

Magnetic Separation Rack 15 mL

Instructions for Use



1 Introduction

Important

Read these instructions carefully before using the products.

Intended use

The products are intended for research use only, and shall not be used in any clinical or *in vitro* procedures for diagnostic purposes.

Safety



WARNING

Contains very strong permanent magnets.

People wearing a pacemaker, or any other medical magnetized implant should not use this product.

Keep away from objects that could be damaged by the magnetic field (e.g., credit cards, watches, electronic equipment, displays and monitors). **DO NOT** put them directly next to the magnet.

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

Do not pull apart if contact has been made; twist off to prevent damage to the unit or fingers.

Storage

Store Magnetic Separation Rack 15 mL in a dry environment at room temperature..



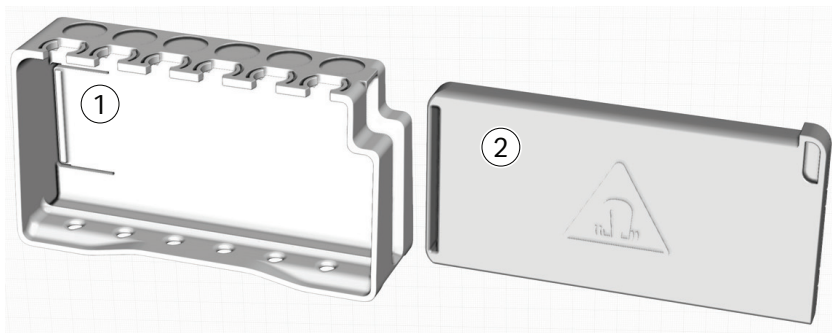
CAUTION

Do not expose the Neodymium magnet block to temperatures greater than 80°C (175°F). Neodymium magnets lose their magnetic properties if heated above 80°C.

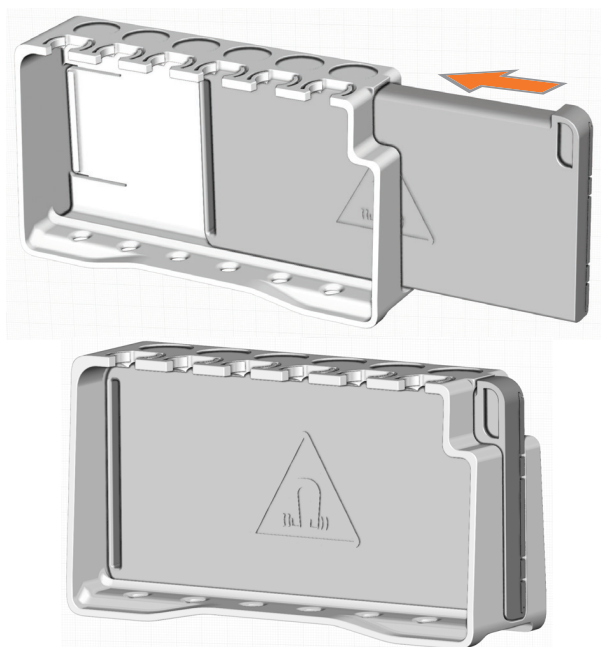
2 Description

Overview

Magnetic Separation Rack 15 mL is designed for purification of sample volumes up to 15 mL using magnetic beads. The rack consists of a plastic rack (1) with a detachable magnet block (2) containing high-energy neodymium magnets.



The magnet block is inserted into the plastic rack in the dedicated slot.



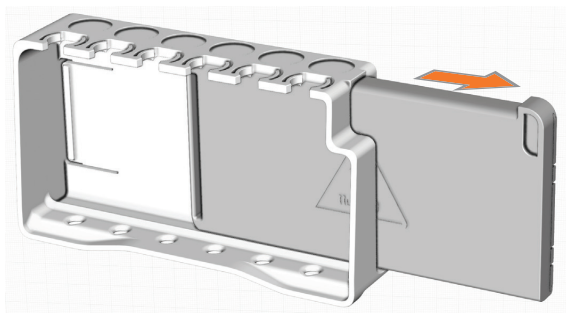
Characteristics

The following applies to Magnetic Separation Rack 15 mL:

- Up to six standard 15 mL conical tubes can be held in the rack enabling multiple separations in parallel.
- Caps of 15 mL tubes can be stored on top of the Magnetic Separation Rack 15 mL in the locations provided.



- The magnetic beads are attracted to magnets located at the back of the Magnetic Separation Rack 15 mL, resulting in distribution of the bead pellet along just one side of the tube. This enables clear visibility of the sample for efficient removal of the supernatant with minimal risk of disturbing or collecting contaminating beads from the pellet, permitting maximum bead retention and yield.
- Once the tubes are placed in the rack, the magnetic beads are attracted to the magnet within a few seconds or minutes, depending on bead type, bead concentration, and diluent viscosity. This allows easy removal of the supernatant while the magnetic beads remain in the tube.
- The magnet block can be easily removed from the plastic rack to enable rapid demagnetization of the samples. This aids swift dispersion of the beads once the unwanted supernatant has been removed.



Typical applications

Magnetic Separation Rack 15 mL allows separation of magnetic beads from various liquid sample media, including viscous samples such as blood or plasma diluted in typical viscous lysis and binding buffers used routinely for nucleic acid extraction procedures.

Magnetic Separation Rack 15 mL is well-suited for use with Cytiva products containing magnetic beads, for example :

- SeraSil-Mag™ silica coated superparamagnetic particles,
- Sera-Mag™ SpeedBeads Carboxylate-Modified Magnetic Particles, or
- Sera-Mag™ Carboxylate-Modified Magnetic Particles

Details of Cytiva magnetic bead products are given in the ordering information section. For further details, refer to [cytiva.com/shop/molecular-biology/pcr-and-amplification/magnetic-beads](https://www.cytiva.com/shop/molecular-biology/pcr-and-amplification/magnetic-beads).

Specifications

Parameter	Specification
Number of tubes	6
Maximum volume that can be processed	15 mL
Minimum volume that can be processed	2.5 mL
Tube type	Standard 15 mL (17 x 118 mm) conical tubes

Compatible tubes

The table below lists the 15 mL tubes compatible with the Magnetic Separation Rack 15 mL.

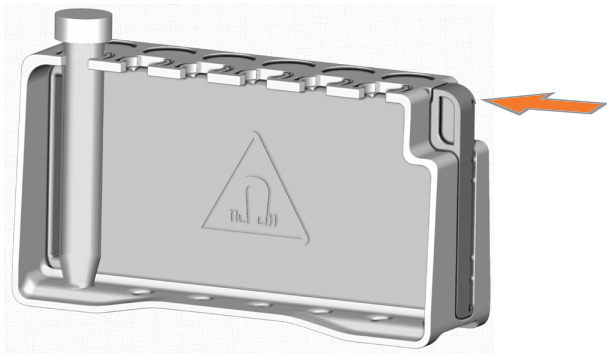
Manufacturer	Reference
Corning	CLS430052
Eppendorf	0030122208
VWR	525-1084
VWR	525-0309
VWR	89401-574

3 Operating instructions

General protocol

Note: When using the Magnetic Separation Rack 15 mL for the first time, make sure to remove the white label used to retain the magnet block (2, in [Description, on page 3](#)) inside the plastic rack (1, in [Description, on page 3](#)) during transportation prior to use.

Step	Action
1	Make sure the magnetic beads are fully resuspended by agitating with a vortex mixer before use.
2	Add the magnetic beads to your sample in a standard 15 mL conical tube and mix well.
3	Wait an appropriate amount of time for the magnetic beads to bind to your target biomolecules
4	Place the 15 mL tube into the Magnetic Separation Rack. Make sure the magnet block is fully inserted into the plastic rack.



5 Wait an appropriate amount of time to allow all the beads to attract to the magnet.



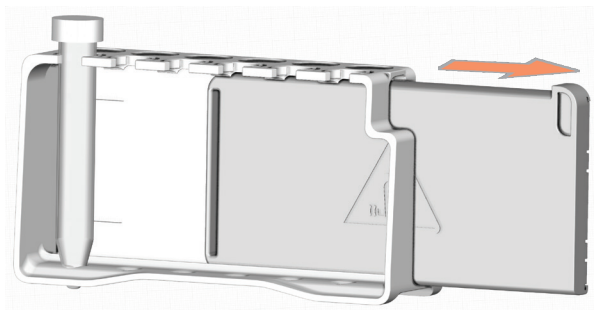
CAUTION
Do not leave the beads pelleted against the magnet for longer than required as this may result in difficulty resuspending the bead pellet.

Step	Action
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Note:

The required waiting time can vary from seconds to minutes, depending on bead type, bead concentration, sample volume and diluent viscosity. Once all the beads are attracted to the magnet, proceed to step 6 immediately.

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|---|---|
| 6 | Carefully remove the supernatant, taking care not to disturb the bead pellet. |
| 7 | Remove the magnet block from the plastic rack. |



- | | |
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| 8 | Add liquid to disperse the beads, for example wash buffer, elution buffer equilibration buffer or sample solution. |
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For further advice on magnetic bead handling and protocol details, see instructions for the various magnetic beads products supplied from Cytiva.

4 Cleaning and disinfection

Clean and disinfect Magnetic Separation Rack 15 mL

To clean and disinfect Magnetic Separation Rack 15 mL follow the recommendations below:

- Clean by wiping with distilled water.
- Disinfect by wiping with 70% ethanol, 70% isopropyl alcohol (IPA) or 1% sodium hypochlorite (bleach).
- The plastic rack (1, in [Description, on page 3](#)) is suitable for autoclaving.

**CAUTION**

Do not autoclave the magnet block. The magnet block (2 in [Description, on page 3](#)) will become demagnetized if autoclaved.

5 Recycling information

Disposal of product packaging

All cardboard parts (i.e., box and interior) are Forest Stewardship Council (FSC) compliant¹ and fully recyclable. Recycle the cardboard according to national and local environmental regulations.

The packaging interior is covered with a polyethylene (PE)-stretch film that is easily removable. Recycle the stretch film according to national and local environmental regulations.

Disposal of product components

When taking the product out of service, the different materials described below must be separated and recycled according to national and local environmental regulations.

- The plastic rack and casing of the magnet block are composed primarily of plastic, designated SPI code 7 for recycling.
- The magnet block contains high-energy neodymium magnets.

Note: *Some magnet suppliers may offer a service to recycle neodymium magnets.*

Dismantle the product

For final disposal and complete recycling, the Magnetic Separation Rack 15 mL can be disassembled into its core material components. This process is irreversible and must be performed only for recycling at final disposal.

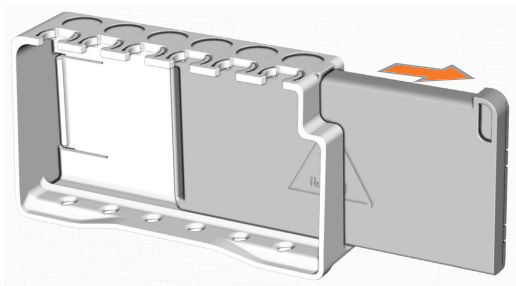
**WARNING**

Always wear eye protection and gloves. Strong magnet components present serious risk of injury. Disassembly is performed at the users own risk.

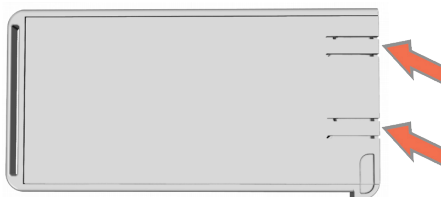
¹ FSC certification ensures that products come from responsibly managed forests that provide environmental, social and economic benefits.

Step	Action
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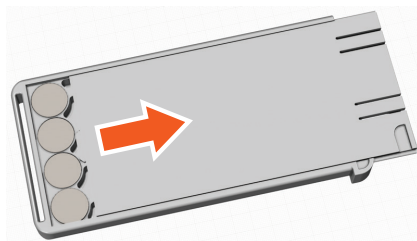
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|---|--------------------------------|
| 1 | Remove magnet block from rack. |
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| 2 | On the reverse of the magnet block pry open or snap off the two retention clips. |
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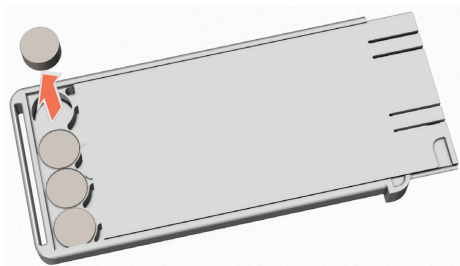


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| 3 | Carefully open the magnet block compartment by sliding the cover. |
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Result:
A single row of magnets is exposed.

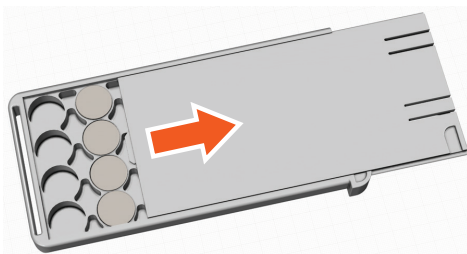
Step	Action
4	Using a long-handled screwdriver, attract each magnet at the tip to lift out of the cavity.



CAUTION

Keep hands away from magnets. Magnets may snap together.

- 5 Remove magnet from screwdriver and place in suitable container.
- 6 Repeat process one row at a time.



CAUTION

Do not attempt to remove magnets more than one row at a time, as trapping hazard is significantly increased.

Step	Action
7	Dispose of magnets and plastic components according to national and local environmental regulations.

6 Ordering information

Product	Quantity	Product code
Magnetic Separation Rack 15 mL	1	29710714

Related products	Quantity	Product code
MagRack 6	1	28948964
MagRack Maxi	1	28986441
Sera-Xtracta™ Cell-Free DNA Kit	96 purifications	29437807
Sera-Xtracta HMW DNA Kit	96 purifications	29429140
Sera-Xtracta Virus/Pathogen Kit	96 purifications	29506009
SeraSil-Mag™ 400	5 mL	29357369
SeraSil-Mag 400	60 mL	29357371
SeraSil-Mag 400	450 mL	29357372
SeraSil-Mag 700	5 mL	29357373
SeraSil-Mag 700	60 mL	29357374
SeraSil-Mag 700	450 mL	29357375
SeraSil-Mag 400 beads	1 L	29705862
SeraSil-Mag 700 beads	1 L	29705861
Sera-Mag SpeedBeads Carboxylate-Modified Magnetic Particles (E3)	15 mL	65152105050250
Sera-Mag SpeedBeads Carboxylate-Modified Magnetic Particles (E3)	100 mL	65152105050350
Sera-Mag SpeedBeads Carboxylate-Modified Magnetic Particles (E3)	1000 mL	65152105050450
Sera-Mag Carboxylate-Modified Magnetic Particles (E7)	15 mL	24152105050250
Sera-Mag Carboxylate-Modified Magnetic Particles (E7)	100 mL	24152105050350
Sera-Mag Carboxylate-Modified Magnetic Particles (E7)	1000 mL	24152105050450
Sera-Mag Select	5 mL	29343045
Sera-Mag Select	60 mL	29343052
Sera-Mag Select	450 mL	29343057

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