
Product Specification

Product Name: NHS-Activated MagPoly Beads

Product Code: MAGP009 / MAGP010 / MAGP011 / MAGP012

PRODUCT DESCRIPTION:

NHS-Activated Magpoly Beads are pre-activated polymer magnetic microspheres and can be used directly in the coupling of amino proteins or polypeptides. The pre-activation media can be prepared into special affinity media as required, and the corresponding substances can be quickly and effectively purified in one step from the complex system.

Product Code	Size
MAGP009	1 ml
MAGP010	10 ml
MAGP011	25 ml
MAGP012	100 ml

Item	Description
Matrix:	Polymer magnetic beads
Particle Size (μm):	1 μm
Storage Buffer:	100% Isopropanol
Concentration of Magnetic Beads:	10 mg/ml
Storage Temperature:	- 20°C

COUPLING PROCEDURE

1. Buffer Preparation

Water and chemicals used for the buffer preparation should be of high purity. It is recommended to filter the buffers by passing them through a 0.22 μm or 0.45 μm filter before use.

Cleaning Buffer: 1mM HCl

Coupling Buffer: 0.2M NaHCO₃, 0.5M NaCl, pH 8.0

Blocking Buffer: 0.5M ethcholine, 0.5M NaCl, pH 8.3 or 0.1M Tris, pH 8.5

Wash Buffer 1: 0.1M acetic acid-sodium acetate, 0.5M NaCl, pH 4.0

Wash Buffer 2: 0.1M Tris-HCl, 0.5M NaCl, pH 8.0

Storage Buffer: 1X PBS containing 20% ethanol

Note: The Coupling Step should be performed in bicarbonate or borate buffers. Tris and other buffer salts containing amino groups or other nucleophilic components **should NOT** be used since these will be coupled to the medium instead.

2. Sample Preparation

Dissolve the sample in coupling solution with a concentration of about 5-10mg/ml.

3. Ligand Coupling

- 1) Prepare appropriate amounts of NHS-Activated Magpoly Beads, then remove the Storage Buffer after the magnetic beads are adsorbed. Wash the Beads with 1mM HCl solution and remove the buffer after the wash. Afterwards, add the Coupling Buffer to the magnetic beads and mix well.

Note: The **magnetic beads** are to be **immediately placed on the Magnetic Separation Rack** for adsorption after mixing with the cleaning buffer. Pre-cooled buffers can be selected for quick cleaning to reduce the hydrolysis of pre-activated media.

- 2) Add the dissolved samples to the cleaned NHS-Activated Magpoly Beads suspended in the Coupling Buffer. The volume ratio of the sample solution should be about 1:1 or 1:2.
- 3) Place the centrifuge tube on a Rotating Mixer and gently rotate the tube at 28°C for 2-4 hours or 4°C overnight.

Note: Make sure the magnetic beads are suspended in the solution, otherwise, the coupling efficiency would be greatly affected.

- 4) After the reaction, adsorb the coupled magnetic beads using a Magnetic Separation Rack then remove the supernatant. Clean the magnetic beads with deionized water and remove the supernatant after the adsorption of the magnetic beads. Add the Blocking Buffer and gently oscillate the beads on a Rotating Mixer for 1 hour at 28°C.
- 5) Remove the Blocking Buffer from the magnetic beads after adsorption. Wash the magnetic beads with deionized water using 3 times the volume of the magnetic beads then remove the supernatant after adsorption. Wash the beads again with wash buffer 1, followed by deionized water, wash buffer 2, then Deionized water again. Repeat the washing step one more time and then store in an equal volume of Storage Buffer at 2°C-8°C.

Rev 0