of Magnetization</b>	Superparamagnetic	Superparamagnetic
<b>Surface Coating Material</b>	Silica	Hydrophilic Polymer
<b>Functional Group</b>	Silanol, Carboxyl	Amine, Carboxyl, Streptavidin
<b>Main Applications</b>	<ul style="list-style-type: none"> <li>● Nucleic acid isolation</li> <li>● Molecular diagnostics</li> <li>● Purification of small molecules</li> </ul>	<ul style="list-style-type: none"> <li>● Chemiluminescence immunoassay</li> <li>● Immuno(co)precipitation</li> <li>● Magnetic cell separation</li> <li>● Suspension array analysis</li> </ul>

\* Beads larger than 5  $\mu\text{m}$  are available as custom products.

\*\* Ferrite content is adjustable according to customer requirements.

## Silica Coated Magnetic Beads (MS Series)

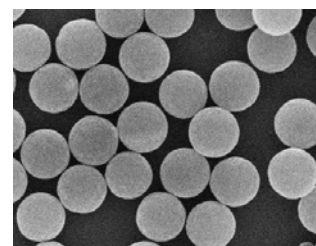
**MagneStar® MS** magnetic beads are core-shell type microspheres with a magnetic iron oxide core and a silica shell. The hydrophilicity of the silica shell provides MS series magnetic beads with long term suspension stability in aqueous media. The relatively high ferrite content and rapid magnetic response make these magnetic beads particularly suitable for automated analytical instruments. MS magnetic beads are mainly used in molecular biology, including nucleic acid isolation, NGS size selection, PCR cleanup, etc. Besides, MS magnetic beads can be used in specific capture of nucleic acid sequences and other small molecule biomarkers.



Cat. No.	Product Name	Nominal Diameter	Package Size
13001-000300	MS300-SiOH	300 nm	Stored in 20% ethanol 2.0% solids content  <b>Standard package sizes:</b> 25 g, 100 g, 500 g
13001-020300	MS300-COOH		
13001-000500	MS500-SiOH	500 nm	
13001-020500	MS500-COOH		
13001-001000	MS1000-SiOH	1000 nm	
13001-021000	MS1000-COOH		

## Functional Polymer Magnetic Beads (MP Series)

**MagneStar® MP** magnetic beads bear sandwich type structure. The magnetite layer is interbedded between a polymer core and encapsulating outer layers. The surface of MP magnetic beads is coated by a layer of hydrophilic polymer, which reduces non-specific adsorption and provides surface functional groups for covalent attachment of biological ligands. MP magnetic beads have highly uniform sizes with CV < 5% and good batch-to-batch consistency, making them satisfactory for IVD assay development. They can also find applications in many other areas e.g. magnetic separation of cells, magnetic carriers of enzyme catalysts, suspension arrays, etc.



Cat. No.	Product Name	Nominal Diameter	Package Size
13002-011000	MP1-NH2	1 µm	Stored in deionized water 2.0% solids content  <b>Standard package sizes:</b> 25 mL, 100 mL, 500 mL
13002-021000	MP1-COOH		
13002-013000	MP3-NH2	3 µm	
13002-023000	MP3-COOH		
13002-015000	MP5-NH2	5 µm	
13002-025000	MP5-COOH		

## Affinity Ligand Conjugated Magnetic Beads (MP Series)

Cat. No.	Product Name	Nominal Diameter	Package Size
13002-041000	MP1-Streptavidin	1 µm	Stored in neutral buffer 1.0% solids content  <b>Standard package sizes:</b> 10 mL, 50 mL
13002-043000	MP3-Streptavidin	3 µm	

Please contact your sales representative for custom products or package sizes that are not listed.