

Technical data sheet 0502

magNP-OH

MagNP-OH are magnetic particles of one magnetic core with a coating matrix of polymers with terminal functionalized groups.

Magnetic separation techniques are becoming increasingly important with a wide range of possible applications in the biosciences thanks to their potential application in cell isolation, enzyme immobilization, protein separation and pre-concentration of targets from crude samples in a rapid way.

The unique and attractive property of magnetic carrier materials is that they can readily be isolated from sample solutions by the application of an external magnetic field. This also makes biomagnetic separation ideal for automated assay/analysis systems which will play a very important role in the near future.

MagNP-OH's are available in aqueous suspension stabilized with surfactants. Thus, they have to be cleaned before use.

Should any of our materials fail to perform to our specifications, we will be pleased to provide replacements or return the purchase price. We solicit your inquiries concerning all needs for life sciences work. The information given in this bulletin is to the best of our knowledge accurate, but no warranty is expressed or implied. It is the user's responsibility to determine the suitability for their own use of the products described herein, and since conditions of use are beyond our control, we disclaim all liability with respect to the use of any material supplied by us. Nothing contained herein shall be construed as a recommendation to use any product or to practice any process in violation of any law or any government regulation.

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Characteristics

Particles composition:
Methyl methacrylate-co-hydroxyl ethyl methacrylate-co-ethylene glycol dimethacrylate (MMA-co-HEMA-co-EGDMA); Magnetite (γ -Fe₃O₄) content = 90 % v/v

Mean diameter particle: \approx 100 nm

Saturation magnetization: 30 emu g⁻¹

Packaging: 250 mL aqueous suspension (2 mg/mL) stabilised with surfactants

Storage and Stability

Store at 4-8°C. **Do not freeze!**

Ordering information

Reference	Description	Size
05-02-250	magNP-OH	250 mL

Shake before using

More information:

Synthesis of a novel polyurethane-based-magnetic imprinted polymer for the selective optical detection of 1-naphthylamine in drinking water.

[Biosens. Bioelectr. 26 \(2011\) 4520-4525](#)

Novel strategy to design magnetic, molecular imprinted polymers with well controlled structure for the application in optical sensors.

[Macromolecules 43 \(2010\) 55-61](#)

Luminescent Miniemulsion solvent evaporations: a simple a versatile way to magnetic nanosensors.

[Microchim. Acta 172 \(2011\) 299-308](#)

One-step fabrication of multifunctional core-shell fibres by co-electrospinning.

[Adv. Funct Mater. 21 \(2011\) 3488-3495](#)

This product is for research use only is not intended for use in humans or for in vitro diagnostic use.

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Wash Protocol

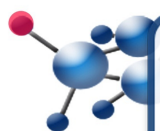
magNP-OH

MagNP-OH particles are available in aqueous suspension stabilized with surfactants. Thus, they have to be cleaned before use. Please follow the next procedure to eliminate the surfactant content.

- 1)** Centrifuge 50 mL of magNP-OH suspension at 7200 rpm for 20 min. Discard the supernatant.
- 2)** Add 20 mL of water and re-disperse the particles ensuring that they are well suspended (Vortexing, sonication, or rolling should aid in resuspension). Repeat steps **1)** and **2)** two times.
- 3)** Add 20 mL of a water-methanol solution (50/50 v/v) and vortex the particles thoroughly.
- 4)** Centrifuge at 7200 rpm for 20 min. Discard the supernatant.
- 5)** Add 20 mL of methanol and vortex the particles thoroughly.
- 6)** Centrifuge at 7200 rpm for 20 min. Discard the supernatant.
- 7)** Add 10 mL of methanol and vortex the particles thoroughly.
- 8)** Collect magNP-OH particles with a magnet for 6 hours and discard the brown supernatant. Thus, you will ensure getting the more superparamagnetic particles.
- (9)** Finally, resuspend pellet in 5 mL of methanol or any other organic solvent (AcN, THF, acetone, etc.)

This protocol describes the wash procedure for 50 mL of magNP-OH particles. It can be scaled up by adjusting volumes of required reagents.

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