

AccuBead™ Silica Coated Magnetic Beads

Making the Best of a Rapid Solution for Magnetic Beads Purification

- **Spherical Magnetic Silica Beads**
- **Suitable for Separation of Bio-Molecules**
- **Susceptibility for Nucleic Acid, Protein and Cell Isolation**
- **Speedy, Accuracy and Low Cost Purification Method**
- **High Quality and High Efficiency Separation**



Product Descriptions

Recently, many of bio related institutes and industries are approaching their research applying Magnetic Beads.

They use this material either from cell test experiment or DNA purification for disease monitoring as well as developing the treatments. The principle of Magnetic Beads are coating with appropriate functional group in the surface of magnetic beads. With the function group, magnetic beads can combine DNA, RNA, protein and specific cell and then using external Magnetic field, Magnetic Beads is moved for isolation.

The Features of Silica coated Magnetic Beads

- Sizes of Magnetic Beads are 1 -5 μ m
- Uniform Disperse Size Distribution of Magnetic Beads
- Sphere Form of Silica coated Magnetic Beads
- Excellent Efficiency of DNA/RNA Purification
- Rapid Purification Method using Magnetic Beads with Simple Separation Protocol

Magnetic Beads are a highly efficient tool for Nucleic Acids Purification

- DNA/RNA affinity to Magnetic Beads (Uniform disperse super-paramagnetic particles) is used for separation
- Magnetic Beads are mixed with naked DNA/RNA in salt-containing buffer
- DNA/RNA is bound to Magnetic Beads co-aggregately
- By magnetic separation, highly enriched DNA/RNA preparations are obtained in the matter of minutes
- Magnetic Beads is highly suitable for automation since it requires no centrifugation, vacuum filtration procedures

Applications of Magnetic Beads

- Magnetic DNA/RNA Purification
- Magnetic Protein Separation
- Magnetic Antibody Separation
- Magnetic Cell Isolation

FE-SEM Image of Magnetic Beads

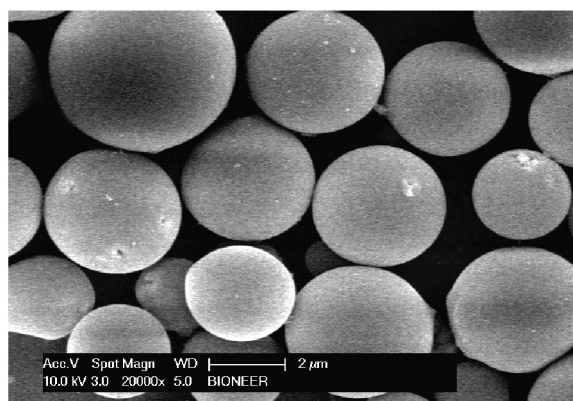
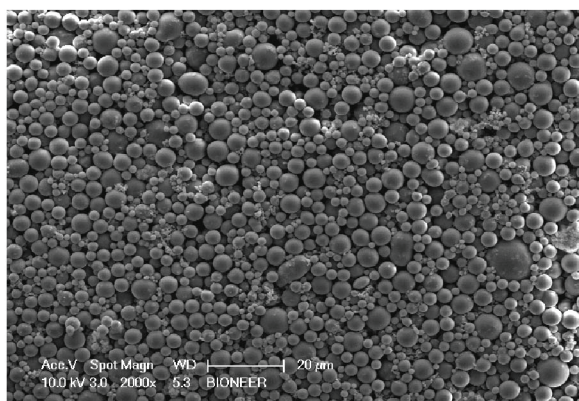


Figure 1. FE-SEM image of Magnetic Particles for Nucleic acids Purification. Uniform size of Magnetic beads is well seen at SEM image of silica coated magnetic beads.

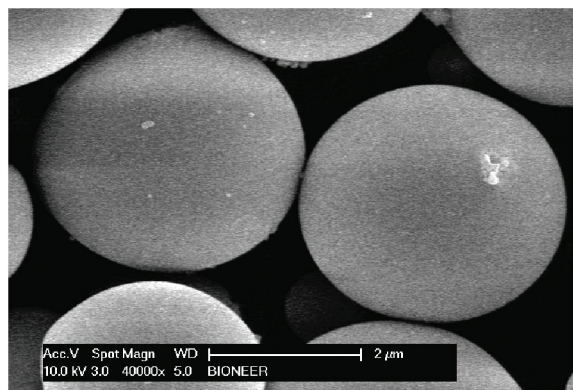
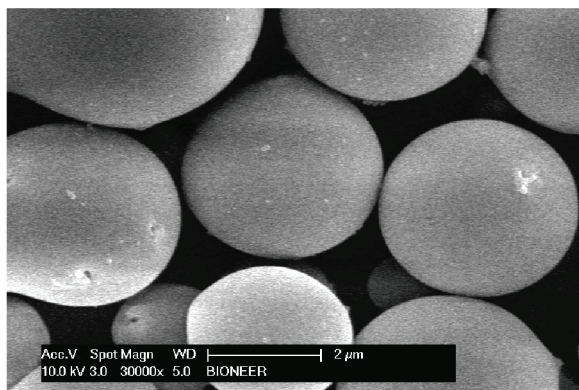


Figure 2. FE-SEM magnification image of Magnetic Beads. SEM images show that Magnetic Beads are sphere shape and coated with silica completely.

Size Distribution and Zeta Potential Diagram of Magnetic Beads

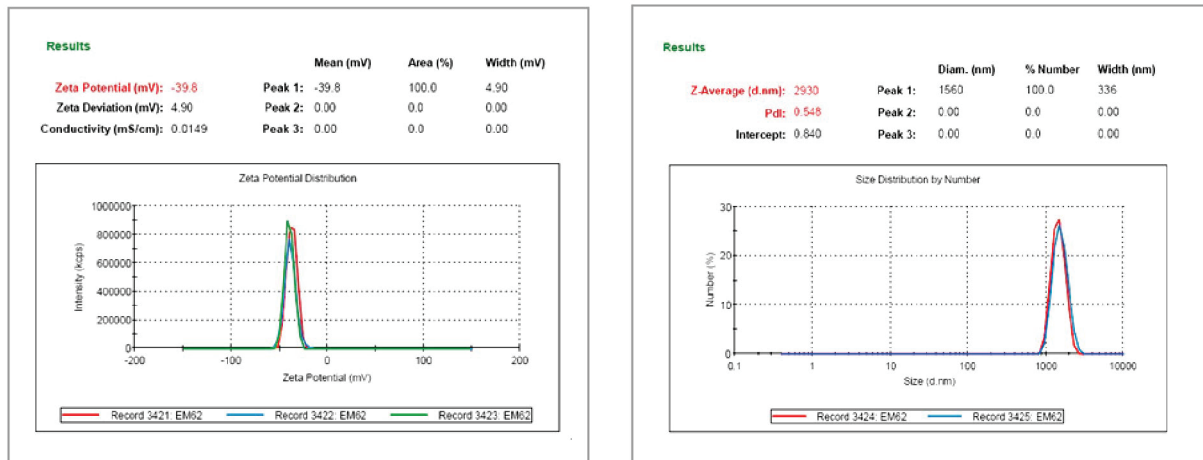


Figure 3. Size distribution diagram and zeta potential of silica coated magnetic beads. The average size of magnetic beads is 1.56µm approximately and zeta potential of magnetic beads is -39.8 mV due to hydroxyl group on surface of silica.

DNA/RNA Purification Procedure

Using Magnetic Beads to use in purification is much faster to separate DNA compare to an existing method.

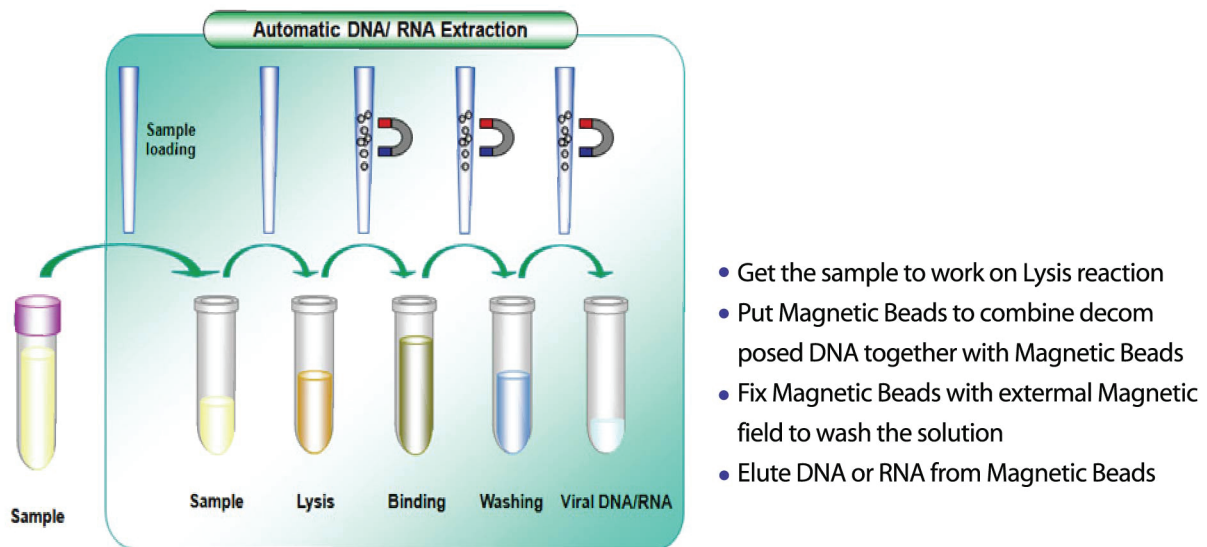


Figure 4. The steps of DNA separation by silica coated magnetic beads

Electrophoresis Results of purified DNA

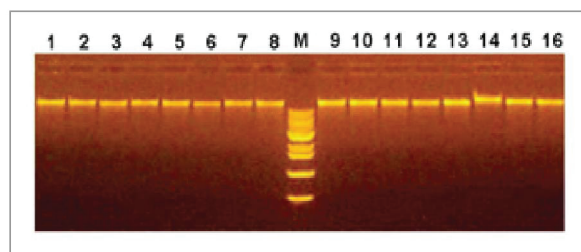


Figure 5. Electrophoresis image of amplification of purified genomic DNA by silica coated magnetic beads

Comparison of viral RNA Prep Kit Quality

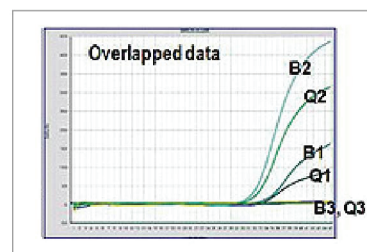


Figure 6. Comparison of viral RNA Prep Kit Quality using WHO HIV-1 working standard (PWS-1, 2, 3) serums (Q1, Q2: Q Company, B1, B2: Bioneer)

Legal statement

AccuBead™ Silica Coated Magnetic Beads technology' is covered under Korea patent application 10-2008-0013545 and its corresponding international patent application.

Ordering Information

Please inquiry for bulk orders.

Cat. No.	Products Name	Pack size	List Price (\$)
TS-1010-1	Silica Coated Magnetic Beads, size 1-5um	0.5 g /10 ml	US\$ 195
TS-1010-2	Silica Coated Magnetic Beads, size 1-5um	1 g /50 ml	US\$ 350
TS-1010-3	Silica Coated Magnetic Beads, size 1-5um	10 g /500ml	US\$ 1,990
TS-1011-1	NH ₂ Magnetic Beads, size 1-5um	0.5 g	US\$ 225
TS-1012-1	COOH Magnetic Beads, size 1-5um	0.5 g	US\$ 225
TS-1013-1	Epoxy Magnetic Beads, size 1-5um	0.5 g	US\$ 245
TS-1014-1	C ₁₈ Magnetic Bead, size 1-5um	0.5 g	US\$ 245
TS-1015-1	Streptavidin Magnetic Bead, size 1-5um	50 mg / 25 ml	US\$ 195
TS-1016-1	Biotin Magnetic Bead, size 1-5um	0.5 g /25 ml	US\$ 245
TS-1017-1	Ni-NTA Magnetic Bead, size 1-5um	0.5 g / 25 ml	US\$ 295

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