Magnetic Beads (Short Oligo Purification)

Catalog No.	40058S	40058L
Runs*	24 runs	96 runs

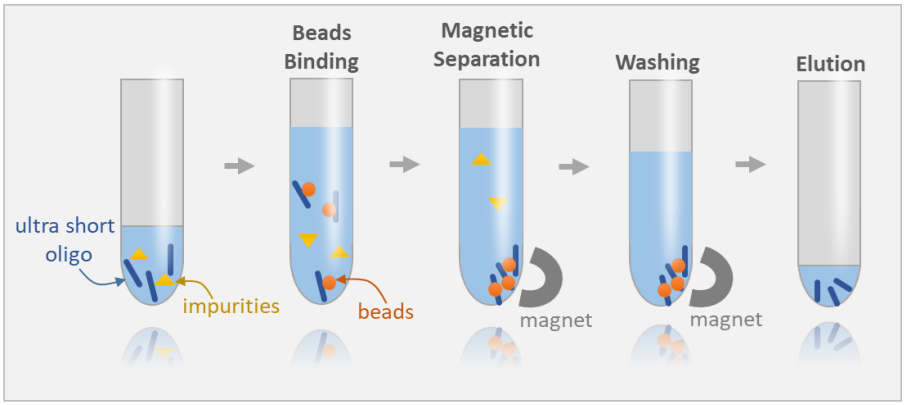
*Based on 40 µl of sample volume

Description

Solid Phase Reversible Immobilization (SPRI) beads are a simple and effective reagent for DNA purification. The beads are paramagnetic particles coated with carboxyl groups that can reversibly bind to nucleic acid. However, SPRI beads can only purify DNA/RNA fragments that are 100 base pairs or longer. DNA/RNA fragments shorter than 100 base pairs are not effectively recovered.

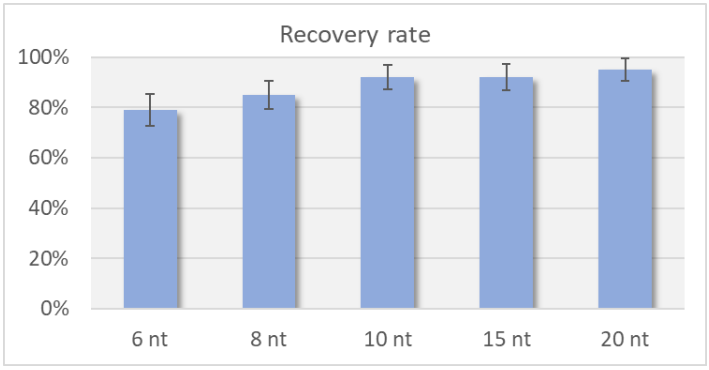
Oligo purification can also be performed using spin column-based technology. The oligo size limitation for recovery is around 20 nt, as oligos under 20 nt have a very low recovery rate.

We have developed **Magnetic Beads (Short Oligo Purification)** for short oligo purification. Our proprietary bead technology enables the recovery of oligos as short as 6 nt. 80% of the 6 nt oligos and 90% of the > 8 nt oligos can be recovered. The reagent also effectively removes impurities and unwanted components such as salts, proteins, dNTPs, detergents, and other contaminants. The magnetic bead reagents are RNase free, and can be used for both DNA and RNA applications.



Features

- Effective purification of short oligos
  - 6 nt oligos: 80% recovery rate
  - >8 nt oligos: >90% recovery rate
- Removal of impurities and unwanted reaction components



Component

Catalog No.	40058S	40058L
S3 Buffer	1920 µl	7680 µl
EM Buffer	2160 µl	8640 µl
S3 Beads	240 µl	960 µl

Storage Condition

- Store at 4°C, stable up to 6 months.

Reagent & Equipment Needed (not provided in this reagent)

- Magnetic particle concentrator
- 96-well plates
- 80% ethanol (prepare before use)

Protocol

Note: Invert or shake the beads to thoroughly resuspend the beads.

1) Transfer samples (up to 40 µl) to a 96-well plate.
2) Add 2X volumes of the S3 Buffer to the wells containing samples. Slow pipetting of the viscous buffer is needed for precise aliquot. Mix by pipetting.
3) Add 2.25X volumes of EM Buffer to the supernatant and mix by pipetting.
4) Add 10 µl of S3 Beads and mix by pipetting gently and thoroughly, incubate 10 min.
5) Load the sample plate on a magnet, incubate for 10 min, and discard the supernatant carefully.
6) Add 180 µl of 80% ethanol without disturbing the beads. Incubate for 1 minute and discard the supernatant carefully. Remove all residual ethanol without disturbing the beads.
7) Air-dry the beads on the magnet for 3 min.
8) Remove the plate from the magnet and resuspend the beads in water, Tris-HCl (10 mM) or a low TE buffer. **Note**: Resuspending the beads in less than 20 µl may reduce the yield.
9) Load the plate on the magnet, incubate for 1 min, and transfer supernatant (containing sample) to a new tube without disturbing the beads.

Buffer volume calculation table

Sample volume	S3 Buffer volume (2X of sample volume)	EM Buffer volume (2.25X of sample volume)
30 µl	60 µl	67.5 µl
40 µl	80 µl	90 µl

Quality Control

Magnetic beads components passed stringent functional quality test.

Product Use Limitation

This product is developed and sold for research purposes and *in vitro* use only. Please refer to BioDynami.com for Material Safety Data Sheet of the product.

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