Miltenyi Biotec

gentleMACS™ Perfusers

Order no. 130-128-151

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1. Description

This product is for research use only.

Components	**25 gentleMACS™ Perfusers**, sterile and single-packed
	50 Luer Caps, sterile packed in one bag
Storage	Store gentleMACS Perfusers dry and protected from light at room temperature. The expiration date is indicated on the box label. Do not use after this date.

1.1 Background information

The gentleMACS Perfusers are single-use consumables designed exclusively for the gentleMACS Perfusion Technology using the gentleMACS Octo Dissociator with Heaters. gentleMACS Perfusers are used for the gentle and efficient perfusion of tissue samples in order to isolate sensitive cell types.

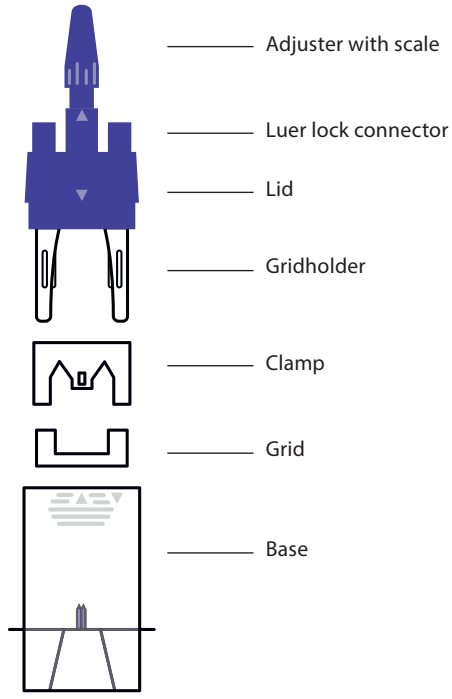


Figure 1: Components of the gentleMACS Perfuser.

The gentleMACS Perfuser can be disassembled into four parts: lid, clamp, grid, and base. The base contains an in-built peristaltic pump which delivers liquids via a needle array into the penetrated tissue sample. To aspirate buffer from the inside of the gentleMACS Perfuser, introduce a glass Pasteur pipette with elongated tip through one of the luer lock connectors to the base bottom. The adjuster on top of the lid can be used to adapt the penetration depth of the needle array into the sample material.
For more information on the penetration depth, the clamp position in the grid, and and if turning of the adjuster is needed, please check the data sheet of the respective MACS® Tissue Perfusion Kit.

1.2 Technical specifications

- Dimensions
  - Length: 100 mm
  - Diameter: 38 mm
- Reservoir of empty gentleMACS Perfuser: 10 mL
- Recommended working temperature is betweeen +4 °C and +40 °C.
- Chemical resistance: only use water-soluble liquids within the gentleMACS Perfuser.
- The gentleMACS Perfusers are for single use only.

  ▲ **Note:** Do not reuse the gentleMACS Perfusers. Reusing the gentleMACS Perfuser will lead to damage of the pumping membrane due to higher mechanical stress. This might lead to reduced performance and liquid leakage.

1.3 Reagent and instrument requirements

- gentleMACS Octo Dissociator with Heaters
- gentleMACS Perfusion Sleeves (# 130-128-752)
- MACS® Tissue Perfusion Kits, e.g., MACS Liver Perfusion Kit, mouse and rat (# 130-128-030)

1.4 Applications

The gentleMACS Perfusers together with the gentleMACS Perfusion Sleeves and MACS Perfusion Kits are designed for the perfusion of tissues to obtain highly viable single-cell suspensions, e.g., hepatocytes from perfused liver tissue.

For further details and more applications, please refer to www.miltenyibiotec.com. The gentleMACS Protocols are also online available at www.miltenyibiotec.com/protocols.

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2. Instructions for use

▲ When using the gentleMACS Perfuser, replace the regular sleeve of the gentleMACS Dissociator with the gentleMACS Perfusion Sleeve prior to use.

▲ Clamp and grid are delivered disassembled. They are used to keep the sample material in position and are clicked into the lid via the gridholder.

▲ A click will be heard at each side of the gridholder if the gridholder has been properly connected to the clamp-grid assembly.

▲ The gentleMACS Perfuser is delivered with the adjuster being in the correct position for the perfusion of mouse liver. If working with tissues that are thicker than mouse liver, adapt the needles penetration depth. Turn the adjuster clockwise and the needles will penetrate deeper into the tissue. One full clockwise rotation by 360° will lead to 1 mm deeper penetration. For more information, please refer to the data sheet of the respective MACS Tissue Perfusion Kit.

▲ The enclosed luer caps can be used to close the luer openings. However, both openings must be free during buffer replacement.

1. Replace regular sleeve of the gentleMACS Dissociator with the gentleMACS Perfusion Sleeve.
2. Attach the base of the gentleMACS Perfuser with connected lid to the gentleMACS Octo Dissociator with Heaters.
3. Install Heating Unit.
4. Prime the gentleMACS Perfuser with the respective buffer by starting an appropriate gentleMACS Perfusion Program to remove air from the pumping membrane and needles.
5. Assemble clamp-grid with the fixed sample material. Make sure that the sample material is located in the middle of the grid.
6. Remove the lid and click it into the assembled clamp-grid.
7. Attach the lid-clamp-grid assembly to the base by turning the lid slowly without pressure counterclockwise on the base until the lid drops to a lower position. Then, screw the thread clockwise to tightly close the gentleMACS Perfuser.
8. Start the perfusion process by resuming an appropriate gentleMACS Perfusion Program.
9. After processing, detach gentleMACS Perfuser and remove the perfused material. Discard the gentleMACS Perfuser.

Refer to **www.miltenyibiotec.com** for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www.miltenyibiotec.com for local Miltenyi Biotec Technical Support contact information.

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