

Dynal MPC™ -9600

Magnetic Particle Concentrator

For research use only.

For optimal results, please read this instruction leaflet before use.

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1. PRODUCT DESCRIPTION

1.1 Intended Use

The Dynal MPC-9600 is a magnetic particle concentrator (magnet) for use with 48 or 96 microtubes, with an optimal working volume of 5 - 200 µl. The use of Dynal MPC-9600 allows the separation with Dynabeads in molecular biology, microbiology and other small volume applications.

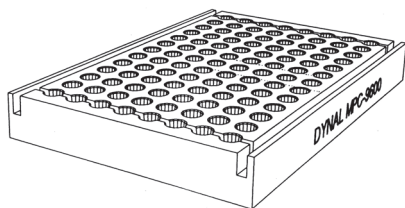
1.2 Principle of Isolation

Dynabeads are mixed with the sample in a tube. The Dynabeads will bind to the target material during a short incubation, and then the bead-bound material is separated by the magnet.

Dynabeads will be attracted to the side of the tube nearest the magnet, enabling easy removal of the supernatant. The Dynabeads with bound material are left in the tube.

1.3 Product Description

The Dynal MPC-9600 (Magnetic Particle Concentrator) is made from polyacetal and equipped with Dynal rare earth magnets.



It is designed to hold non-skirted or semi-skirted plates/strips with up to 96 microtubes (0.2 ml thinwall microtubes). Repositioning the microtubes on the magnet allows for relocation of the Dynabeads and bound target (see "Washing of target material" below).

The Dynal MPC-9600 is made of disinfectant proof material for easy cleaning (see section 3.2).

Nominal magnetic properties:

The permanent magnet properties of the neodymium-iron-boron rod-shaped magnets ensure satisfactory isolation of the Dynabeads.

Br (Residual Induction):	Min.: 1200 mTesla	Typ.: 1250 mTesla
BHC (Coercive Force):	Min.: 740 kA/m	Typ.: 900 kA/m
IHC (Intrinsic Coercive Force):	Min.: 800 kA/m	Typ.: 960 kA/m
BH _{max} (Maximum Energy Product):	Min.: 265 kJ/m ³	Typ.: 295 kJ/m ³

Related Products

For magnetic separation in 96- and 384-well microtiter trays, use Dynal MPC-96B, Dynal MPC-96S or Dynal MPC-384. For larger volumes, use Dynal MPC-S, Dynal MPC-L, Dynal MPC-15 or Dynal MPC-50.

1.4 Technical Support

Please contact Invitrogen Dynal for further technical information (see contact details).

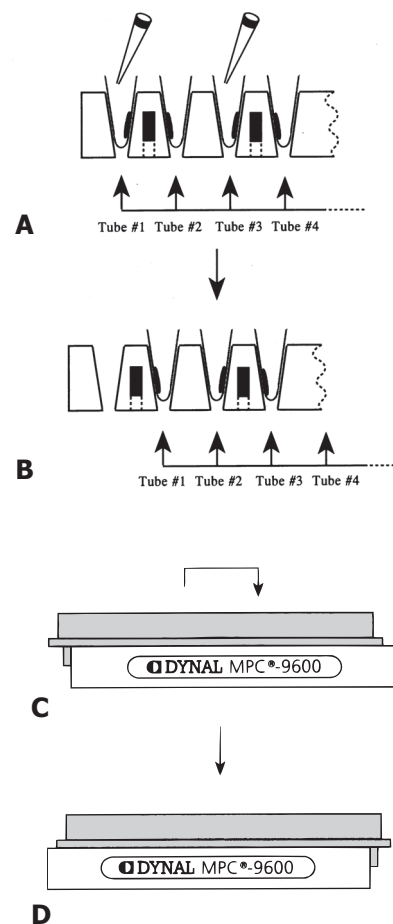
2. INSTRUCTIONS FOR USE

2.1 Magnetic Separation

1. Mix and incubate the starting sample with the appropriate Dynabeads according to the relevant protocol.
2. Place the plate/microtube-strips in the magnet. Ensure that the tubes are properly inserted, but not so they become jammed. Do not move the tubes during the separation process.
3. Leave the plate/tubes on the magnet for 1-2 minutes, to allow the bead-bound target material to be attracted to the tube-wall.
4. Remove the supernatant carefully by aspiration with a pipette while the plate/tubes are on the magnet. Use appropriate multipipette tips (preferably prefilled boxes) with no bent tips and avoid fast aspiration to minimize the risk of material loss.

NOTE: Dynabeads will be attracted to the opposite side of the tube wall of alternate rows (see Fig. A and B below). To remove all supernatants without

touching the Dynabeads; aspirate every second row along the side without Dynabeads, Rotate the magnet by 180 degrees while keeping the plate/tubes in the same position (without changing the angle of your hand holding the multi-channel pipette). Aspirate the remaining rows along the side without Dynabeads.



2.2 Washing of Target Material

1. Discard the supernatant (step 4 in section 2.1). Add washing buffer along the tube-wall where your bead-bound target is located.
2. Shift the plate/tubes from one row to the next and back again to mix the Dynabeads in the microtubes simultaneously (see Fig. C and D below).

NOTE:

The extra row of tube positions allows you to shift the plate/tubes while keeping them all in contact with a magnet (see Fig. A and B). When the holder is moved one position, (see Fig. C and D) the bead-bound target material will pass through the washing buffer and migrate to the other side of the tube, thus allowing for efficient washing (see the location of the bead pellet in tube #1 in Fig. A and B).

3. Leave the plate/tubes in the same position for a minimum of 1 minute. Discard the supernatant by aspiration. Repeat the washing step 2-3 times, or according to the experimental protocol.

4. Discard the final washing buffer. Remove the plate/tubes from the magnet and resuspend your bead-bound target in an appropriate medium.

The bead-bound target material is now ready for further analysis.

3. GENERAL INFORMATION

Invitrogen Dynal AS complies with the Quality System Standards ISO 9001:2000 and ISO 13485:2003.

3.1 Precautions

This product contains very strong permanent magnets.

People wearing a pacemaker should not use this product. Pacemakers may be affected or damaged if they come in close contact with a strong magnetic field.

Keep the Dynal MPC-9600 magnet away from credit cards and all other products containing magnetic recording devices, such as videocassettes and computer discs. Keep away from delicate instruments, watches, electronic equipment, displays and monitors.

The Health and Safety Officer should take all necessary steps and full responsibility to ensure that the precautions and statements are followed and adhered to. IN NO EVENT SHALL INVITROGEN DYNAL BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

3.2 Handling

Any laboratory skilled in using conventional laboratory techniques that follow good laboratory practices may use Dynal MPC-9600 for separation of Dynabeads.

The magnet may attract steel or other magnetic material with high mechanical forces. Great care is needed during handling.

3.3 Disinfection

The Dynal MPC-9600 can be washed in a mild soap solution and hot water. If disinfection is necessary, use 70 % ethanol.

Do not autoclave the Dynal MPC-9600.

3.4 Storage and Stability

Your Dynal MPC-9600 contains sintered rare-earth Neodymium Iron Boron permanent magnets. Magnetic strength will not diminish significantly during the

lifetime of the product. Do not use the magnets above 50°C (122°F) and store in a cool, dry environment.

Do not leave your Dynal MPC-9600 exposed to artificial UV light, as the surface material may become brittle.

3.5 Warning and Limitations

The Dynal MPC-9600 is only guaranteed to satisfactory isolate Dynabeads, not the isolation of your specific biomolecule.

The efficacy of magnetic separation is – as with all biological techniques – critically dependant on the specificity and avidity of the antibody or other ligand applied, as well as factors concerning the bio-molecules themselves and the matrix from which they are to be isolated.

3.6 Patents and Trademarks

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Claims for merchandise damaged in transit must be submitted to the carrier.

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