

HA330 Disposable Hemoperfusion Cartridge Properties

Adsorbent Volume(mL)	330
Biocompatibility	Tested as required in ISO10993
Adsorbent Material	Double Cross-linked Styrene-divinylbenzene Copolymers
Housing Material	Polycarbonate
Sterilization Method	Irradiation Sterilization
Unit Package	285±2mm(L)*117±2mm(W)*108±2mm(H)

*Contraindications, Warnings and Precautions refer to Instructions For Use.

JAFRON - Global Manufacturer and Supplier of Adsorption Columns



Jafron Headquarters



CE



ISO 9001



EN ISO 13485

References

1. Ankawi, G. et al. A New Series of Sorbent Devices for Multiple Clinical Purposes: Current Evidence and Future Directions. *Blood Purif.* 47, 94–100 (2019).
2. Pomarè Montin, D. et al. Biocompatibility and Cytotoxic Evaluation of New Sorbent Cartridges for Blood Hemoperfusion. *Blood Purif.* 46, 187–195 (2018).
3. Huang, Z., Wang, S. R., Su, W. & Liu, J. Y. Removal of humoral mediators and the effect on the survival of septic patients by hemoperfusion with neutral microporous resin column. *Ther. Apher. Dial.* 14, 596–602 (2010).
4. Huang, Z., Wang, S. R., Yang, Z. L. & Liu, J. Y. Effect on extrapulmonary sepsis-induced acute lung injury by hemoperfusion with neutral microporous resin column. *Ther. Apher. Dial.* 17, 454–461 (2013).
5. Sun, S. et al. High-volume hemofiltration plus hemoperfusion for hyperlipidemic severe acute pancreatitis: A controlled pilot study. *Ann. Saudi Med.* 35, 352–358 (2015).
6. Wang, Y. T. et al. Effects of hemodialysis and hemoperfusion on inflammatory factors and nuclear transcription factors in peripheral blood cell of multiple organ dysfunction syndrome. *Eur. Rev. Med. Pharmacol. Sci.* 20, 745–750 (2016).
7. Kovacs, J., et al. USE OF HEMOADSORPTION IN CARDIAC SURGERY. CASE PRESENTATION.
8. Arslan, B., Kucukbingoz, C., Kutuk, M. & Gunduz, H. A single-center experience with resin adsorption hemoperfusion combined with continuous veno-venous hemofiltration for septic shock patients. *Med. Sci. | Int. Med. J.* 1 (2018). doi:10.5455/medscience.2018.07.8950.
9. Chavez, J. R. et al. A case of leptospirosis with acute respiratory failure and acute kidney injury treated with simultaneous extracorporeal membrane oxygenation and haemoperfusion. *BMJ Case Rep.* 12, 1–6 (2019).
10. Hui, L., Zeng, A., Zhang, X., Zang, K. & Shang, F. Evaluation of the therapeutic effect of hemopurification in hyperlipidemic severe acute pancreatitis. *Int. J. Clin. Exp. Med.* 12, 1004–1010 (2019).
11. Chu, Laping, et al. Clinical effects of hemoperfusion combined with pulse high-volume hemofiltration on septic shock. *Medicine* 99.9 (2020): e19058.
12. Yuan, H., Chen, S., Hu, F. & Zhang, Q. Efficacy of Two Combinations of Blood Purification Techniques for the Treatment of Multiple Organ Failure Induced by Wasp Stings. *Blood Purif.* 42, 49–55 (2016).
13. Li, Z. et al. Effects of hemodialysis combined with hemoperfusion on severe acute pancreatitis. *Turkish J. Gastroenterol.* 29, 198–202 (2018).
14. Tang, Y., Zhang, L., Fu, P., Kang, Y. & Liu, F. Hemoperfusion plus continuous veno-venous hemofiltration in a pregnant woman with severe acute pancreatitis: A case report. *Int. Urol. Nephrol.* 44, 987–990 (2012).
15. Hui, Liangliang, et al. "Evaluation of the therapeutic effect of hemopurification in hyperlipidemic severe acute pancreatitis." *Int J Clin Exp Med* 12.1 (2019): 1004-1010.
16. Huang Bin, et al. Clinical study of continuous veno-venous hemofiltration combined with hemoperfusion in the treatment of severe burn sepsis. *Journal of Clinical emergency(China)*.2019:1009-5918.
17. Ronco, C et al. Kidney involvement in COVID-19 and rationale for extracorporeal therapies. *Nature Reviews* 2020.
18. ZHANG Lin, et al. Clinical study of mechanical ventilation combined with hemoperfusion and purification in the treatment of pneumothorax complicated by respiratory failure caused by traffic accident. *Chin J Emerg Resusc Disaster Med.* 2021.
19. Zijian He, et al. The Efficacy of Resin Hemoperfusion Cartridge on Inflammatory Responses during Adult Cardiopulmonary Bypass. *Blood Purif.* 2021 Jun 9;1-7.
20. Prof. Claudio Ronco. CENTRO SPECIALIZZATO REGIONALE. PER LE TERAPIE DIALITICHE NELL' INSUFFICIENZA RENALE ACUTA E CRONICA E PER LE TECNOLOGIE EXTRACORPOREE DI SUPPORTO MULTI-ORGANICO. 2020.



JAFRON BIOMEDICAL CO., LTD.

Address: No. 98, Technology Sixth Road, High-tech Zone, Zhuhai City, 519085, Guangdong, China.

Tel: +86 (756) 3689708

E-mail: overseatrade@jafron.com

Website: www.jafron.com

(For Internal Use)



Stock Abbreviation: JFSW
Stock Code: 300529

Get Control of Cytokine Storm^[17]



HA330

Disposable Hemoperfusion Cartridge

20 years in blood purification clinical practices

Widely used in more than 80 countries

More than 5 million treatments per year



CY-HA330-01-10-2021-EN

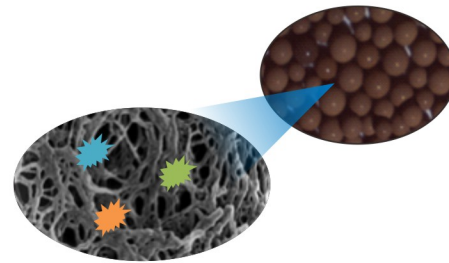
HA330 Disposable Hemoperfusion Cartridge

HA330 hemoperfusion therapy can be used alone or in combination with other extracorporeal blood circulations, which provides a new therapy to reduce inflammatory mediators and cytokines for critically ill patients in ICU or those undergoing cardiac surgery.^{[1][17]}

How HA330 Works?

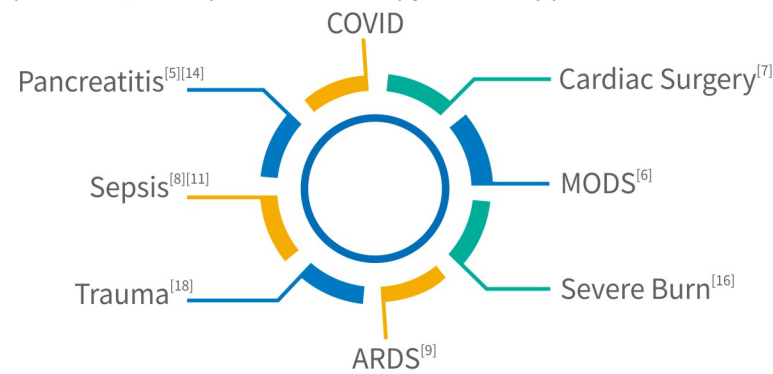
The porous structure and hydrophobic feature of the adsorbing beads allow HA330 in combination with standard therapy to reduce inflammatory mediators and cytokines. It further results in improving patients' hemodynamics and shortening intensive care unit (ICU) length of stay.^[1]

The coating and double cross-linked technologies of HA330 help to optimize its structural stability, avoid particles falling off in the blood, reduce the coagulation risk, and improve the blood compatibility, thus to support the safety of HA330.^{[1][2]}



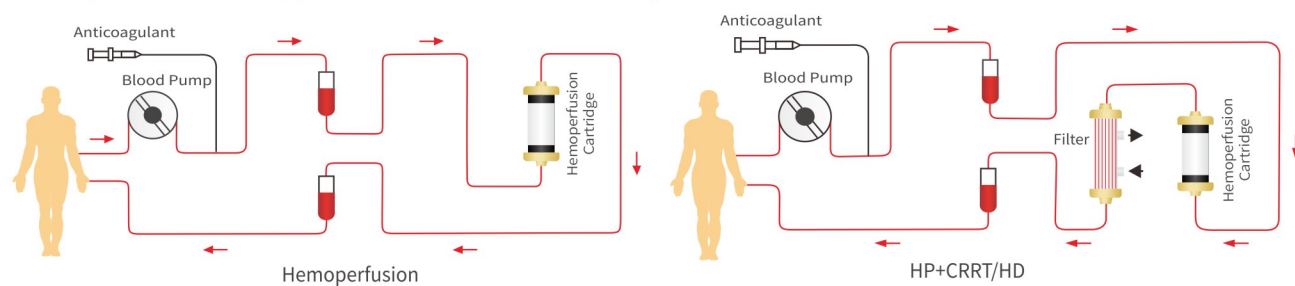
Adsorption Therapy Applications[△]

According to clinical practices, hemoperfusion therapy can be applied in the listed conditions.

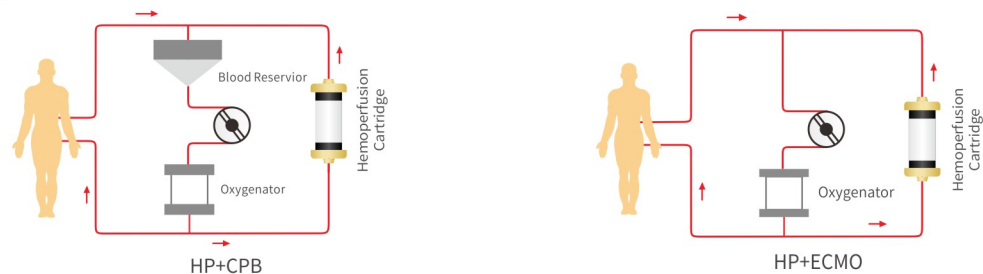


Multiple Therapy Operation Modes & Flexible Choices[△]

Hemoperfusion therapy can be used alone or in conjunction with CRRT/HD/HDF/SLED.^[11,14]

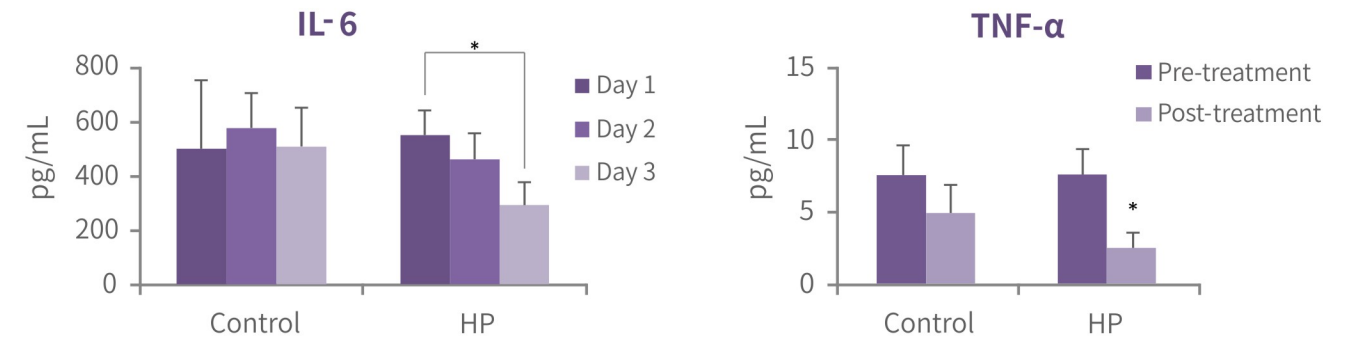


Other modes have been used based on clinical practices such as HP+CPB/ECMO, please refer to the references.^{[19][20]}



[△]For detailed information, please visit www.jafron.com.

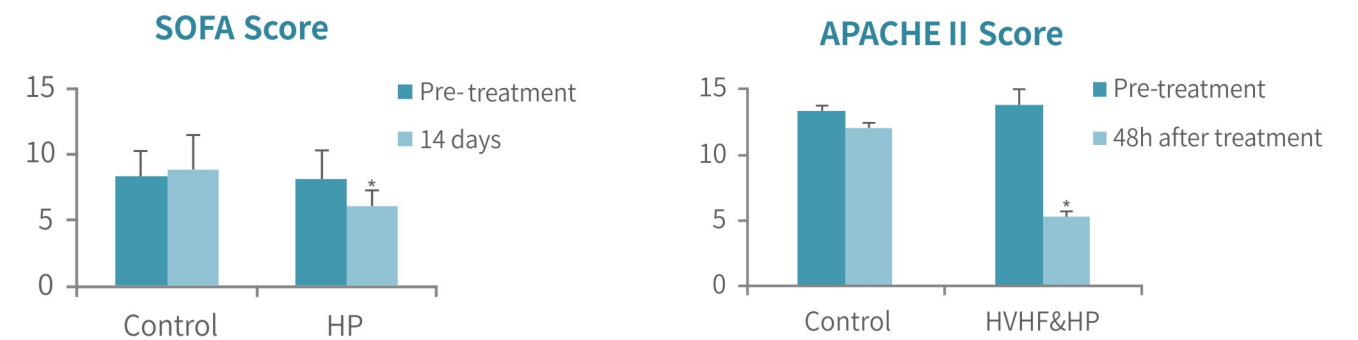
Remove Inflammatory Mediators^{[3-6][8-10][17]}



* Compared to Control group, P<0.05.

HA330 could reduce inflammatory factors such as IL-6^[3, 5-6], IL-8^[3, 5], TNF-α^[4-6], IL-1^[4, 5], IL-2^[5], IL-10^[5], PCT^[8], and CRP^[8-10], as well as decrease the lipid level^[5, 7].

Improve Hemodynamics and Organ Function^{[3-5][8-9][12-14]}

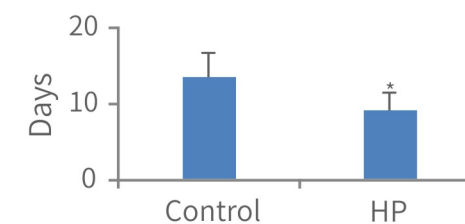


* Compared to Control group, P<0.05; SOFA, Sequential Organ Failure Assessment; APACHE II, Acute Physiology and Chronic Health Evaluation.

HA330 had benefits in PaO₂/FiO₂^[3-5], SOFA score^[4-5, 9], APACHE II score^[4-5, 8, 12-14], and hemodynamics^[4, 16], etc.

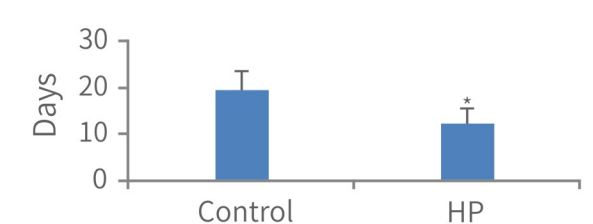
Reduce ICU Stay^{[3-5][8][11][17]}

Duration of Mechanical Ventilation



* Compared to Control group, P<0.05; ICU, Intensive Care Unit.

ICU Stay



HA330 reduced the use of dopamine^[3, 4, 8] and noradrenaline^[4, 8], shortened the duration of mechanical ventilation^[4, 15], the ICU stay^[3-5], as well as the hospital stay^[3, 5, 11].