



Leading the Way

LodeStarsTM

Biomagnetic Separation Technology

- High Performance LodeStars Superparamagnetic Particles
- LodeStars Products for Bioscience Applications
- Fast, Efficient & Easy to Use
- Affordable



Polymer Laboratories

Biomagnetic separation today is a mainstream technology in life science research, clinical diagnostics and therapeutics. With so many new and demanding applications, it is vital that research scientists, product developers, manufacturers and healthcare professionals have access to top quality paramagnetic particle products which they can rely on for performance and consistency.

Polymer Laboratories' (PL) new LodeStars™ are high performance, superparamagnetic particles with excellent physical and chemical characteristics designed for biomagnetic separations. Based on PL's patented technology and experience, LodeStars is a powerful magnetic platform for bioscience and diagnostic applications.

LodeStars are polymer microparticles with a microcrystalline ferric oxide component uniformly dispersed throughout the bead. This provides the beads with their superparamagnetic properties, causing them to move rapidly in an applied magnetic field. Also, because no permanent magnetism is induced, the LodeStars fully disperse once the field is removed.

The beads are coated in a polymer shell which provides two key properties. This design ensures that the iron is protected inside the bead and cannot interfere with biological reagents. In addition, the polymer coating provides chemical groups for covalent attachment of biological molecules, eg, antibodies for immunocapture.

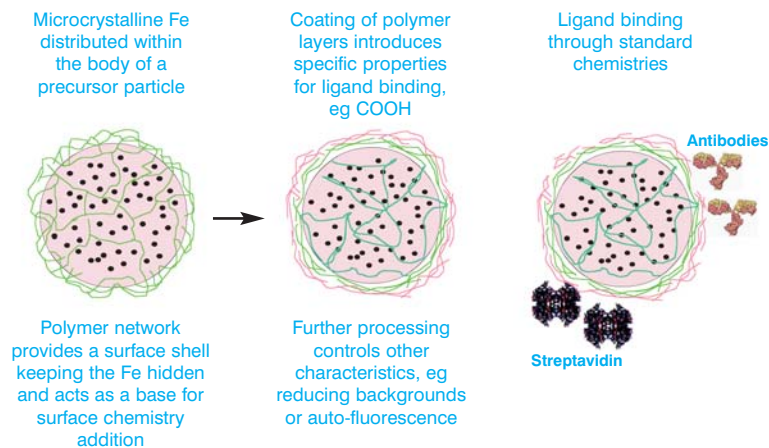
LodeStars are used as a solid phase in manual and automated bioassay, and to isolate and manipulate targets in biological samples, eg, cells, proteins and other molecules.



Monodisperse LodeStars Particles



LodeStars™ Particle Design



Binding Capacity Comparisons

LodeStars 2.7 Streptavidin Compared with a Leading Competitor's 2.7 Streptavidin Product

	Biotin binding capacity (Oregon Green® 488 - desthiobiocytin conjugate)	Biotinylated antibody binding capacity (Biotinylated IgG goat anti-fluorescein)
LodeStars 2.7 Streptavidin	>900 pmole/mg	6.3µg/mg
Competitor's 2.7 Streptavidin equivalent	>800 pmole/mg	3.0µg/mg

In each case, LodeStars 2.7 Streptavidin showed improved performance metrics

LodeStars 2.7 Carboxyl Compared with a Leading Competitor's 2.7 Carboxyl

	Affinity-purified polyclonal goat anti-mouse IgG (Fc)	Immunocapture of mouse IgG	Performance (µg/µg)
LodeStars 2.7 Carboxyl	9µg/mg	4.0µg/mg	
Competitor's 2.7 Carboxyl equivalent	11µg/mg	2.8µg/mg	

In these experiments, LodeStars 2.7 Carboxyl consumed less goat-anti mouse first antibody and more mouse IgG than the leading competitor. The LodeStars' surface allows high functional availability, leading to better all round performance metrics.

LodeStars™ Biomagnetic Separation Technology

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CS0953/A/6.05

Contact the UK office for details of your local distributor

Your local distributor is:



Polymer Laboratories



Polymer Laboratories (PL) is the largest independent bead developer and manufacturer in the bioscience industry. Founded in 1976 and privately owned, PL has 180 staff serving major markets in bead-based assays, chromatography media, resins for combichem and supports for peptide and oligonucleotide synthesis.

PL manufactures polymer microparticles with engineered structure and highly controlled surfaces with batch-to-batch consistency. In response to client partners' needs, PL applies its abilities and technologies to make bead products directed towards specific applications. As a result, PL is a key OEM development partner and supplier of beads to major diagnostic and bioscience companies worldwide.

Headquarters and state-of-the-art production and R&D facilities are at Church Stretton, UK, with subsidiary offices located in Amherst, MA (USA), Darmstadt (Germany), Marseille (France) and Heerlen (Benelux region).

PL's particle technologies are supported by patents, exclusive licenses, non-exclusive licenses, trademarks and almost 30 years of proprietary experience.

- Microparticles for Clinical Diagnostics & Bioscience
- Synthesis & Purification of Oligonucleotides & Peptides
- Analytical Chromatography
- Polymerization Monitoring & Control