IMAG™ Handheld Magnetic Separation Devices

Transforming low throughput to high throughput separation by a flip of a tube or microplate

AXYGEN
A Corning Brand

IMAG Handheld Magnetic Beads Separation Devices

The use of magnetic separation devices (MSD) are essential in any paramagnetic bead based purification process. Traditionally, MSDs are not optimized for manual use and most require electrically powered liquid handling systems. IMAG MSDs are available in tube or microplate format and are designed to simplify the manual processing of magnetic bead separations including:

- Nucleic acid purification and clean up
- Cell based assays
- Antibody and protein purifications

Features and Benefits

- IMAG MSDs accommodate single tube or 96 well microplate formats
- Fast separation time
  - Strong magnets enable less than 30 second separation times
  - Holds tubes or microplate enabling fast wash steps
- Manual operation enables low or high throughput

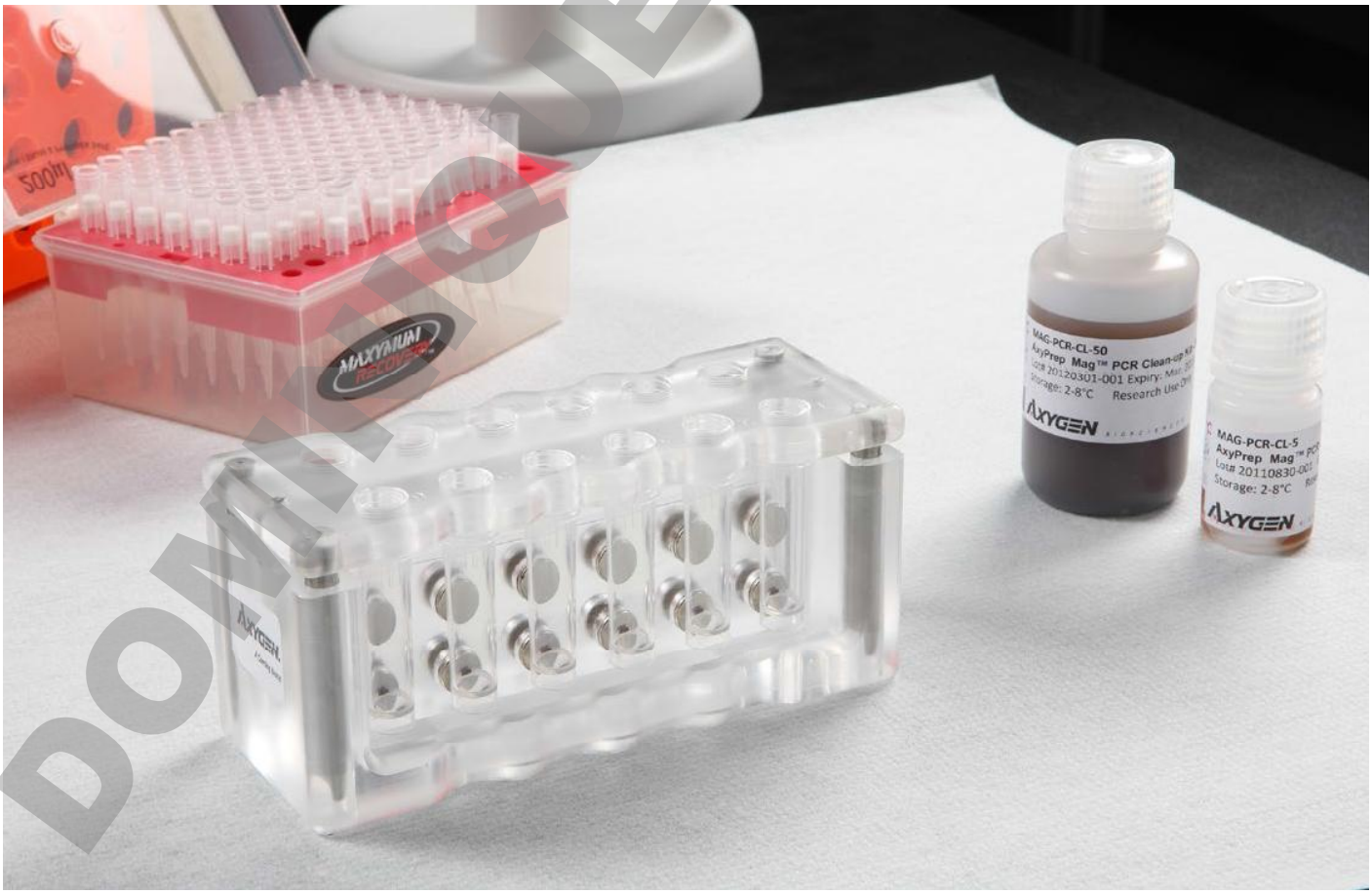
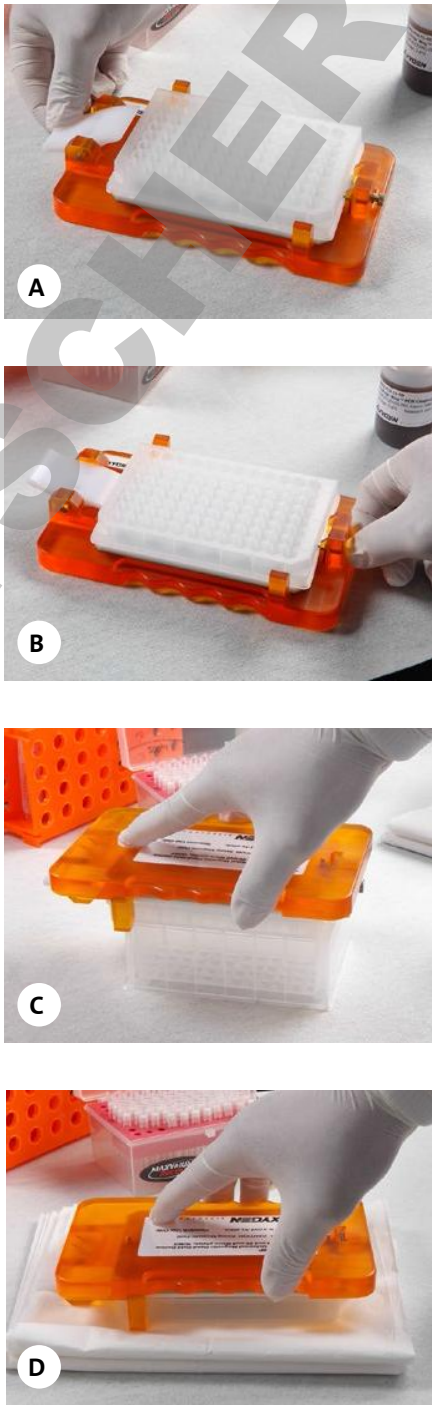


Figure 1.



Instruction for Use

IMAG™ MSD 96 well microplate format

1. Raise the clip by pushing down from its edge to allow placement of a microplate of end user choice (requires microplate conforming to ANSI standard for 96 well microplate) (Figure 1A). When the microplate is positioned on top of the magnets, release the clip to hold the microplate in place. On the other end of the device, a thumb screw holder is also adjusted to hold the microplate. (Figure 1B). This holding mechanism is designed to hold the microplate firmly on top of the magnets without leaving any air gaps, allowing for optimal separation.
2. The magnetic beads will aggregate to the side or bottom of the well (Figure 2). The excess fluid can be removed by flipping the microplate and IMAG-96P upside-down into a deep well reservoir (Figure 1C).
3. While the IMAG-96P is in the upside-down position, tap the microplate gently 3-5 times onto a clean thick tissue pad (1/5" thickness) to remove any residual liquid. In order to ensure optimal removal of any residual fluid after the tapping process, leave the microplate while in the handheld device in the upside-down position for 1-2 minutes to allow the residual fluid to diffuse through the tissue. This will ensure optimal removal of any residual fluid. (Figure 1D).
4. Repeat step 3 for washing steps. For these steps there is no need to use a pipettor to remove washing fluid.

Note: PCR microplates have narrow wells, which increases surface tension and makes removing the excess fluid of the original sample from the beads difficult. For such microplates the use of a pipettor is recommended to fully remove the supernatant. In order to ensure efficient separation, make sure no air bubbles are formed during pipetting.

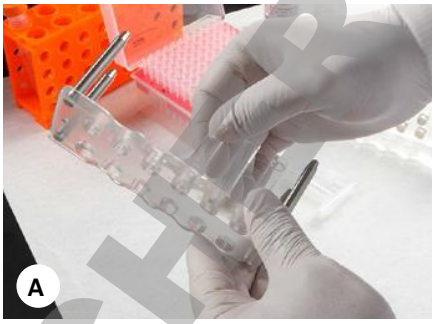
Figure 2. Separation of magnetic beads in microplate format

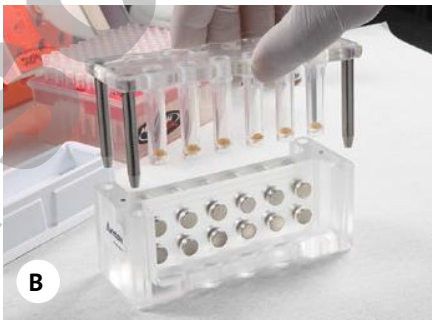
10 seconds after the separation process

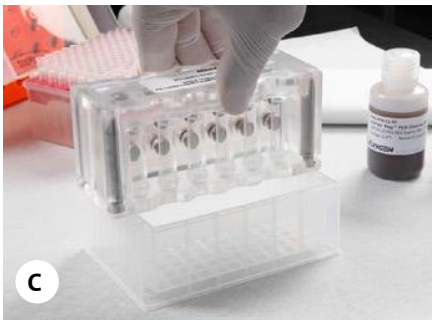
20 seconds after the separation process

30 seconds after the separation process

Figure 3.







Instruction for Use

IMAG™ MSD 12 Tube Format

1. Separate the top rack portion from the magnet bearing base. Screw in the 0.5, 1.5, or 2.0 mL tubes into the designated holes to the top part of the IMAG-12T MSD (Figure 3A).
2. When the magnetic beads are added to the solution in the tubes, assemble the top part of the rack with the magnet bearing part to initiate the separation process (Figure 3B).
3. The beads will aggregate to the side of the tube closest to the magnets. (Figure 4) The excess fluid can be removed by flipping the assembled IMAG-12T upside-down into the reservoir (Figure 3C).
4. While the assembled rack is in the upside-down position, tap gently 3 to 5 times on a clean, thick pad of tissue to remove any residual fluid in the tubes. In order to ensure optimal removal of any residual fluid after the tapping process, leave the assembled rack in the IMAG-12T MSD in the upside-down position for 1-2 minutes to allow the residual fluid to diffuse through the tissue. This will ensure optimal removal of any residual fluid (Figure 3D).
5. Repeat step 4 for washing steps.

Note: Remove the top rack from the magnet bearing part for non-MSD requiring steps such as vortexing and incubation. In order to ensure efficient separation, make sure no air bubbles are formed during pipetting.

Figure 4. Separation of magnetic beads in tube format

10 seconds after the separation process

20 seconds after the separation process

30 seconds after the separation process

Ordering Information

Cat. No.	Description	Qty/Unit
IMAG™-12T	Handheld magnetic separation device for 0.5, 1.5 and 2.0 mL screw cap tubes	1
IMAG-96P	Handheld magnetic separation device for 96 well microplates	1

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