

EnrichingBeads® Streptavidin for Immunoassay and Molecular diagnosis

Introduction

The streptavidin-biotin interaction is very strong ($K_d = 10^{-15}M$) and allows the separation, purification and detection of biotinylated molecules under different pH conditions (3-10), buffers (0.01-3.0 M salt), and detergents such as SDS or Tween 20 without effect. Enriching Beads® streptavidin coated magnetic microspheres provide an efficient solid-phase for separating many types of biotinylated biomolecules including: antigens, antibodies or nucleic acids from different sources such as serum blood, saliva, urine and so on. Recently, our Streptavidin coated microspheres have been used in a nucleic acid analysis, cell separation and chemiluminescence.

Excellent dispersion abilities and the lack of magnetic remanence make Enriching Beads® streptavidin ideal for manual as well as automated protocols, including microfluidic systems. Depending on your specific application and target molecule, a direct or indirect capture method is applied (Figure 1).

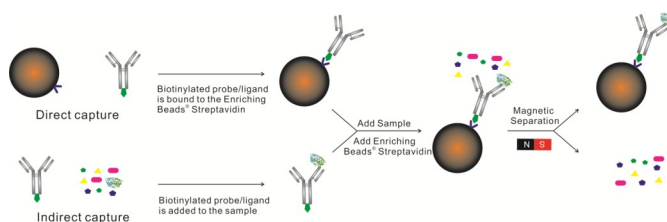


Figure 1. Direct and indirect approach for separation

- Low non-specific binding
- Improved colloidal stability
- High binding capacity
- Fast magnetic response time

Table 1: Streptavidin coated Magnetic Microspheres

	1µm Streptavidin C1	3µm Streptavidin C3
Magnetic content	30%	25%
Number of beads	7~8*10 ⁸ /mg	4~5*10 ⁷ /mg
Binding capacity		
Free biotin	>3500pmol/mg	>1350pmol/mg
Biotinlated IgG	Up to 20 µg/mg beads	10~15 µg/mg beads
Biotinlated ss-oligonucleotides	>500pmol/mg	>300pmol/mg

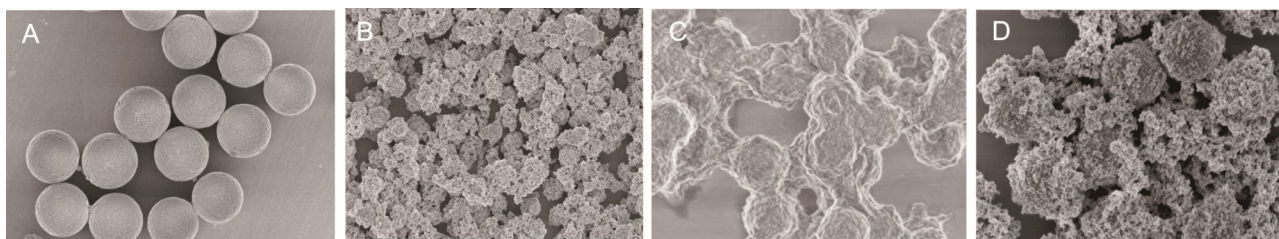


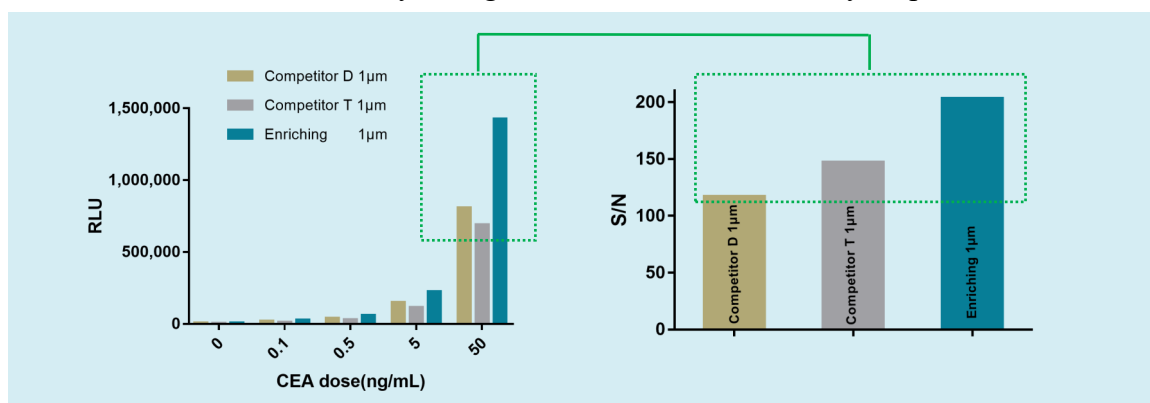
Figure 2: Monosized, superparamagnetic Enriching Beads® A. Manufactured with highly controllable product qualities, Enriching Beads® Magnetic polystyrene microsphere series are highly uniform within and between batches. B–D. Magnetic particles from alternative suppliers.

Your Benefits

Characteristics	Advantages	Benefits
1.0µm	High surface area Low sedimentation rate	Increased sensitivity and capture Less beads to be used with no loss in performance; cost saving
3.0µm	High magnetophoretic mobility	Easy automation and time saving Higher recovery in a complex matrix or viscous liquid

Superior performance for chemiluminescence.

Comparison studies against commercially available beads have demonstrated the superior performance and economic benefits of Enriching Beads® 1µm Streptavidin magnetic beads for chemiluminescence immunoassays. The study measured the chemiluminescence (relative light unit, RLU) output of AMPPD-ALP sandwich chemiluminescent assay, using an automated immunoanalyzer platform.



Ordering information

	Concentration	Quantity	Cat. No
Enriching Beads® MPS100/Streptavidin C1	10mg/mL	2mL	ST01-002
1.0 µm magnetic beads with covalently coupled recombinant Streptavidin.		10mL	ST01-010
		100mL	ST01-100
Enriching Beads® MPS300/Streptavidin C3	10mg/mL	2mL	ST03-002
3.0 µm magnetic beads with covalently coupled recombinant Streptavidin.		10mL	ST03-010
		100mL	ST03-100

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