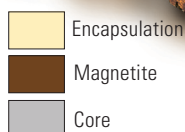
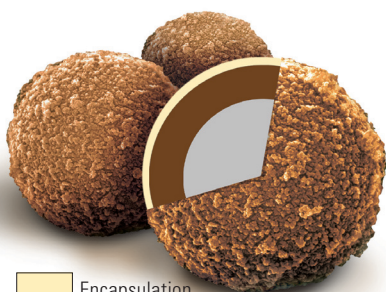


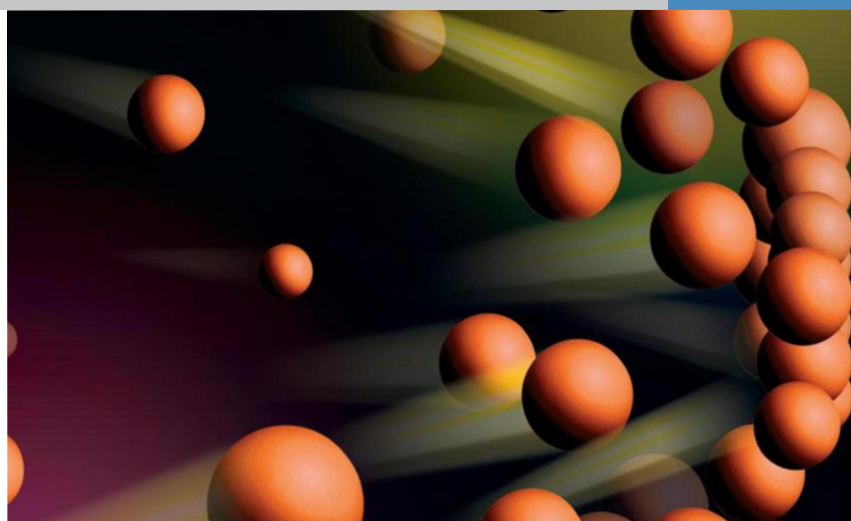
**Thermo Scientific Sera-Mag Oligo(dT)-coated Magnetic Particles** easily isolates and extracts your valuable mRNA from a variety of sources, and enables you to perform such applications as RT-PCR, cDNA library construction, cDNA microarrays, affinity purification, primer extension and subtractive hybridization.

## Thermo Scientific Sera-Mag Magnetic Particles

Oligo(dT)-Coated



**This SEM image shows the unique cauliflower-like surface of the Sera-Mag Beads which dramatically increases the overall surface area available for binding.**



- Covalently bound oligo(dT)<sub>14</sub> prevents leaching from the particle surface
- Very high, specific poly A<sup>+</sup> binding capacity ensures maximum extraction of mRNA
- Proprietary surface characteristics provides low non-specific binding and more precise isolation accuracy
- Stability in buffer systems (pH 4 to 11) optimizes performance in most applications
- Excellent colloidal stability significantly slows settling in the absence of a magnetic field
- Encapsulation means no exposed iron and no interference with downstream enzymatic applications
- Tight size distribution ensures even particle separation and excellent lot-to-lot reproducibility

Thermo Scientific Sera-Mag Oligo(dT)-coated Magnetic Particles are nominal 1 µm super-paramagnetic particles of uniform size that provide high surface oligo(dT) concentration with the highest poly A<sup>+</sup> binding capacity available to enhance productivity. In fact, 1 mL of Sera-Mag particles can bind up to 12 µg of mRNA from cells or tissue (depending upon expression levels).

Colloidally stable in the absence of a magnetic field, these particles separate rapidly and completely from suspension when a magnetic field is applied.

Binding of polyadenylated RNA (poly-A<sup>+</sup> RNA) to the covalently bound oligo(dT) groups on the surface is easily accomplished using standard hybridization conditions.

Additionally, oligo(dT) particles can be used as a universal base particle to attach your unique oligo sequence.

# Product Specifications

## Thermo Scientific Sera-Mag Magnetic Particles Oligo(dT)-Coated

### Specifications

Particle Composition	Polystyrene core particle encapsulated in magnetite with surface coated oligo(dT) <sub>14</sub>
Stability	Compatible with most commonly used detergents and biological buffer systems (pH 4 to 11). Stable in GITC, DMF, DMSO and PCR cycling temperatures
Binding Capacity	>300 pmol (dA) <sub>30</sub> per mg
Particle Size	1 µm nominal diameter
Density	1.5 g/cm <sup>3</sup>
Concentration	Supplied at approximately 1% solids (10 mg/mL)
Fill Volume	1 mL, 5 mL and 100 mL bottles
Magnetite Content	~40%
Additives	0.05% sodium azide preservative
Shelf Life Stability	Approximately 48 months (as supplied)
Package Includes	Certificate of Analysis and Package Insert
Storage and Handling	Unless otherwise stated, refrigerate (2-8 °C) product when not in use but do not freeze. Store upright and keep bottle tightly sealed. Mix product with gentle inversion by hand, roller or vortex mixer.

Product Specifications	Bottle Size	Type/Post Processing
3815-2103-011150	1 mL	Oligo surface/0.05% Az
3815-2103-010150	5 mL	Oligo surface/0.05% Az
281111 (Buffer Kit)	3 x 4 mL	Hybridization, wash and elution buffers

### Application

Given the excess of rRNA from cells and the fact that eukaryotic mRNA makes up only 1 - 3% of total RNA, having a purification method that is both versatile and efficient is critical. Studies show that rRNA contamination may be caused by the pairing of rRNA to mRNA. In order to break this interaction, one must increase stringency by increasing binding temperatures. Thermo Scientific Sera-Mag Oligo(dT) Magnetic Particles remove 90% or more of mRNA from total RNA with just one extraction. This efficiency, coupled with the fact that they are versatile at high temperatures, makes these particles ideal for this application.

### Binding of Target mRNA

Binding of target mRNA occurs through the pairing of the polyadenylated RNA tail found on the 3' end of mRNA to the covalently bound oligo(dT) groups on the surface of the Sera-Mag Oligo(dT) Magnetic Particles. This binding is easily accomplished using standard hybridization conditions.

