

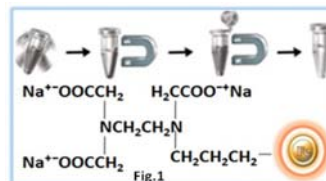
BcMag™ EDTA Magnetic Beads

Introduction

BcMag™ EDTA Magnetic Particles are silica-based superparamagnetic particles coated with high density EDTA (Ethylene Diamine Triacetic Acid) functional groups on the surface. The beads are used to chelate metal ion such as Ni^{2+} , CO^{2+} and *etc.*

Features and Advantages:

- Quick, Easy and one-step high-throughput procedure to chelate metal ions; eliminates columns or filters, and laborious repeat of pipetting or centrifugation (Fig.1)
- High capacity
- Reproducible results



Product Specificities		
Composition	Silica-coated iron oxide magnetic beads grafted with EDTA group on the surface	
Bead Size	~1 μm diameter; ~5 μm diameter	
Number of Beads	~1.7 x 10 ⁸ beads (1 μm beads) /mg; ~5 x 10 ⁷ beads (5 μm beads) /mg	
Surface Area	~100 m ² /g	
Stability	Short Term (<1 hour): pH 3-11; Long-Term: pH 4-10 Temperature: 4°C -140°C; Most organic solvents	
Magnetization	~40-45 EMU/g	
Type of Magnetization	Superparamagnetic	
Effective Density	2.5 g/ml	
Concentration	30 mg/ml in 100 mM sodium phosphate, pH 6.81M NaCl, 20% Ethanol	
Functional Group Density	1 μm Magnetic Beads	~65 $\mu\text{Mol NiSO}_4$ / Gram of Beads
	5 μm Magnetic Beads	~50 $\mu\text{Mol NiSO}_4$ / Gram of Beads
Storage	Store at 4°C upon receipt.	

Protocol

1. Magnetic Beads Preparation

1. Shake the bottle to resuspend the beads thoroughly.
2. Transfer desired amount of magnetic beads to a centrifuge tube.
3. Place the tube on the magnetic separator for 1-3 minutes. Remove the supernatant while the tube remains on the separator. Remove the tube and resuspend the beads thoroughly with $\text{d}_2\text{H}_2\text{O}$. Place the tube on the magnetic separator for 1-3 minutes. Remove the supernatant while the tube remains on the separator.
4. Repeat step 3 once.
5. Wash the beads with downstream application buffer once as described in step 3
6. The beads is ready to use or store at 4°C.