



CPB with CytoSorb - Intraoperative Use

Quick Setup Guide

CytoSorbents™

Notes prior to treatment start

- The preparation and use of CytoSorb must always be carried out under hygienic conditions.
- Before connecting CytoSorb, the feeding tube system must be prefilled air-free with the sterile isotonic saline solution.
- **Under no circumstances should air enter the CytoSorb Adsorber.**
- Always pay attention to the running direction indicated on the label when installing CytoSorb.
- The recommended blood flow rate should be 150 - 700 ml/min but at least 100ml/min.
- The maximum use time of a CytoSorb adsorber should not exceed 24 hours.
- It may be useful to replace the adsorber earlier if there are indications of an exhausted elimination capacity.
- The postoperative continued use of the adsorber in a CRRT system, after it has already been used in a CPB, is not recommended for hygienic and / or clotting reasons.
- Check the extracorporeal circulation at regular intervals for signs of blood clots and seating of the connection.

Anticoagulation

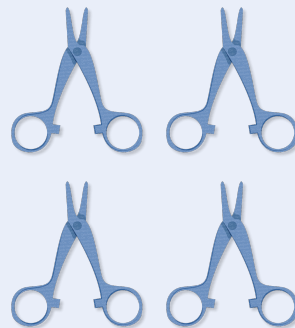
- CytoSorb must be installed in a bypass of the main flow, as is usual in hemoconcentration therapy.
- Pressure or flow monitoring of the CytoSorb bypass line is recommended.
- The blood flow through CytoSorb should be continuous.
- The adsorber should be installed before a hemoconcentrator in series, not in parallel.
- The ultrafiltrate line of the hemoconcentrator should only be opened for fluid removal.
- Coagulation
 - Anticoagulation must be effective at the start of treatment.
 - Anticoagulation with heparin, an ACT of 160-210 sec. is sufficient for CytoSorb.

Materials required

Mounting option
for CytoSorb



Plastic scissor clamps, x 4



Normal saline
2 liters, sterile

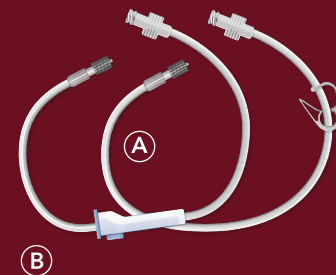


Adsorber



H CytoSorb
Adsorber

Adapter 3



- A** Luer Lock male - DIN Lock female - roller clamp
- B** Luer Lock male - DIN Lock - female pinch clamp

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Step 1 - Preparation CPB

1. Setup the cardiopulmonary bypass machine completely according to the operating instructions of the device manufacturer (including priming).

Step 2 - Preparation CytoSorb Adsorber

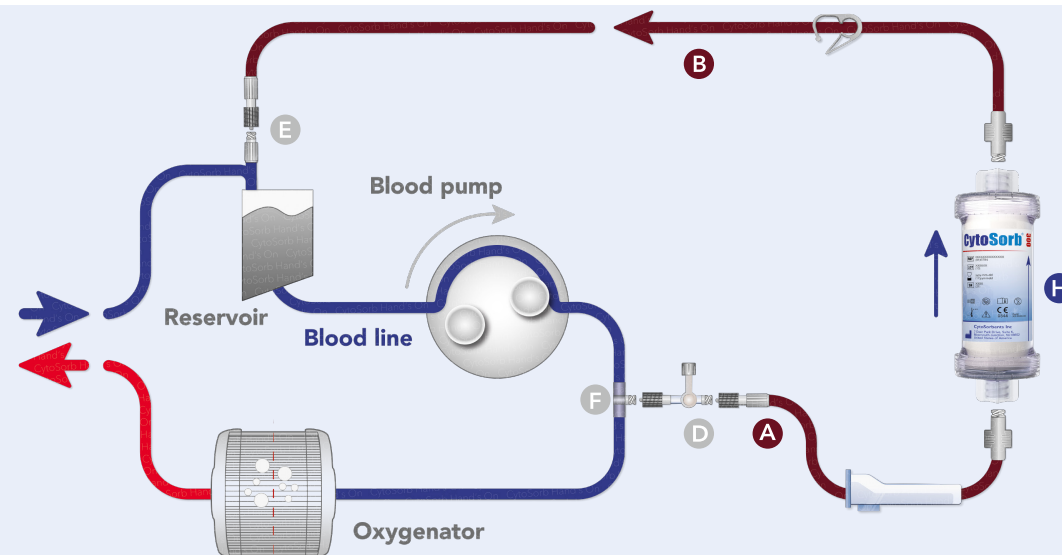
2. Connect **A** with saline solution and deaerate. Close clamp on **A**.
3. Connect **A** bubble-free to CytoSorb blood inlet **H** (bottom). Observe the flow direction indicated on the label.
4. Connect CytoSorb blood outlet **H** (top) with **B** and **C**.
5. Open **clamp** at **A** and flush CytoSorb by gravity with 2 liters normal saline. Rinse saline solution and vent by tapping with the palm of the hand.
6. Close clamps on **A**, **B** and **C**.

Caution: Never remove both port plugs at the same time.



Step 3 - Integration of Cytosorb in CPB

7. Mount CytoSorb **H** vertically on the heart-lung machine using the mounting device.
8. Separate **A** from the saline bag and connect it bubble-free via a high-flow three-way valve to **D** at Luer-Lock on the main line after the blood pump.
9. Connect **B** to reservoir **E** via a high-flow Luer-Lock connection.
10. If necessary, regulate the blood flow in the bypass by use of the **roller clamp** on **A**.



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Watch the complete set-up video: [cytosorb.com/setup](https://www.cytosorb.com/setup)

The clinical and preclinical data and results obtained with the CytoSorb adsorber are not transferable to other products. CytoSorb should only be administered by personnel who have been properly trained in administration of extracorporeal therapies. CytoSorb is not available for commercial sale in USA.

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