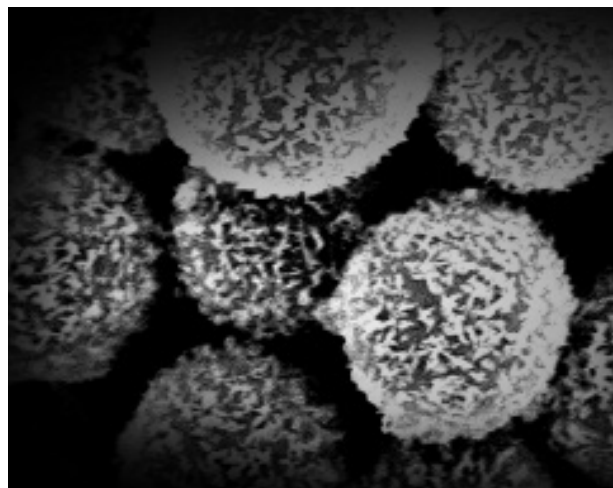


SPHERO™ Paramagnetic and Superparamagnetic Particles

- SPHERO™ Magnetic Microparticles provide high quality and reproducible results for your application
- Allow for rapid and reliable binding between the target and magnetic particle
- Consists of a uniform, monodispersed surface for optimal performance.

The SPHERO™ Magnetic Particles (Paramagnetic Particles) are prepared by coating a layer of iron oxide and polystyrene onto polystyrene core particles. The SPHERO™ Magnetic Particles are relatively uniform in size, spherical in shape and paramagnetic in nature. The paramagnetic nature of the particles allows them to be separated using a magnet and resuspended easily when removed from the magnet. They do not retain any significant magnetism even after repeat exposure to strong magnetic fields. For the maximum uniformity, of shape and size Spherotech offers SPHERO™ Highly Uniform Magnetic Particles in the 1 and 3µm size range.

The SPHERO™ Smooth Surface Magnetic Particles have a thick layer of polymer coating on the surface of the particles to fully encapsulate the iron oxide coating. There is no exposed iron oxide on the surface of the particles. These particles are paramagnetic. The SPHERO™ Smooth Surface Magnetic Particles are particularly useful in applications where exposed iron oxide may interfere with the enzymatic activities or cause other undesirable interferences. The SPHERO™ Magnetic Particles are used for cell separation, affinity purification, DNA probe assays, magnetic particle EIA, etc.

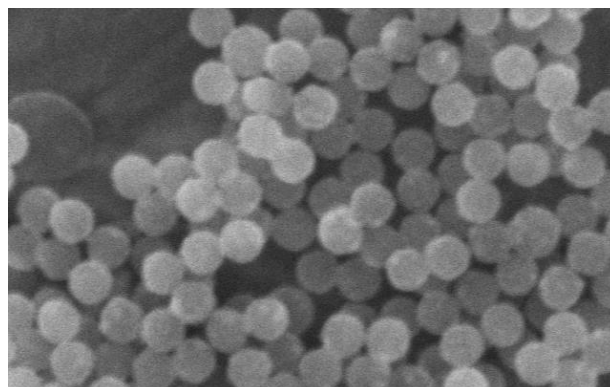


SEM of CM-80-10

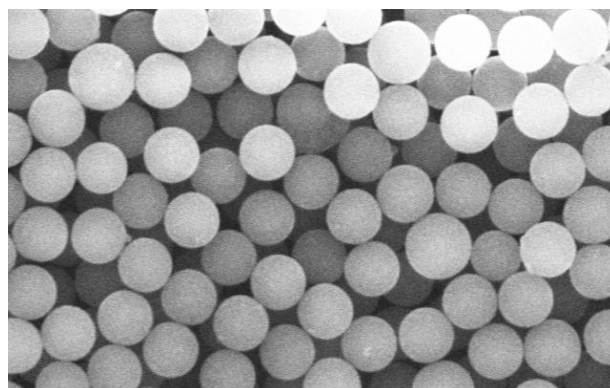
The SPHERO™ High Iron Superparamagnetic and Silica Magnetic Particles have significantly greater magnetite content (~40%). The large surface area combined with higher magnetite content make SPHERO™ High Iron Magnetic Particles ideal solid phase for use in cell separation, magnetic removal of microorganisms, viruses and cross reactants in serum, as well as, affinity purification applications.

SPHERO™ Silica Magnetic Beads are designed to binds RNA and DNA in the presence of chaotropic reagents or under mild acidic buffer conditions. They are positively charged and bind the negatively charged nucleic acids. In addition, they can be used with a variety of organosilane chemistry approaches to modify the surface of magnetic of the silica magnetic bead.

The SPHERO™ Cross-linked Magnetic Particles are prepared to render them resistant to common organic solvents such as acetone, acetonitrile, DMF and chloroform. Uniform diameters between 1 to 100 micron are available.



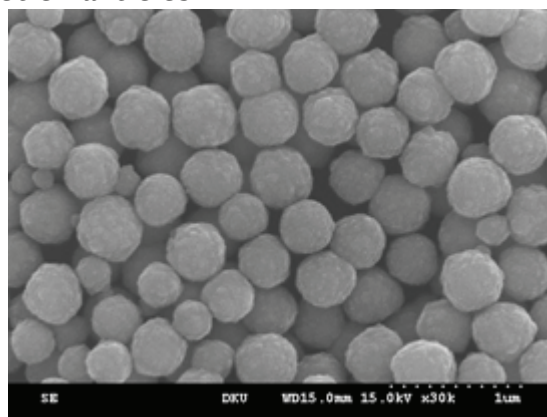
SEM of CMU-10-10 from a JEOL JCM-6000



SEM of CMU-30-10 from a JEOL JCM-6000

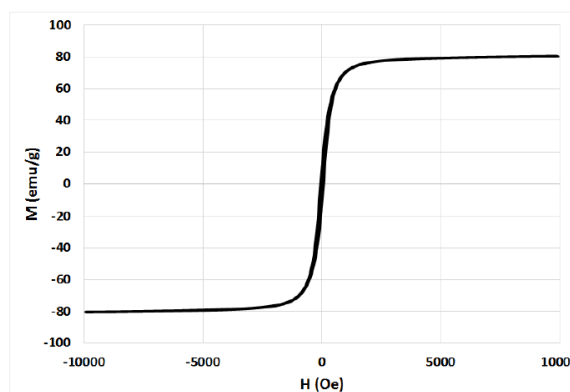
SPHERO™ High Iron Nano Superparamagnetic Particles

- Superparamagnetic nanospheres with ~40% iron and superior stability for coupling to nucleic acids, proteins, and antibodies
- Allows for rapid and reliable cell isolations from whole blood without extensive sample preparation
- Provides an uniform, monodispersed surface with high magnetic susceptibility
- Available with a variety of surface chemistries for stable binding and optimal orientation of biomolecules

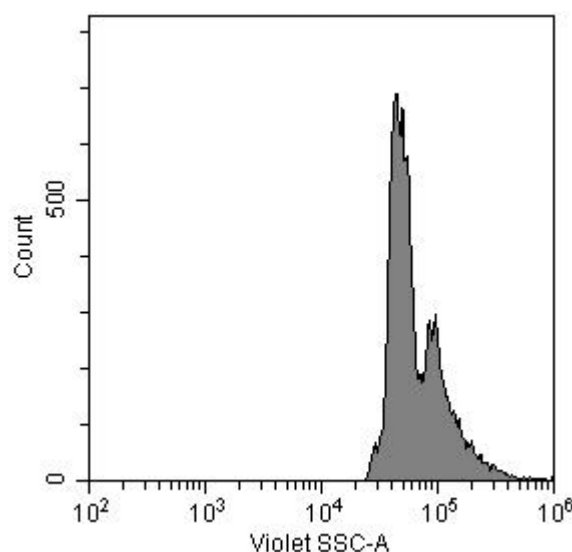


SEM analysis of CM-05-10H

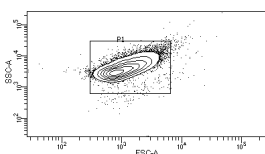
Particle Type and Surface	Size, μm	% w/v	Catalog No.	Unit
Carboxyl Magnetic, High Iron	0.1-0.39	1.0	CM-025-10H	10 mL
Carboxyl Magnetic, High Iron	0.1-0.39	1.0	CM-025-100H	100 mL
Carboxyl Magnetic, High Iron	0.4-0.69	1.0	CM-05-10H	10 mL
Amino Magnetic, High Iron	0.1-0.39	1.0	AM-025-10H	10 mL
Amino Magnetic, High Iron	0.4-0.69	1.0	AM-05-10H	10 mL
Streptavidin Magnetic, High Iron	0.1-0.39	0.5	SVM-025-5H	5 mL
Streptavidin Magnetic, High Iron	0.4-0.69	0.5	SVM-05-5H	5 mL
Protein A Magnetic, High Iron	0.1-0.39	0.5	PAM-025-5H	5 mL
Protein A Magnetic, High Iron	0.4-0.69	0.5	PAM-05-5H	5 mL
Fluorescent Carboxyl Magnetic Particles, High Iron, Yellow	0.1-0.39	0.1	FCM-02552-2H	2 mL
Fluorescent Carboxyl Magnetic Particles, High Iron, Pink	0.1-0.39	0.1	FCM-02558-2H	2 mL
Fluorescent Carboxyl Magnetic Particles, High Iron, Yellow	0.4-0.69	0.5	FCM-0552-2H	2 mL
Fluorescent Amino Magnetic Particles, High Iron, Yellow	0.1-0.39	0.1	FAM-02552-2H	2 mL
Aldehyde Magnetic, High Iron	0.1-0.39	1.0	GLM-025-5H	5 mL
Aldehyde Magnetic, High Iron	0.4-0.69	1.0	GLM-05-5H	5 mL



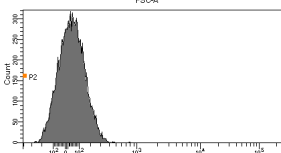
Hysteresis analysis of CM-05-10H



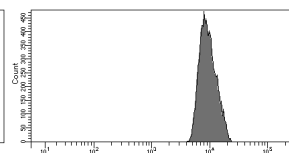
Histogram of CM-05-10H using a Beckman Coulter CytoFLEX LX using Violet Side Scatter for detection



Dot plot & histogram of SVM-05-5H before and after exposure to biotin-FITC



before exposure



after exposure