

Dynal MPC™-L

Magnetic Particle Concentrator

For laboratory use only

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

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1. PRODUCT DESCRIPTION

1.1 Intended Use

Use the Dynal MPC-L to separate Dynabeads® from samples such as whole blood, bone marrow, buffy coat, mononuclear cells and any other single cell suspension in only 1-3 minutes.

1.2 Principle of Isolation

Dynabeads are superparamagnetic, which means they become magnetised when exposed to a magnetic field and pull towards the magnet. Once the magnetic field is removed, Dynabeads have no magnetic remanence.

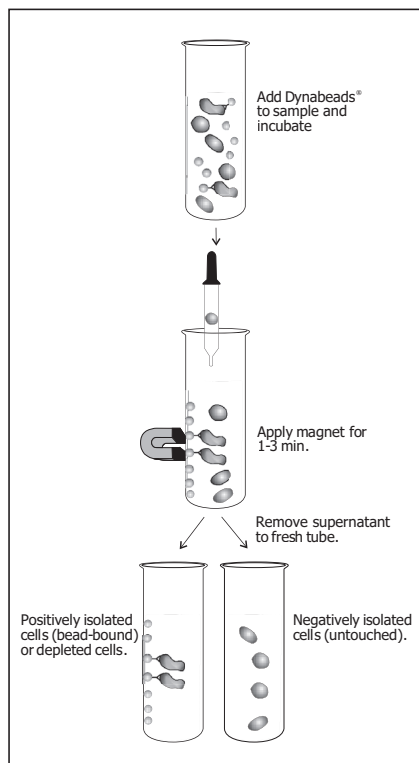


Figure 1: General cell isolation method with Dynabeads.

Dynabeads are mixed with the sample in a tube. The Dynabeads will bind to the target cells during a short incubation, and then the bead-bound cells are separated by the magnet (fig. 1). The removable slide magnet means you do not need to disturb the tubes during the washing and isolation steps.

- Positive isolation – discard the supernatant and use the bead-bound cells for downstream applications.
- Depletion – discard the bead-bound cells and use the remaining, untouched cells for any application.

1.3 Product Description

The Dynal MPC-L Magnetic Particle Concentrator contains a plastic housing and a removable magnet slide incorporating high-energy neodymium magnets.

The magnet is designed to hold six separate FACS or Vacutainer tubes (10–16 mm in diameter) with working volumes ranging from 1 ml to 8 ml. It can be used with all Dynabeads but for 1 µm Dynabeads (MyOne™) the volume range is limited to 1-5 ml.

1.4 Technical Support

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

2. GENERAL INFORMATION

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

2.1 Precautions

This product contains very strong permanent magnets. People with pacemakers 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-L 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.

The blue plastic springs contain maximum structural memory characteristics. Do not leave tubes in the housing when the unit is not in use as this may expand the springs. If the springs have been expanded, smaller tubes may not be held tightly in position.

2.2 Handling

The efficiency of bead capture depends on the size, and therefore iron content, of the beads and viscosity of the sample. Two rounds of bead removal may be needed if a low level of residual beads is necessary.

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

Follow the protocol in each Dynabeads product for more instructions on how to use the magnet.

2.3 Storage and Stability

Your Dynal MPC-L contains sintered rare-earth Neodymium Iron Boron permanent magnets. Magnetic strength will not diminish significantly during the lifetime of the product. Loss of magnetic strength will occur only if the magnets are exposed to temperatures greater than 90°C. Do not leave Dynal MPC-L exposed to artificial UV light, as the surface material may become brittle.

Always leave the magnetic slide in the housing when not in use.

Store the product at room temperature and clean with a damp cloth. For disinfection, use 70 % isopropyl alcohol, 1 % sodium hypochlorite solution or 0.1N HCl solution. Do not autoclave the Dynal MPC-L. Avoid prolonged exposure to aqueous solutions.

2.4 Warning and Limitations

This product guarantees optimum isolation of Dynabeads, not the isolation of a specific material. Recovery of bio-molecules by magnetic isolation depends on the avidity of the antibodies or ligands on the surface of Dynabeads, as well as factors concerning the bio-molecules themselves and the matrix from which they are to be isolated.

2.5 Patents and Trademarks

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2.8 Warranty

The products are warranted to the original purchaser only to conform to the quantity and contents stated on the vial and outer labels for the duration of the stated shelf life. Invitrogen Dynal's obligation and the purchaser's exclusive remedy under this warranty is limited either to replacement, at Invitrogen Dynal's expense, of any products which shall be defective in manufacture, and which shall be returned to Invitrogen Dynal, transportation pre-paid, or at Invitrogen Dynal's option, refund of the purchase price.

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

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