



Miltenyi Biotec

thermoMACS™ Separator

User manual



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thermoMACS™ Separator

User manual

Original instructions

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Read the chapter **Important safety information** and all other information in this user manual before using the instrument

⚠WARNING Before using the thermoMACS Separator, read the chapter **Important safety information** and all other information contained in this user manual, including any safety and operating instructions. Pay special attention to all warnings displayed on the instrument. Failure to read and follow these guidelines could lead to improper or incorrect usage and result in damage to the instrument. Improper usage could also cause severe personal injury, death, unpredictable results, instrument malfunction, and premature wear to components shortening the lifetime of the instrument. Such actions may void your warranty. Keep the user manual and any other safety and operating instructions provided with the instrument in a safe place accessible to all users for future reference.

If you have a serious concern regarding the safe use of your instrument, contact your authorized Miltenyi Biotec service provider or call Miltenyi Biotec Technical Support.

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Important safety information

General safety instructions



THIS CHAPTER DESCRIBES POTENTIALLY HAZARDOUS SITUATIONS ASSOCIATED WITH THIS INSTRUMENT AND PROVIDES IMPORTANT SAFETY INFORMATION TO MINIMIZE THE RISKS AND PROTECT YOURSELF AND OTHERS.

This chapter provides important information for your personal safety and the correct use of the instrument. Read and observe all instructions carefully before proceeding with the installation and use of the instrument. Observe general safety practices in addition to this user manual.

- Use this instrument only as indicated in this user manual to avoid personal injury and property damage.
- Keep this user manual in a place that is always accessible to all users.
- Follow local working area safety instructions and laboratory policies and standards for health, safety, and prevention of accidents.
- Ensure that the power cable plug is close to the user.
- Check the instrument before each use for visible damage.
- In case of severe accidents, damages to the instrument, or if smoke or flames appear, cut the power supply immediately.
- If it is necessary to cut the power supply, unplug the cable from the power outlet and contact an authorized Miltenyi Biotec service provider or Miltenyi Biotec Technical Support.

Hazard levels

Signal words are used to warn against hazardous situations and property damages. The following signal words are used in this user manual.

WARNING or **WARNING!** indicates a hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION or **CAUTION!** indicates a hazardous situation that, if not avoided, could result in minor or moderate injury. It is also used to warn against unsafe practices.

NOTICE or **NOTICE** indicates information considered important but not hazard related (e.g. messages relating to property damage).

Symbols



SAFETY WARNING: THE DOCUMENTATION MUST BE CONSULTED IN ALL CASES WHERE THIS SAFETY SYMBOL IS USED ON THE INSTRUMENT



ELECTRICAL HAZARD



BIOLOGICAL HAZARD



STRONG MAGNETIC FIELD



PERSONS WEARING A PACEMAKER OR OTHER ELECTRONIC IMPLANTS MUST MAINTAIN DISTANCE



CRUSH HAZARD



READ THE USER MANUAL BEFORE USING THE INSTRUMENT



DIRECT CURRENT



POLARITY (POSITIVE INSIDE)



WEEE (WASTE OF ELECTRICAL AND ELECTRONIC EQUIPMENT)



EUROPEAN CONFORMITY MARKING



UNITED KINGDOM CONFORMITY ASSESSED MARKING



NRTL CERTIFICATION MARK: PRODUCT MEETS CONSENSUS-BASED STANDARDS OF SAFETY, REQUIRED BY THE OCCUPATIONAL SAFETY/HEALTH ADMINISTRATION (OSHA), DETERMINED BY THE NATIONALLY RECOGNIZED TESTING LABORATORIES (NRTL) TÜV SÜD

Safety labels

Notice the hazard points and safety symbols of the instrument.

- Keep safety labels and safety markings clean and legible.
- Inspect the safety labels and safety markings regularly and replace them if they are not legible or identifiable from a safe viewing distance.
- Contact Miltenyi Biotec for replacement labels.

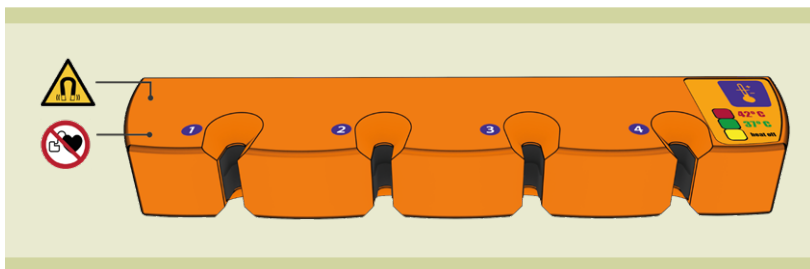


Figure 1.1: Safety symbols on the instrument.

Electrical and thermal hazards



ELECTRICAL HAZARD



Electric shock, short circuit, overheating, fire, and explosion may lead to death or serious injury.

Cables and power supplies

- Only use the included power cable.
- Use the included power cable only for the thermoMACS Separator.

Liquids inside the instrument

Liquids inside the instrument can cause short circuits.

- Do not allow liquids to enter the inside of the instrument.
- Protect the external power supply against spilled liquids.
- Clean up spilled liquids immediately.
- Use only small amounts of cleaning agents on a soft cloth to wipe the instrument. Do not spray or pour liquid cleaning agents onto or into the instrument.
- Do not use the instrument if liquids have entered the inside of it.
- Do not use the external power supply if liquids have entered it.
- Do not use the instrument if it has been dropped or is damaged.
- Do not use the instrument if the power cable is damaged.

Biological hazards



BIOLOGICAL HAZARD



Contamination or infection may lead to death or serious injury depending on the material used.

Biological material

All biological material must be considered potentially infectious.

- Follow local working area safety instructions and laboratory policies and standards for health, safety, and prevention of accidents.
- Wear personal protective equipment (such as gloves, safety glasses, etc.) as indicated in the safety data sheet for the particular substance.
- Decontaminate the instrument after processing hazardous or potentially infectious material.
- If hazardous or potentially infectious material has been spilled or leaked from the system, decontaminate the affected area.
- Use a disinfectant or cleaning agent that is appropriate for the specific pathogen or substance.

Waste

All liquid and solid waste must be considered hazardous.

- Follow the general laboratory safety regulations when handling liquid and solid waste.
- Follow local regulations regarding waste disposal.
- Autoclave or alternatively decontaminate waste with an appropriate disinfectant.

Magnetic field hazards



STRONG MAGNETIC FIELD



Strong magnetic fields can influence the functioning of pacemakers or electronic medical implants.



- If wearing pacemakers or electronic medical implants, keep a distance of at least 30 cm.



Magnetizable objects can suddenly move towards the magnet.

- Keep all magnetizable objects at a distance of at least 30 cm.



Strong magnetic fields can damage equipment sensitive to magnetic fields.

- Keep all magnetic storage devices and electronic equipment at a distance of at least 30 cm.

Servicing and transportation

Servicing

Improper servicing or repair of the instrument or use of unauthorized parts can cause malfunction of or damage to the instrument. This can cause hazards to users. Unless otherwise specifically noted in this user manual or other Miltenyi Biotec documentation, do not service the instrument yourself. Servicing and repair must be performed by Miltenyi Biotec certified and qualified service personnel. If the instrument needs servicing, decontaminate the instrument to remove any hazardous material. If you have questions regarding proper decontamination or shipment, contact Miltenyi Biotec Technical Support for assistance. Only use accessories and upgrades recommended by Miltenyi Biotec. Inquire with your local Miltenyi Biotec representative about Miltenyi Biotec's extensive instrument service and service contracts, or refer to www.miltenyibiotec.com/support.

Transportation

The instrument should be transported with care in packaging specified by Miltenyi Biotec. Internal damage can occur if the instrument is subjected to excessive vibration or if it is dropped. If the instrument needs to be shipped back to the manufacturer for service, contact Miltenyi Biotec for instructions and packaging materials.

Disposal



WASTE OF ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) CUSTOMER INFORMATION

Dispose of your end-of-life Miltenyi Biotec products in accordance with the applicable WEEE and hazardous waste disposal legislation, which may differ by country or region. Electrical equipment may contain hazardous substances that may have a serious detrimental effect on the environment and/or human health. All equipment must be specifically collected and treated by designated waste facilities and by qualified WEEE compliance schemes. By ensuring that you dispose of your unwanted electrical and electronic equipment according to the applicable WEEE and hazardous waste disposal legislation, you are helping to preserve our natural resources and protect human health. Miltenyi Biotec is committed to protecting the environment. Miltenyi Biotec offers product end-of-life return programs in many countries and partners with licensed WEEE compliance schemes throughout the world. Miltenyi Biotec takes back your end-of-life Miltenyi Biotec equipment for recycling free of charge. The terms and availability of this offer vary by geography because of differences in regulatory requirements. Note that, depending on the type and use of your equipment, additional requirements may apply. Before shipping the instrument back to the manufacturer for disposal, decontaminate the instrument to remove any hazardous material. For more information or if you wish to dispose of your end-of-life Miltenyi Biotec equipment, contact your local Miltenyi Biotec representative or Miltenyi Biotec Technical Support.

2.1 Intended use

The thermoMACS Separator is a heatable magnetic separator specifically developed for molecular biology applications and is to be used by professional laboratory personnel only. The thermoMACS Separator, in combination with μ Columns and μ MACS MicroBeads, is used for the isolation of highly pure biomolecules such as mRNA, sequence-specific DNA, or proteins. In addition to applications at room temperature, the thermoMACS Separator allows molecular biological reactions to be carried out at increased temperatures of 37 °C or 42 °C, such as enzymatic reactions. The instrument is for research use only and not for therapeutic or diagnostic use.

2.2 Separation principle

For magnetic purification, biomolecules are labeled with target specific μ MACS MicroBeads. μ MACS MicroBeads are optimized for the isolation of biomolecules such as RNA or proteins. They are conjugated to specific molecules, e.g. Protein A, epitope tag specific antibodies, Streptavidin, or single-stranded oligonucleotides, and can be used for magnetic labeling of multiple target molecules. The labeled sample is applied to the μ Column and placed into the thermoMACS Separator. The thermoMACS Separator (**Figure 4.1**) generates a high gradient magnetic field to bind magnetically labeled biomolecules in the μ Column. While the labeled molecules are retained in the magnetic matrix, the nontarget molecules are rinsed out of the column.

Heating elements are present in each column slot, heating up the reaction chamber in the μ Column to pre-defined temperatures of 37 °C or 42 °C. The target molecule-ligand complex can be incubated with an enzymatic solution. The selected temperature maintains constant throughout the whole separation process.

For elution of the target molecule, an appropriate elution buffer, which disrupts the binding between the target molecule and its immobilized ligand, is applied onto the column. While the target molecule is collected in the eluate, the ligand remains within the column. A second option is the release of the target molecule-ligand complex by removing the column from the magnetic field. In this case, the complete complex can be eluted using a buffer of choice.

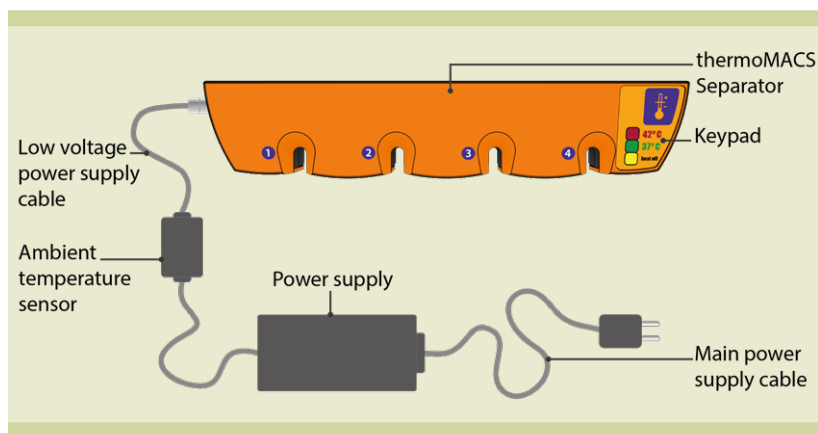


Figure 2.1: The thermoMACS Separator.

3

Installation

3.1 Included components

Component
thermoMACS Separator
µMACS Sealing Solution, 1 mL
Low voltage power supply cable, temperature sensor and power supply
Main power supply cable
User manual

Table 3.1: Components included in the delivery of the thermoMACS Separator.

3.2 Consumables

Consumable	Order number
MACS MultiStand	130-042-303
µ Columns	130-042-701
µMACS Sealing Solution, 1 mL	130-091-160
Reagents	For a complete list of Molecular Analysis products, refer to www.miltenyibiotec.com .

Table 3.2: Standard laboratory consumables for use with the thermoMACS Separator.

3.3 Assembling the instrument



CRUSH HAZARD



Risk of crushing.

The instrument may fall if it is not placed on a flat and even surface. This may cause injury. Place the instrument only onto stable, even, and vibration free tables or laboratory benches.



A change in the environmental temperature may cause condensation inside the instrument.

After moving the instrument from a cold environment to room temperature, wait for the instrument to dehumidify before using it.

- 1 Place the MACS MultiStand on a clean and stable laboratory bench.
- 2 Attach the thermoMACS Separator to the MACS MultiStand by holding the rear surface against the stand. It will remain attached to the MACS MultiStand by internal magnets on the rear surface of the instrument.
- 3 Take the low voltage power supply cable and insert the output into the plug on the left side of the instrument. The power supply cable is correctly orientated when the red dot on the plug meets the red dot on the connector. **WARNING! Only use the included power cable.**
- 4 Connect one end of the main power supply cable with the power supply, and plug it into an appropriate electrical outlet.
- 5 Place an appropriate rack for the collection tubes under the thermoMACS Separator.

The thermoMACS Separator and the temperature sensor should not be used in direct proximity to any heat source or strong illuminants. The column temperature is turned to "heat off" (yellow LED) as default.

4

Operating the instrument

4.1 Keypad

The keypad is used to select the temperature of the reaction chamber in the μ Column. Gently touching the control button on the keypad changes the temperature as indicated by the three light emitting diodes (LED): the red LED for 42 °C, the green LED for 37 °C, and the yellow LED for heat off, i.e., for working at room temperature. When the target temperature is changed via the control button to 37 °C or 42 °C, the corresponding temperature LED flashes until the target temperature is reached. Then the LED is permanently on.

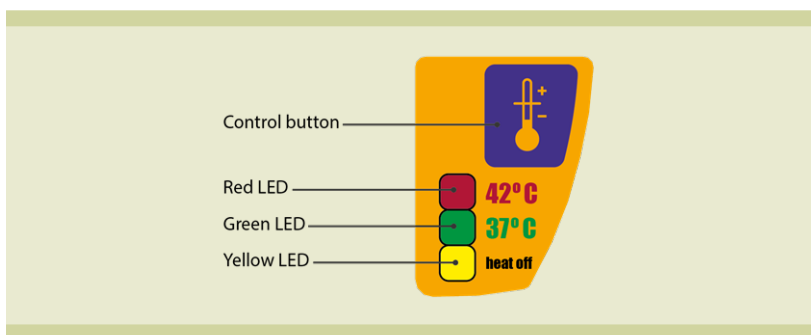


Figure 4.1: The keypad of the thermoMACS Separator.

4.2 Status of the thermoMACS Separator

LED signal	Status
No LED is on	The thermoMACS Separator may not be connected to the power supply.
Yellow LED is on	The thermoMACS Separator is in standby mode, and the heating elements are deactivated.
Yellow LED flashes fast	The thermoMACS Separator has a hardware error. Contact Miltenyi Biotec Technical Support.
Green LED flashes slowly	The 37 °C heating mode is on, but the target temperature has not been reached.
Green LED is on	The target temperature of 37 °C has been reached.
Red LED flashes slowly	The 42 °C heating mode is on, but the target temperature has not been reached.
Red LED is on	The target temperature of 42 °C has been reached.

Table 4.1: Status of the thermoMACS Separator.

4.3 Performing a separation

The thermoMACS Separator requires 5–15 minutes to reach 37 °C or 42 °C. Permanent illumination of the LED indicates that the target temperature is reached (refer to **Table 4.1**). Before starting an application, consider whether the assay requires immediate heating (refer to **Immediate heating on the facing page**) or heating after biomolecule separation (refer to **Heating after biomolecule separation on the facing page**).

Use of pre-heated buffer on a pre-warmed column is recommended due to prevention of air bubble formation in the column matrix.

For further details on the separation process, refer to the respective μ MACS data sheet. All protocols and data sheets are available at www.miltenyibiotec.com.

4.3.1 Immediate heating

- 1 Pre-heat the μ Column in the thermoMACS Separator for 5–15 minutes to ensure that the matrix in the column is heated to the correct temperature.
- 2 Apply the pre-heated buffer for equilibration onto the column.
- 3 Apply the labeled sample directly after flow-through of the equilibration buffer onto the column.
- 4 Immediately apply 1 μ L of μ MACS Sealing Solution onto the μ Column.

Make sure to pipette the μ MACS Sealing Solution directly onto the iron sphere matrix in the μ Column so that it can spread and completely cover the surface of the matrix.

4.3.2 Heating after biomolecule separation

- 1 Carry out the separation according to the standard μ MACS protocol at room temperature (thermoMACS Separator "heat off").
- 2 Set the thermoMACS Separator to the required temperature.
- 3 If not otherwise specified in the μ MACS reagent data sheet, wait for 5–15 minutes until the thermoMACS Separator has reached the required temperature.
- 4 Apply the labeled sample onto the column.
- 5 Immediately apply 1 μ L of μ MACS Sealing Solution.

Make sure to pipette the μ MACS Sealing Solution directly onto the iron sphere matrix in the μ Column so that it can spread and completely cover the surface of the matrix.

5

Maintenance

NOTICE Some decontamination methods may damage the instrument.

Do not use acetone. Do not use bleach. Do not autoclave the instrument. Do not put the instrument into a dish washer.

Clean up spilled liquids immediately. Unplug the power cable before cleaning the thermoMACS Separator. Use only small amounts of cleaning agents on a soft cloth to wipe the instrument. Do not spray or pour liquid cleaning agents onto or into the instrument. Use a detergent containing wash solution (e.g. 1% SDS solution), alcohol (e.g. 70% ethanol solution), and/or 3% hydrogen peroxide for cleaning and disinfection.

6

Technical data and specifications

6.1 Specifications

The thermoMACS Separator is labeled as a protection class III device. The power supply is classified as protection class I. The instrument is suitable for pollution degree 2 environments.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Transient overvoltages present on the mains supply: category II. Changes or modifications of the instrument, unless expressly approved by Miltenyi Biotec, may void your authority to operate the instrument pursuant to FCC 47 CFR. For other safety considerations, refer to the product label or visit www.miltenyibiotec.com.

Design and specifications are subject to change without notice.

Technical specifications	
Footprint	191 mm × 40 mm
Height	33 mm
Weight	500 g
Input voltage (thermoMACS Separator)	12 V \equiv
Power consumption (thermoMACS Separator)	38 W
Power supply	Input voltage 100–240 V ~ Frequency 50/60 Hz Power consumption 60 W Output voltage 12 V \equiv
Working temperature	10–30 °C Use the instrument only indoors.
Storage temperature	0–60 °C Store the power supply and the instrument at the same temperature.
Humidity	10–85% (noncondensing)
Altitude	Max. 2000 m
Emission sound pressure level at workstation	<70 dBA

Table 6.1: Technical specifications of the thermoMACS Separator.

6.2 EC/EU Declaration of Conformity

This declaration of conformity is issued under the sole responsibility of the manufacturer:

Miltenyi Biotec B.V. & Co. KG
Friedrich-Ebert-Straße 68
51429 Bergisch Gladbach
Germany

The declaration of conformity refers to the product identified as follows:

Model: thermoMACS Separator

The product complies with all essential requirements of the following directives:

2011/65/EU Restriction of the use of certain hazardous substances in electrical & electronic equipment

2014/30/EU Electromagnetic compatibility

2014/35/EU Low voltage

The product is in conformity with the following harmonized standards:

EN 61010-1:2010

EN 61010-2-010:2014

EN 61326-1:2013

Person authorized to compile the relevant technical documentation:

Stefan Miltenyi
Miltenyi Biotec B.V. & Co. KG
Friedrich-Ebert-Straße 68
51429 Bergisch Gladbach
Germany

6.3 UK Declaration of Conformity

This declaration of conformity is issued under the sole responsibility of the manufacturer:

Miltenyi Biotec B.V. & Co. KG
Friedrich-Ebert-Straße 68
51429 Bergisch Gladbach
Germany

The declaration of conformity refers to the product identified as follows:

Model: thermoMACS Separator

The product complies with all essential requirements of the following legislations:

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012
Electromagnetic Compatibility Regulations 2016
Electrical Equipment (Safety) Regulations 2016

The product is in conformity with the following UK designated standards:

EN 61010-1:2010
EN 61010-2-010:2014
EN 61326-1:2013

Signed for and on behalf of:

Miltenyi Biotec B.V. & Co. KG

7

Technical support

For technical support, contact your local Miltenyi Biotec representative or Miltenyi Biotec Technical Support at Miltenyi Biotec headquarters:

Miltenyi Biotec B.V. & Co. KG

Friedrich-Ebert-Straße 68

51429 Bergisch Gladbach

Germany

Phone: +49 2204 8306 3803

Email: technicalsupport@miltenyi.com

Visit **www.miltenyibiotec.com** for local Miltenyi Biotec Technical Support contact information.

8

Legal notes

8.1 Limited warranty

Except as stated in a specific warranty statement which may accompany this product or as otherwise agreed in writing by an authorized representative of Miltenyi Biotec, Miltenyi Biotec's warranty to you, the original purchaser and end user ("you" or "your"), with respect to the product accompanied by this limited warranty shall be subject to the following provisions and the general terms and conditions of sale of the company within the Miltenyi Biotec group which supplied the product in effect at the date of purchase. Those terms and conditions of sale may vary by country and region. Nothing in this document should be construed as constituting an additional warranty.

Miltenyi Biotec warrants that this product will operate or perform substantially in conformance with Miltenyi Biotec's published specifications and be free from material defects in material and workmanship, when subjected to normal, proper, and intended usage by properly trained personnel, for the period of time set forth in the product documentation or package inserts accompanying the product (the "Warranty Period").

Miltenyi Biotec agrees, during the Warranty Period, to repair or replace, at Miltenyi Biotec's option, the defective product so as to cause the same to operate in substantial conformance with said published specifications; provided that you shall (a) promptly notify Miltenyi Biotec in writing upon the discovery of any nonconformity or defect, which notice shall include the product model and serial number (if applicable) and details of the warranty claim; and (b) return the

nonconforming or defective product to Miltenyi Biotec, freight prepaid, only after receipt of a Return Material Authorization ("RMA") from Miltenyi Biotec, which may include biohazard decontamination procedures and other product-specific handling instructions, if applicable.

Miltenyi Biotec shall have no obligation to make repairs, replacements, or corrections to the product or any component thereof required, in whole or in part, as the result of (i) normal wear and tear, (ii) improper handling, installation, operation, storage, service, maintenance, or repair, (iii) failure to follow the instructions, cautions, warnings, and notes set forth in the product documentation provided with the product or provided by Miltenyi Biotec from time to time, (iv) abnormal use, misuse, neglect, abuse, mishandling, misapplication, modification, or alteration of the product, (v) use of the product in a manner for which it was not designed, (vi) causes external to the product such as, but not limited to, power failure or electrical power surges, (vii) use of the product in combination with equipment, accessories, consumables, or software not supplied or approved by Miltenyi Biotec, or (viii) accident, disaster, or acts of God. ANY INSTALLATION, MAINTENANCE, REPAIR, SERVICE, OR ALTERATION TO OR OF, OR OTHER TAMPERING WITH, THE PRODUCT PERFORMED BY ANY PERSON OR ENTITY OTHER THAN MILTENYI BIOTEC AUTHORIZED PERSONNEL WITHOUT MILTENYI BIOTEC'S PRIOR WRITTEN APPROVAL, OR ANY USE OF REPLACEMENT PARTS NOT SUPPLIED BY MILTENYI BIOTEC, SHALL IMMEDIATELY VOID AND CANCEL ALL WARRANTIES WITH RESPECT TO THE AFFECTED PRODUCT.

Miltenyi Biotec's warranty does not cover products sold AS IS or WITH ALL FAULTS, or which had its serial number defaced, altered, or removed, or any consumables or parts identified as being supplied by a third party.

Miltenyi Biotec must be informed promptly if a claim is made under this limited warranty. If a material or manufacturing defect occurs within the Warranty Period, Miltenyi Biotec will take the appropriate steps, at Miltenyi Biotec's option, to make repairs, replacements, or corrections to the product or any component thereof as may be required to restore the full usability of

your product. If Miltenyi Biotec determines that a product for which you have requested warranty services is not covered by the warranty hereunder, you shall pay or reimburse Miltenyi Biotec for all costs of investigating and responding to such request at Miltenyi Biotec's then prevailing time and materials rates. If Miltenyi Biotec provides repair services or replacement parts that are not covered by this warranty, you shall pay Miltenyi Biotec therefor at Miltenyi Biotec's then prevailing time and materials rates.

THE OBLIGATIONS CREATED BY THIS WARRANTY STATEMENT TO REPAIR OR REPLACE A DEFECTIVE PRODUCT ARE EXCLUSIVE AND SHALL BE THE SOLE REMEDY OF BUYER IN THE EVENT OF A DEFECTIVE PRODUCT. EXCEPT AS EXPRESSLY PROVIDED IN THIS WARRANTY STATEMENT, MILTENYI BIOTEC HEREBY DISCLAIMS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, WITH RESPECT TO THE PRODUCT, INCLUDING WITHOUT LIMITATION ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. MILTENYI BIOTEC DOES NOT WARRANT THAT THE PRODUCT IS ERROR-FREE OR WILL ACCOMPLISH ANY PARTICULAR RESULT.

UNDER NO CIRCUMSTANCES WILL MILTENYI BIOTEC BE LIABLE FOR ANY LOSS OF USE, INTERRUPTION OF BUSINESS, OR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES OF ANY KIND (INCLUDING LOST PROFITS) REGARDLESS OF THE FORM OF ACTION WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT PRODUCT LIABILITY, OR OTHERWISE, EVEN IF MILTENYI BIOTEC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL THE TOTAL LIABILITY OF MILTENYI BIOTEC HEREUNDER EXCEED THE GREATER OF 100.00 EUROS OR THE AMOUNT YOU ACTUALLY PAID FOR THE PRODUCT GIVING RISE TO SUCH LIABILITY, REGARDLESS OF THE CAUSE OF ACTION, IN CONTRACT, TORT, STRICT LIABILITY, OR OTHERWISE.

NOT ALL JURISDICTIONS ALLOW SUCH LIMITATIONS OF DAMAGES SO THE FOREGOING LIMITATIONS MAY NOT APPLY TO YOU. This warranty statement gives you specific legal rights and you may have other rights, which may vary from jurisdiction to jurisdiction.

8.2 Trademarks

MACS, thermoMACS, μ MACS, and the Miltenyi Biotec logo are either registered trademarks or trademarks of Miltenyi Biotec and/or its affiliates in various countries worldwide.



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