

## LifeSep™ Biomagnetic Separators

### Bead and Protocol Compatibility

LifeSep magnetic bead separators and products are designed to work with most commercially available superparamagnetic beads, roughly 0.8 micron and above. Smaller beads can be used, but it is important to ensure the size distribution of the beads is narrow and the magnetic mass susceptibility is adequate.

For beads in the nanometer range, Dexter can provide extremely high-gradient, custom separation devices achieving efficient collection that might otherwise only be possible with matrix-based technology.

### Care & Caution

The units can be cleaned with mild detergent but should not be submerged in aqueous solutions.

Separators should be handled with care and stored at a safe distance from magnetic media including computer hard drives, disks, video tapes and credit cards. Persons with pacemakers/implants should be made aware of potential hazards associated with stray magnetic fields. Caution should be exercised with ferrous tools or objects.

### For Research Use Only

Applications mentioned in Dexter Magnetic Technologies LifeSep™ literature are provided for informational purposes only. Dexter does not warrant that all applications have been tested or validated in Dexter laboratories using LifeSep products.

By placing the tube into the separator, our high-energy neodymium-iron-boron (Nd-Fe-B) magnet will quickly draw supermagnetic particles out of the solution. Once separation is complete, with particles held firmly to the wall and away from the bottom of the tube, you can remove the supernatant.

**DEXTER**

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PERMAG®

## SpeedSep

### Application

- > Innovative patented Nd-Fe-B design (U.S. Patent # 6,413,420)
- > Open-faced design for clear visibility and easy access to bottle/vessel
- > Rapid separation and superior retention of micro and nanometer particles
- > Beads are drawn clear off the bottom for easy aspiration
- > Durable and easy to use
- > Robust design with minimal stray field
- > Splash resistance
- > Increased safety and convenience from retractable magnet design
- > Improved safety from limited direct access to magnet
- > Improved reliability compared to more complex diafiltration systems

### Simple Control

- > 3-way rocker switch to:
  - > Reverse direction
  - > Stop motor

### Options

- > Integrated stirring
- > Integrated heating
- > Cart
- > Indicator LEDs
- > Drain valve (disposable)

### Weight, Size and Power Requirements

- > Approximate weight: 180 lbs.
- > Dimensions: 30" W x 20"D x 18.5"T
- > Electrical power:
  - » 12V @ 2A input
  - » 120/240V external wall/desktop adapter
- > Vessel/standard bottle:
  - » 6.0" diameter, thin wall
  - » Capacity: 4.0L—5.0L
  - » Material: Polypropylene
  - » Easily cleaned by standard processes
  - » Inert to standard solutions
- > Vessel features:
  - » Large access
  - » Metal option for heating

## SX Series

### 1.5S

- > For 1.5 ml tubes (Will accommodate some 2 ml tubes)
- > Optimized magnet configuration for rapid separation and maximum wall retention.
- > Side wall collection point
- > Open-faced design
- > Durable and easy to use
- > Beads drawn clear off bottom for easy aspiration

### 15SX/50SX/125SX/500SX/1000SX/5000SX

- > Innovative patented Nd-Fe-B design (U.S. Patent # 6,413,420)
- > Open-faced design for clear visibility
- > Rapid separation of micro and nanometer particles
- > Beads are drawn clear off the bottom for easy aspiration
- > Superior particle retention for easy pour-off
- > Durable and easy to use
- > Minimal stray field

## MX Series

### 96P

- > For 96-well microtitre plates
- > High-energy neodymium iron boron magnets
- > Optimized magnetic array
- > Suitable for bench-top automated platform
- > Superior particle retention
- > Durable and easy to use
- > Beads drawn clear off bottom for easy aspiration

### 96F/384F

- > Patent pending
- > High-energy neodymium iron boron magnets
- > Optimized field gradient within wells
- > Innovative patent-pending design
- > Rapid separation of micrometer and nanometers beads
- > Ideal for bench-top or automated platforms
- > Superior particle retention
- > Durable and easy to use
- > Beads drawn clear off bottom for easy aspiration

**DEXTER**

*Magnetic Technologies*

*Providing Solutions...Delivering Results  
for Biomagnetic Bead Separation Applications*

**LifeSep™**

## Biomagnetic Separators

**Magnetic bead separation** is an increasingly important application in the life sciences. Microbiology, immunology, molecular biology, drug discovery and cancer research rely on this process for future advances. Through our medical division, Dexter Magnetic Technologies expands your opportunities to achieve rapid and reproducible biomagnetic separations with our full line of LifeSep™ products and custom solutions. >>

# LifeSep™ Biomagnetic Separators

## Offering You the Resourceful Solutions

Because we understand that change and innovation are essential to you, our commitment to LifeSep technology has made us the most comprehensive resource for the biotech, life science and pharmaceutical industries in the area of biomagnetic separation and bead processing solutions. That commitment is backed by our position as a world leader in the design and fabrication of permanent magnets and highly specialized magnetic assemblies.

If you are looking for magnetic bead separation units for your work in:

- > DNA separation and mRNA purification
- > Cell isolation and rare cell detection
- > Development of immunoassays
- > Capture of biomolecules
- > Protein purification

then let us introduce you to the LifeSep family of product solutions. In the most demanding process requirements, from nano-sized particle capture to continuous flow separation, we supply you with the technology, equipment and processes that will lead to increased productivity.

## Making the Technology Available

Our line of products provide an immediate starting point for performing rapid separations in single tubes/vessels ranging from 1.5 mL up to 5L as well as 96 and 384 well microtitre plates.

Are you looking for a non-standard product or improved performance from your current separation units? Then let our team of design engineers personally work with you to deliver a customized solution to suit your needs and:

- > Improve the rate of separation
- > Improve wall retention
- > Reduce cycle time
- > Maximize yield

# Dexter's Product Line of Biomagnetic Separation Devices

## LifeSep™ SX Series Single Tube/Vessel Units

Separator	Volume	Vessel Diameter (mm)	Height (mm)	Width (mm)	Depth (mm)	Weight (kg)	Nalgene Nunc Bottle	Dow Corning Centrifuge Tube
1.5 S	1.5 mL	10.5	42	49	60.5	0.1	-	3620
15 SX	15 mL	16.2	107	89	71	1.85	-	430790 or 430791
50 SX	50 mL	28.8	120	88	71	2.14	-	430828 or 430829
125 SX	125 mL	50	71	98	72	0.85	2105-0004	-
500 SX	500 mL	73	142	140	108	8.5	2105-0016	-
1000 SX	1000 mL	91	150	184	133	11.5	2105-0032	Custom
5000 SX	5000 mL	153	327	321	195	60	Custom	Custom



1.5 S



15 SX



50 SX



125 SX



500 SX



1000 SX



5000 SX

## LifeSep™ MX Series

Separator	Volume	Height (mm)	Width (mm)	Depth (mm)	Weight (kg)	Nalgene Nunc Tray	Greiner Tray
96P	96 well plate	29	128	85	.39	*	*
96F	96 well plate	19	128	85	.54	*	*
384F	384 well plate	19	128	85	.54	*	*



96P



96F



384F

\* Denotes compatibility with most Nunc and Greiner plates

## Bulk Separation Unit

**SpeedSep™ 5000** Bulk Magnetic Separation Station

