



- Established in 1989, IPO on ChiNext in 2016
- Widely used in more than 80 countries
- Applied in over 8000 influential hospitals
- Annual application over 5 million pcs



*Contraindications, Warnings and Precautions refer to Instructions For Use

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(For Internal Use)

CZ-CHANPINZONGHE-01-10-2021-EN



Stock Abbreviation: JFSW
Stock Code: 300529



- CE 0197
- ISO9001 & ISO13485



- 6350m² GMP cleanroom



- > 2800 employees

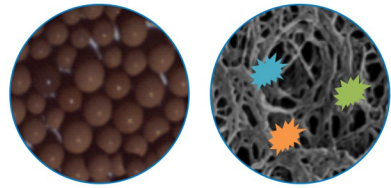


JAFRON FOR THE WORLD

Global manufacturer and supplier
of adsorption columns

Hemoperfusion - Advanced Technology

In **2002**, Jafron HA disposable hemoperfusion cartridges were first used clinically. The HA disposable hemoperfusion cartridges contain brown beads called **neutral macroporous resin**. Under the electron microscopy, it shows the 3D network structure working as the **molecule sieve** aimed at removing endogenous and exogenous molecules including inflammatory mediators and cytokines, bilirubin, metabolic toxins, protein-bound toxins and residual drugs.

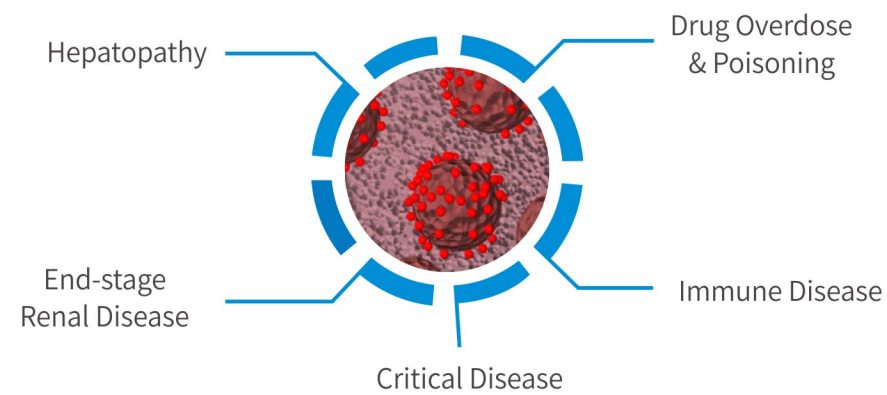


Neutral Macroporous Resin

- High mechanical strength of adsorbents
- Large adsorptive surface area
- Porosity control technology
- Good biocompatibility^[1-2]
- Advanced coating technology
- Optimized hemodynamics

In order to fulfill the clinical requirements, Jafron further innovated cartridges with specific adsorbent such as BS330 and DNA230, as well as blood purification machines such as DX-10 and JF-800A.

Adsorption Therapy Applications^{A[1-2]}



Hybrid Therapies



References

- [1] Pomarè Montin, D. et al. Biocompatibility and Cytotoxic Evaluation of New Sorbent Cartridges for Blood Hemoperfusion. Blood Purification. 2018; 46, 187–195.
 [2] Ankawi, G. et al. A New Series of Sorbent Devices for Multiple Clinical Purposes: Current Evidence and Future Directions. Blood Purification. 2019; 47, 94–100.

^AFor detailed information, please visit www.jafron.com.

Jafron Products

Disposable Hemoperfusion Cartridges



HA130

HA230

HA280

HA330/HA380

HA330-II

Neutral Macroporous Resin (HA Series Disposable Hemoperfusion Cartridges)

Specific Adsorbent Cartridges



BS330

Bilirubin Adsorption
 Anion-exchange Resin
 (Disposable Plasma Bilirubin
 Perfusion Adsorption Column)



DNA230
 SLE

Calf Thymus DNA
 Fixed on the Carbonized Resin
 (DNA Immunoabsorbent Column)

Machines



JF-800A
 Hemoperfusion Machine



DX-10
 Blood Purification Machine

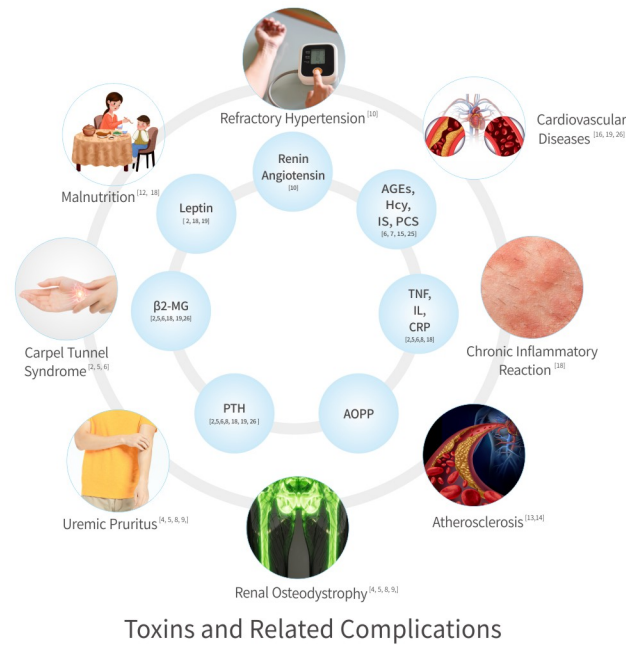
HA130 Disposable Hemoperfusion Cartridge

Uremic toxins could be classified as small water-soluble compounds or groups, protein-bound compounds and middle molecules^[1].

The removal of small water-soluble compounds has been largely improved with the development of dialysis membrane. However, the removal of middle molecules and protein-bound uremic toxins is still unsatisfying. HA130 hemoperfusion therapy provides a new regimen for ESRD complications.

Adsorption Therapy Applications^{△[1-15]}

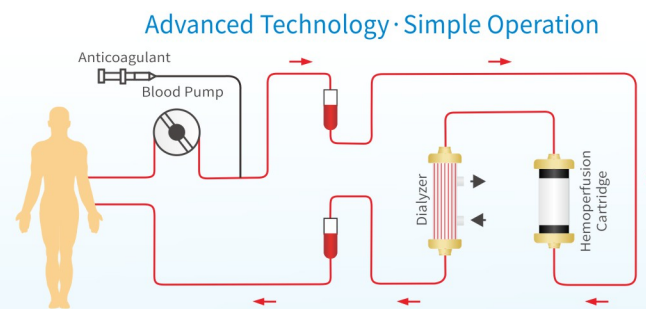
According to clinical practices, hemoperfusion therapy can be applied in the listed conditions.



HA130 Hemoperfusion Therapy

- Removal of **middle molecules and protein-bound uremic toxins** and amelioration of symptoms of the **ESRD complications**.^[5]
- **20 years'** clinical practices, applications in **8000+ hospitals** with over **5 million** treatments annually.
- **Flexible** compatibility with various blood purification machines and therapies such as HD, HDF, and CRRT.

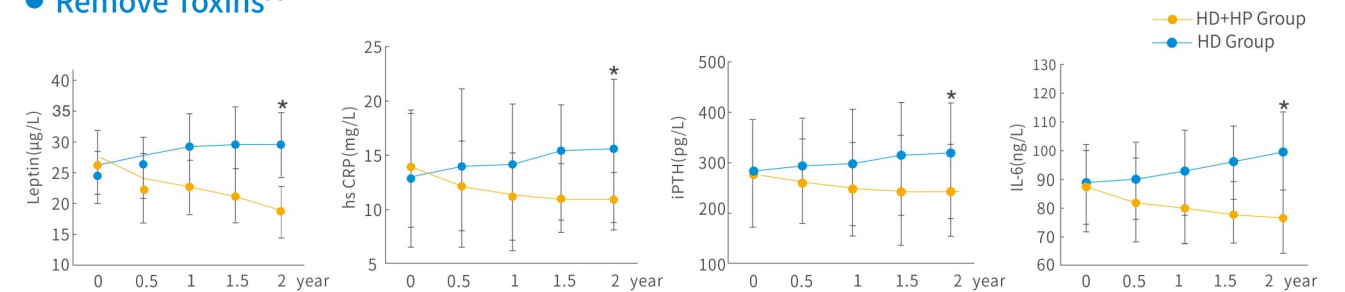
A New Therapy to Remove Uremic Toxins



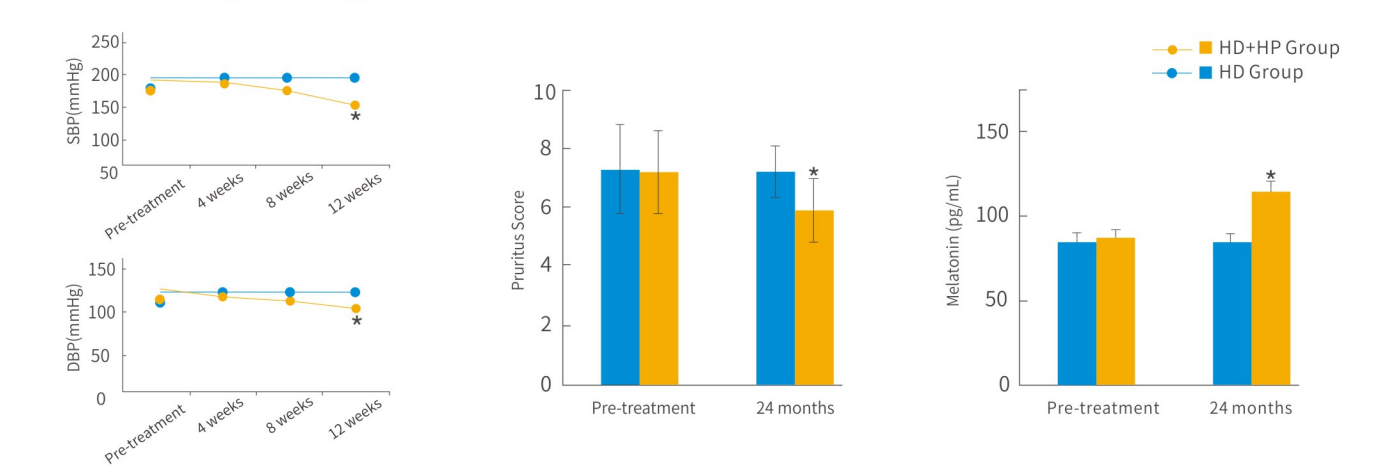
[△]For detailed information, please visit www.jafron.com.

HD+HP Provides a New Blood Purification Therapy for ESRD

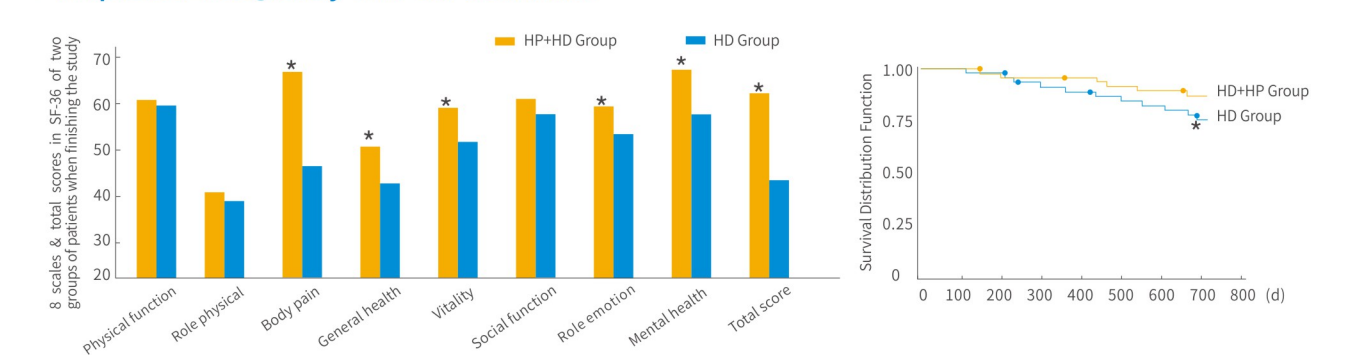
● Remove Toxins^[1]



● Relieve Dialysis Complications^[7,9]



● Improve Life Quality and Survival Rate^[1]



* Compared to Control group, P<0.05.

References

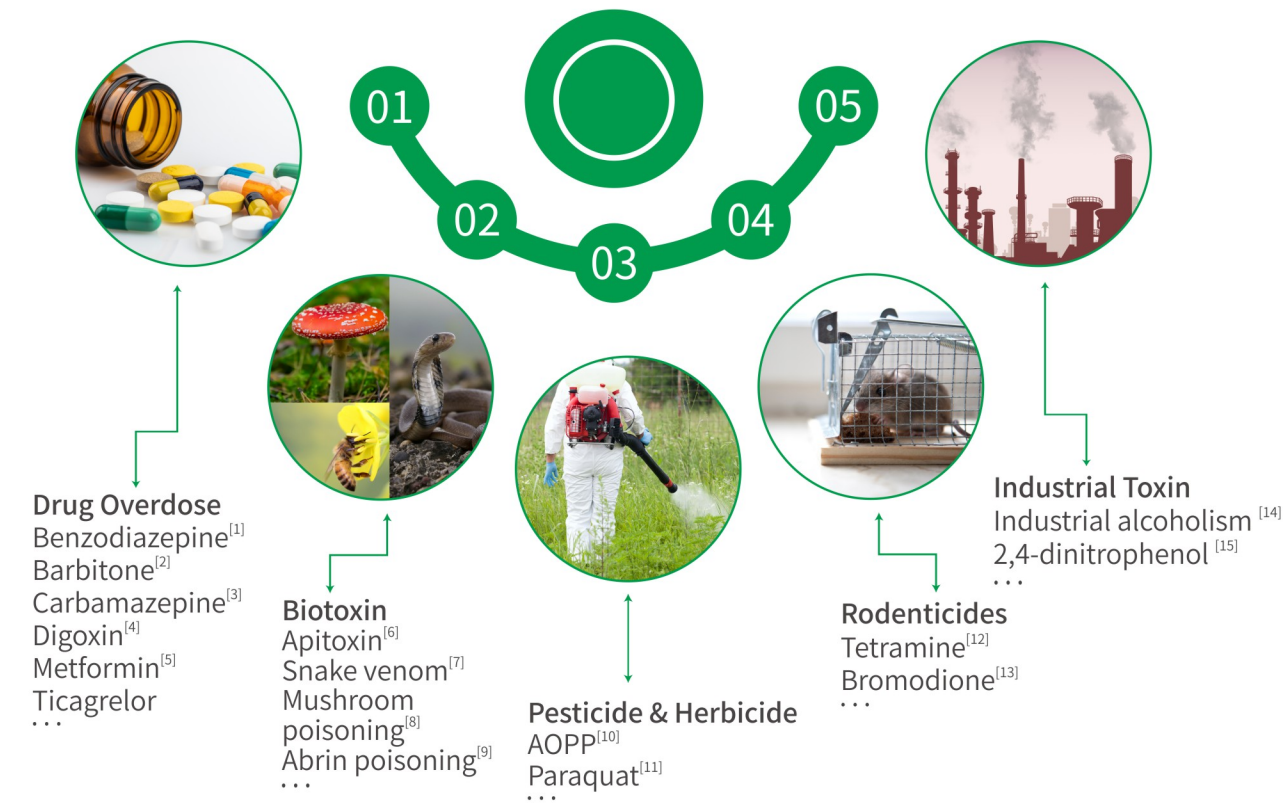
[1] Shun-Jie Chen, et al. Int J Artif Organs. 2011; 34 (4): 339-347.
 [2] Yang Xiaodan, Continuing Medical Education. 2019, Vol. 33, No.3.
 [3] Guo Ai-hua, et al. Journal of Clinical Rehabilitative Tissue Engineering Research. March 19, 2011 Vol.15, No.12.
 [4] Jing Zhang, et al. Int J Clin Exp Med. 2016; 9(5):8563-8568.
 [5] Yu Yin, et al. Journal of Hainan Medical University. 2015; 57-60.
 [6] Li-ying Miao, et al. Experimental And Therapeutic Medicine. 2014; 7: 947-952.
 [7] Yan Hong Gu, et al. The International Journal of Artificial Organs. 2019; 1-7.
 [8] Zhu Feng, et al. Chinese and Foreign Medical Research. 2019; Vol.17, No.6.
 [9] Duan Bin, et al. Med J West China. 2019; Vol. 31, No.2.
 [10] He Qi, et al. Chinese Journal of Clinical Research. 2018; Vol. 31, No.2.
 [11] Zhang Yu, et al. Shanghai Medicine. 2018; Vol.39, No.21.
 [12] Yu Jirong, et al. J Southeast Univ(Med Sci Edi). 2018; Vol.37, No.6:1018-1022.
 [13] Jun Tang, et al. Journal of Hainan Medical University. 2017; 23(4): 74-78.
 [14] Li Xiaolei, et al. Journal of Practical Medicine. 2017; 33(20).
 [15] Ji Xu, et al. Journal of Internal Intensive Medicine. 2017; 23(3).

HA230 Disposable Hemoperfusion Cartridge

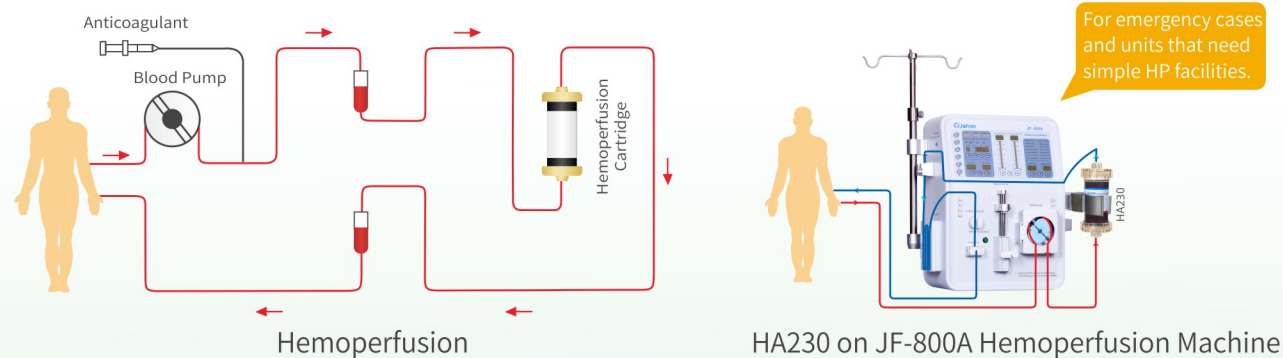
HA230 hemoperfusion therapy removes poisons and excessive drugs. It has been applied in acute poisoning, such as drug overdose, chemical exposure and high-dose regional chemotherapy. It has demonstrated removal efficiency of hydrophobic substances that are easily bound with plasma proteins.^{[3][16]}

Adsorption Therapy Applications[△]

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

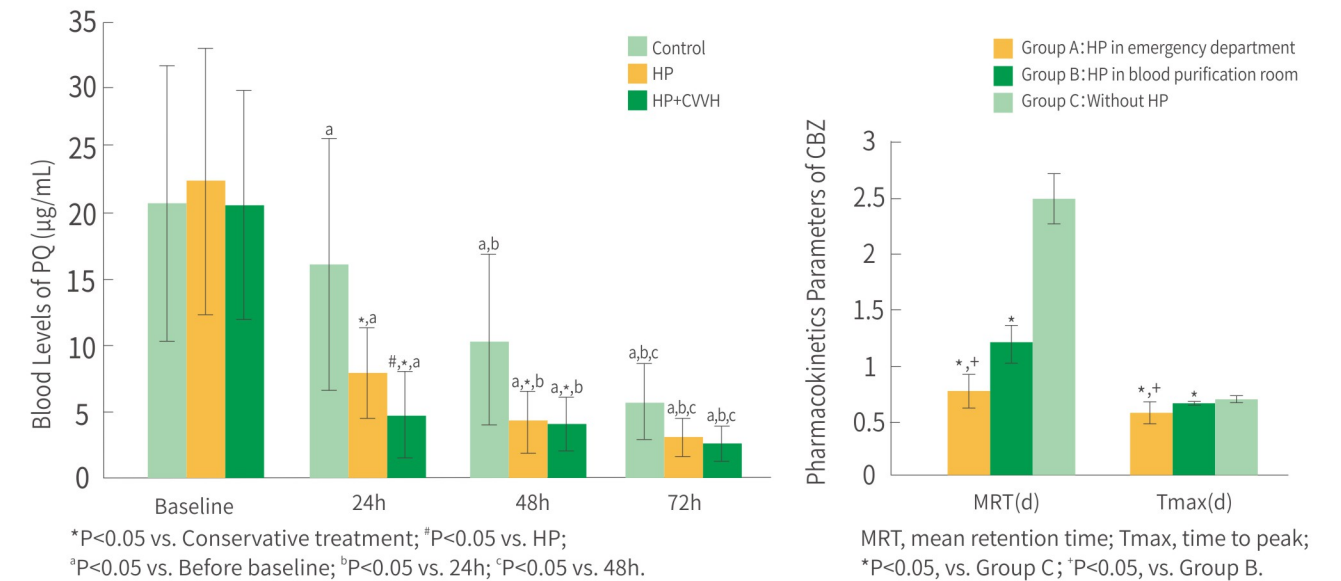


Simple and Flexible Therapy Operation

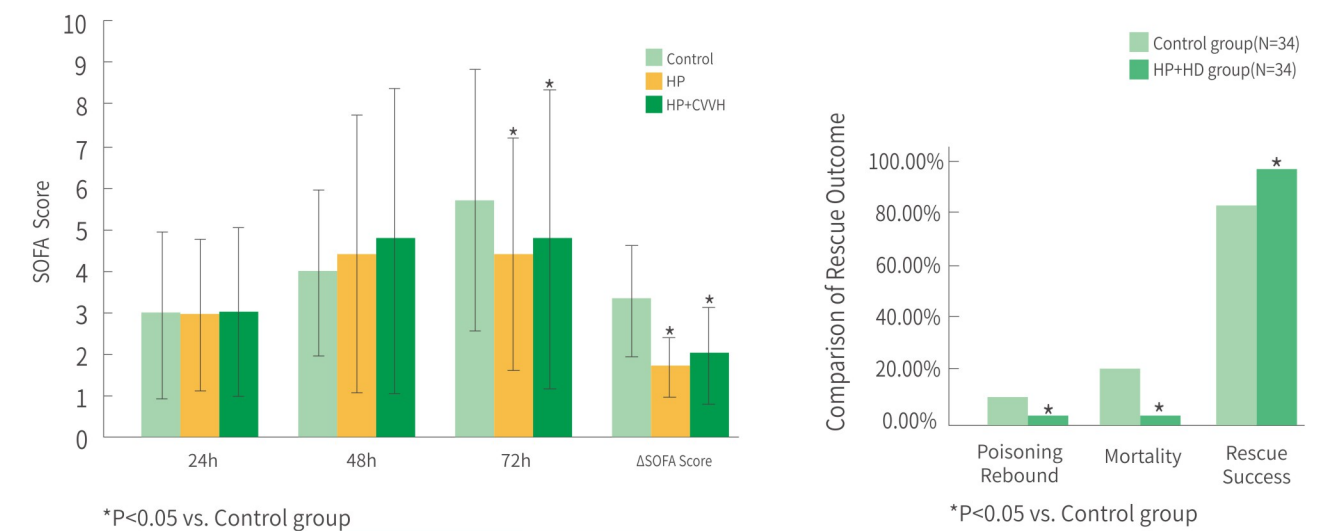


[△]For detailed information, please visit www.jafron.com.

Remove Overdosed Drug and Poison^{[3][16]}



Improve Therapeutic Effect^[16,17]



References

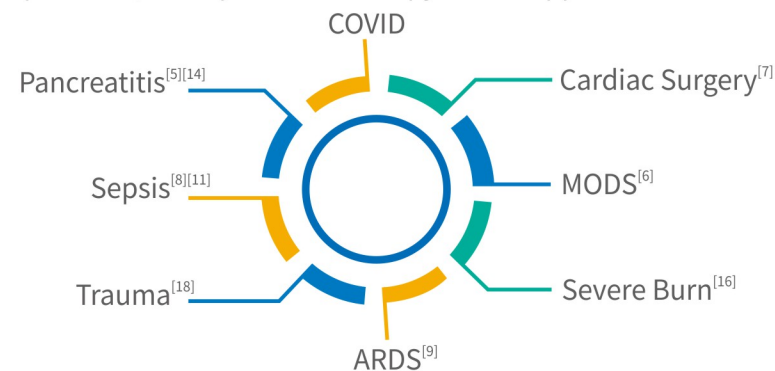
- [1] Jiang Tianlan. Chin J Ethnopharmacology 2012;130-131.
- [2] Yu Dan. J Chin foreign medical treatment 2012; No.02:67.
- [3] Xiangming Yang, et al. American J Emergency Medicine 2017.
- [4] Deven Juneja, et al. Indian J Critical Care Medicine 2011.
- [5] Shuangxin, et al. J Diabetes Investig 2018; 9:975-978.
- [6] Xiaoyun Si, et al. PLOS ONE 2015; 10(7).
- [7] Guo Zhengke, et al. Chin J Blood Purification 2002; Vol.1, No.6: 15.
- [8] Weng Guirong, et al. Chin Crit Care Med 2012; Vol. 24, No. 6:368.
- [9] Jiling Huang, et al. Medicine 2017;96:27.
- [10] Hui Dong, et al. Medicine 2017; 96:25.
- [11] Yuning Shi, et al. PLOS ONE 2012; 7(7).
- [12] Chen Zhi, et al. Chin J Emerg Med 2005; Vol.14, No.2: 140-143.
- [13] Liu Yadong, et al. Hebei Medicine 2012; Vol.18, No.12: 1726-1728.
- [14] Tuo Yanhong, et al. J Yangtze University 2009; Vol.6, No.2: 33-34.
- [15] Xue-hong ZHAO, et al. J Zhejiang Univ-Sci 2015; 16(8): 720-726.
- [16] An Li, et al. Blood Purification 2016; 42: 92-99.
- [17] Hui Dong, et al. Medicine 2017; 96:25.

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.^[1-2,17]

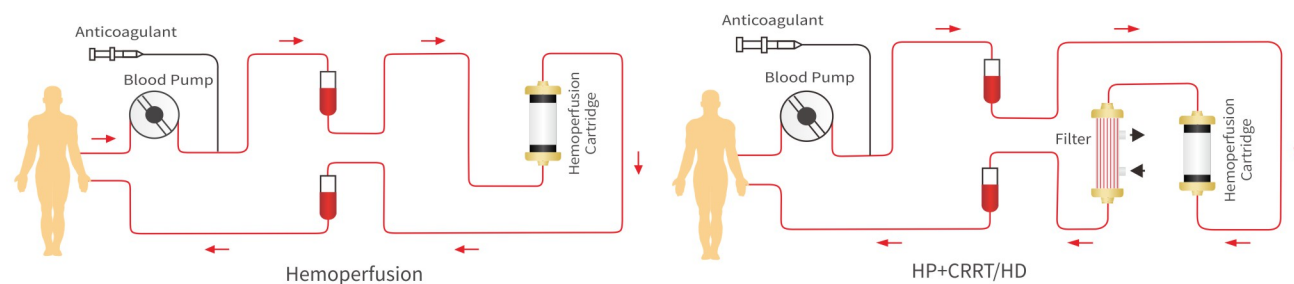
Adsorption Therapy Applications[△]

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

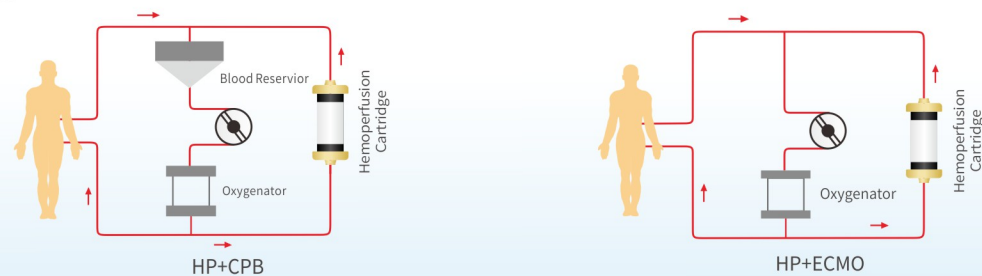


Multiple Therapy Operation Modes & Flexible Choices[△]

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]}

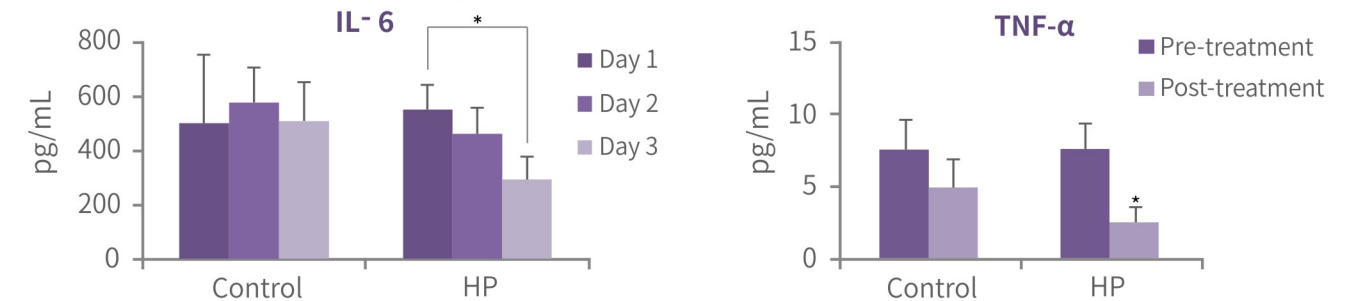


[△]For detailed information, please visit www.jafron.com.

References

- [1] Ankawi, G. et al. Blood Purification 2019; 47, 94–100.
- [2] Pomarè Montin, D. et al. Blood Purification 2018; 46, 187–195.
- [3] Huang, Z. et al. Ther. Apher. Dial 2010; 14, 596–602.
- [4] Huang, Z. Ther. Apher. Dial. 2013; 17, 454–461.
- [5] Sun, S. et al. Ann. Saudi Med 2015; 35, 352–358.
- [6] Wang, Y. T. et al. Eur. Rev. Med. Pharmacol. Sci 2016; 20, 745–750.
- [7] Kovacs, J., et al. USE OF HEMOADSORPTION IN CARDIAC SURGERY. CASE PRESENTATION.
- [8] Arslan, B., et al. Med. Sci. | Int. Med. J. 1. doi:10.5455/medscience.2018.07.8950.
- [9] Chavez, J. R. et al. BMJ Case Rep 2019; 12, 1–6.

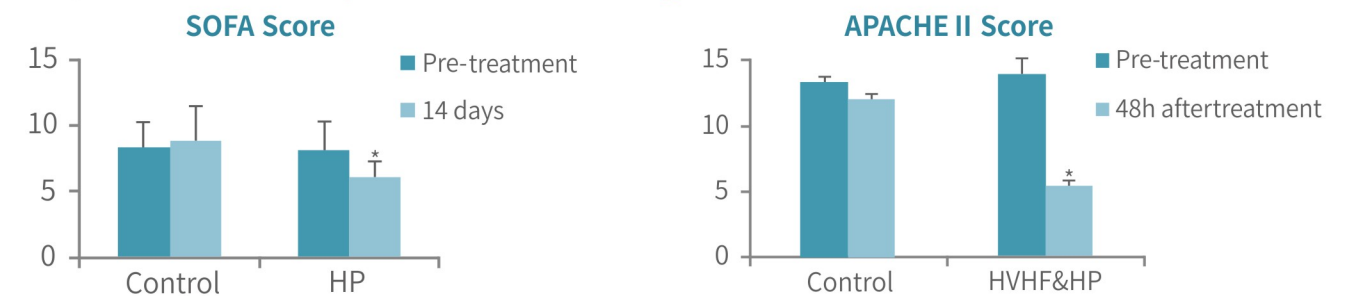
Remove Inflammatory Mediators^{[3-6][8-10][17]}



* 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]}



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

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].

References

- [10] Hui, L., et al. Int J Clin Exp Med 2019; 12(1), 1004–1010.
- [11] Chu, Laping, et al. Medicine 2020; 99.9, e19058.
- [12] Yuan, H., et al. Blood Purif. 2016; 42, 49–55.
- [13] Li, Z. et al. Turkish J. Gastroenterol 2018; 29, 198–202.
- [14] Tang, Y., et al. Int. Urol. Nephrol 2012; 44, 987–990.
- [15] Hui, L., et al. Int J Clin Exp Med 2019; 12.1, 1004–1010.
- [16] Huang Bin, et al. Journal of Clinical emergency (China) 2019; 1009-5918.
- [17] Ronco, C et al. Nature Reviews 2020.
- [18] ZHANG Lin, et al. Chin J Emerg Resusc Disaster Med.2021.
- [19] Zijian He, et al. Blood Purif. 2021; Jun 9, 1-7.
- [20] Prof. Claudio Ronco. CENTRO SPECIALIZZATO REGIONALE. 2020.

HA380 Disposable Hemoperfusion Cartridge

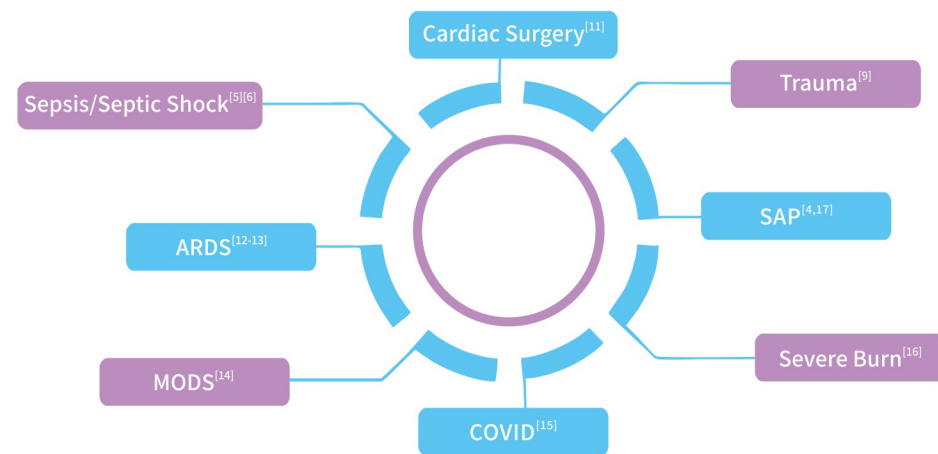
Treatment Principle

Cytokine storm is an umbrella term encompassing several disorders of immune dysregulation characterized by constitutional symptoms, systemic inflammation, and multi-organ dysfunction that can lead to multi-organ failure.^{[1,3][5-6][8-10]}

HA380 disposable hemoperfusion cartridge is filled with neutral macroporous resin, mainly adsorbing molecules from 10 to 60 kDa.^[2] Because of the accurate 3D macroporous structure and over 54000 m² adsorption surface area of the resin^[2], HA380 hemoperfusion therapy can provide a new regimen in controlling inflammatory cytokines storms^[5-6], improving hemodynamics^{[5-6][8-9]}, preventing further organ damage and complications^{[5-6][8-10]}, as well as shortening the ICU stay and hospital stay^[5-6].

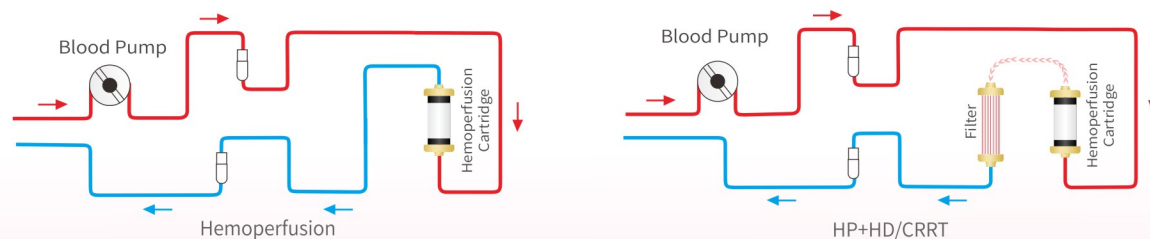
Adsorption Therapy Applications[△]

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.^[16-17]

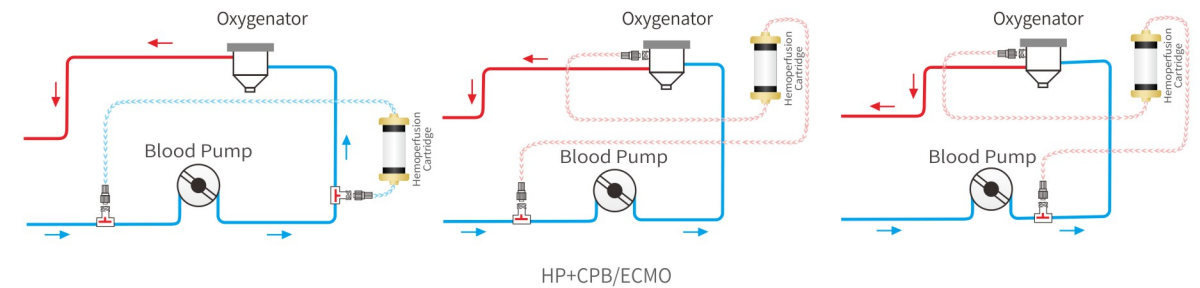


[△]For detailed information, please visit www.jafron.com.

References

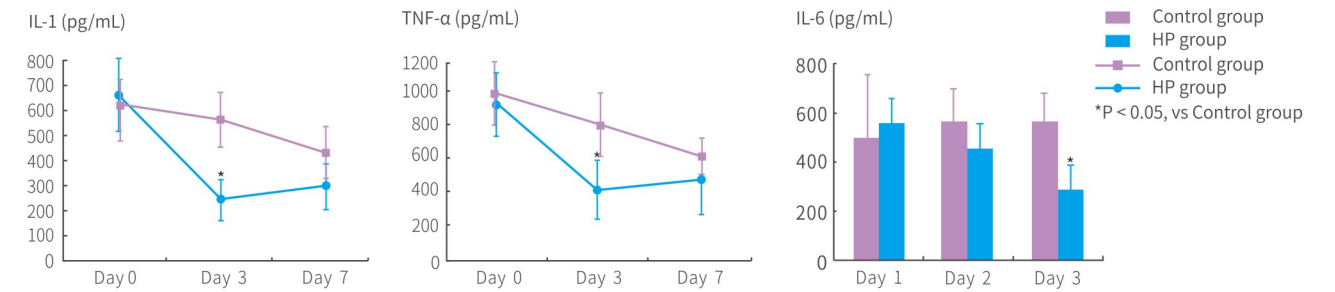
- [1] Fajgenbaum DC, June CH. N Engl J Med. 2020 Dec 3; 383(23), 2255-2273.
- [2] Pomarè Montin D et al. Blood Purif. 2018; 46(3), 187-195.
- [3] Clark W R, Contributions to Nephrology. 2017; 190, 43.
- [4] Tang Y, Zhang L, Fu P, et al. International Urology & Nephrology, 2012; 44(3), 987-990.
- [5] Zhao Huang, et al. Therapeutic Apheresis and Dialysis, 2012; 1-8.
- [6] Huang Z, et al. Ther Apher Dial. 2010 Dec; 14(6), 596-602.
- [7] Vitaliy Sazonov, et al Front Pediatr. 2021.
- [8] Chu, Laping, et al. Medicine 2020; 99.9, e19058.
- [9] ZHANG Lin, et al. Chin J Emerg Resusc Disaster Med. 2021.
- [10] Yuan, Hai, et al. Blood Purif. 2016; 42.1, 49-55.
- [11] Zijian He, et al. Blood Purif. 2021 Jun 9; 1-7.
- [12] Xu, Xuefeng, et al. Annals of intensive care 2017; 7.1, 84.
- [13] Li, Cong, et al. Revista Argentina de Clínica Psicológica 2020; 29.3, 311.
- [14] Wang, Y. T., et al. Eur Rev Med Pharmacol Sci 2016; 20.4, 745-50.
- [15] Elizabeth Y.W, et al, HEMOPERFUSION AS AN ADJUVANT THERAPY IN SEVERE COVID-19 IN HEMODIALYSIS PATIENTS: EXPERIENCE FROM FATMAWATI GENERAL HOSPITAL.
- [16] Huang Bin, et al. Journal of Clinical emergency (China). 2019; 1009-5918.
- [17] Sun, Shiren, et al. Annals of Saudi medicine 2015; 35.5, 352-358.
- [18] 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.

Other flexible modes have been used based on clinical practices such as HP+CPB/ECMO, please refer to the references.^{[11][18]}

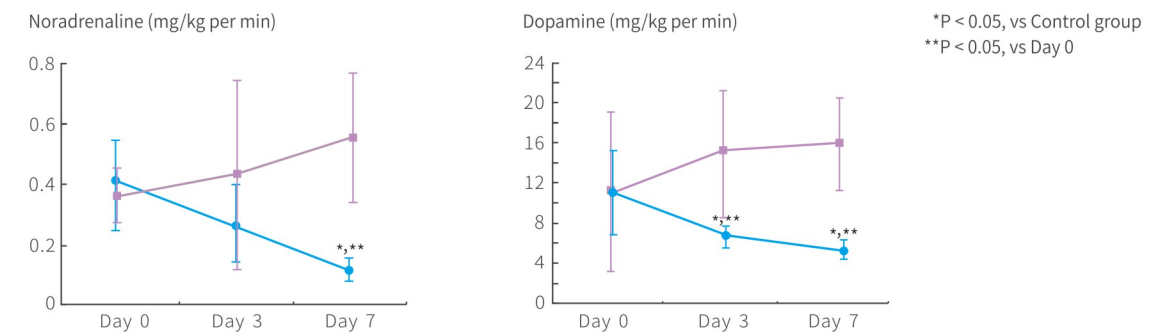


Clinical Data^[5-6]

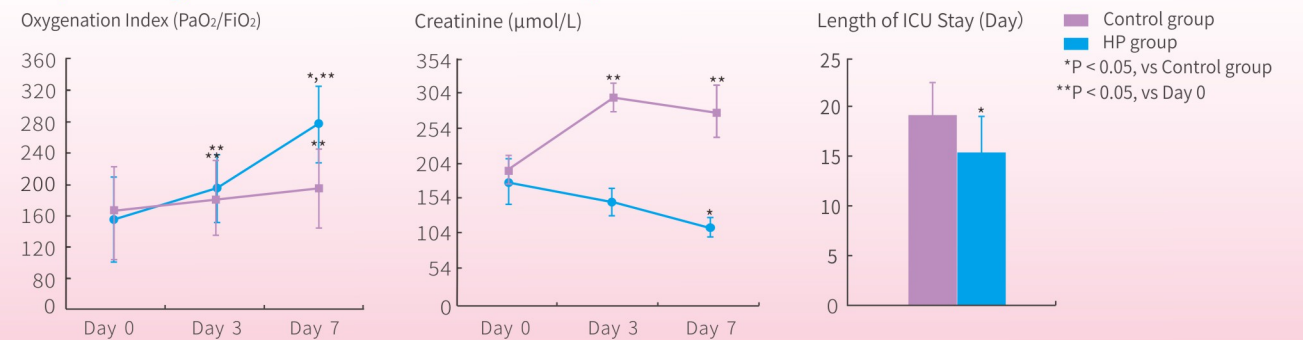
Remove Inflammatory Mediators^[5-6]



Reduce the Dosage of Vasopressors^[5-6]



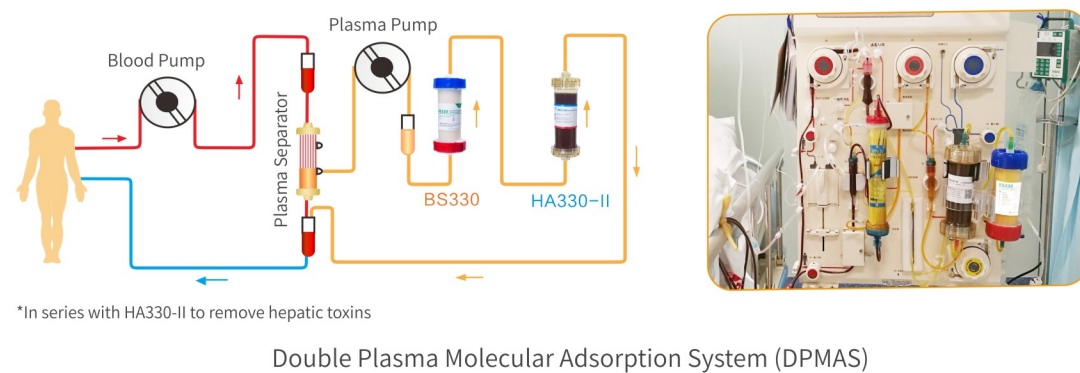
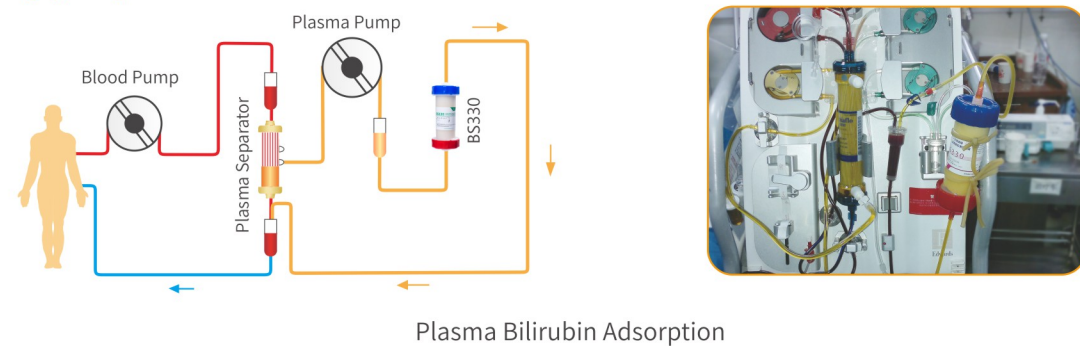
Improve Organ Function and Reduce ICU Stay^[5-6]



BS330 Disposable Plasma Bilirubin Perfusion Adsorption Column

BS330 containing anion-exchange resin, can **adsorb bilirubin** and **bile acid**. BS330 plasma adsorption therapy can relieve the symptoms of **hyperbilirubinemia** and **hyperbileacidemia**.^[1-5]

Therapy Operation Modes^A



Laboratory Test Results^[2-3]

Adsorption test results of plasma in vitro, the efficacy of adsorption for 6 hours:

Adsorption duration (h)	Circulating plasma volume	The adsorption rate of total bilirubin
2	3600	59.68%
4	7200	67.16%
6	10800	71.06%

^AFor detailed information, please visit www.jafron.com.

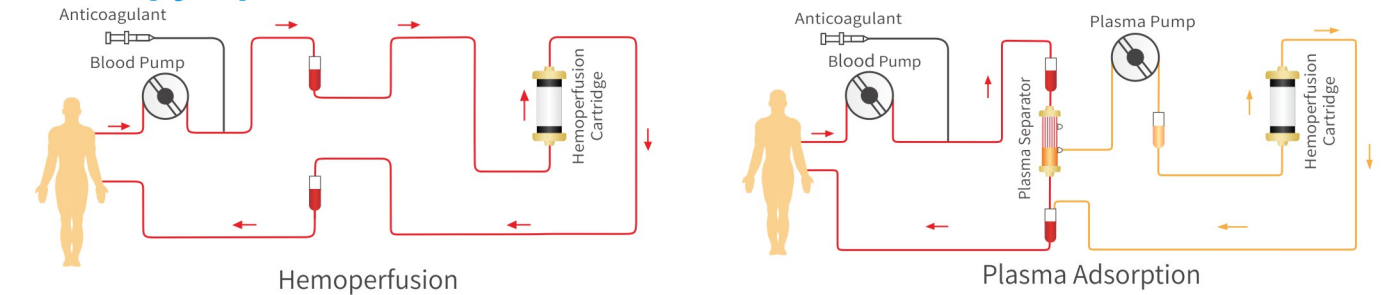
References

- [1] Han, Z., Yao, G. Application of Immunoabsorption therapy in autoimmune diseases. Journal of Internal Intensive Medicine. 2013; 19(3):141-142.
- [2] Clinical Trial Report from The First Affiliated Hospital Zhejiang University School of Medicine and Affiliated Hospital of Air Force Medical University.
- [3] Xiang, D., Mao, Q., Wang, Y., Zhao, S., Zheng, S., et al. Therapeutic effects of selective plasma purifier on bilirubin adsorption. Infectious Diseases Information. 2010; 2(23), 93-100.
- [4] Wen wangze, et al. Observation in vitro for the efficiency of resin hemoperfusion on severe hepatitis. Chinese Journal of Blood purification. 01(2003): 30-32.
- [5] Bin huxiao, et al. Comparisons of effects of different types of physical artificial liver support system applied in treatment of patients with early stage of chronic severe hepatitis. Chin J TCM WM Crit Care, March. 202(2008):55-57.

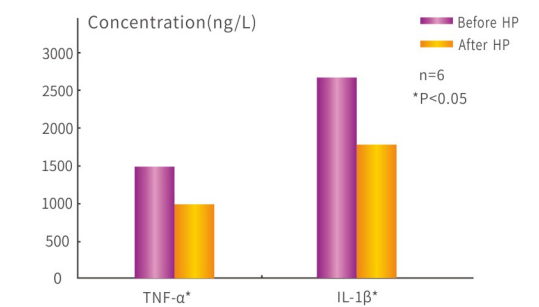
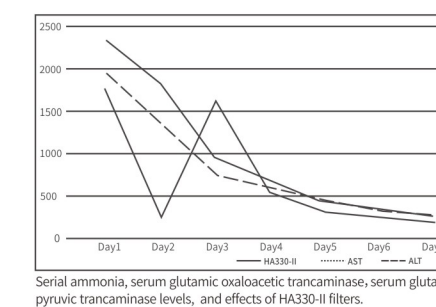
HA330-II Disposable Hemoperfusion Cartridge

HA330-II hemoperfusion therapy can be used alone or in combination with other extracorporeal blood circulations, which provides a new therapy to reduce inflammatory mediators, toxins, bilirubin, etc. in **drug-induced hepatitis, hepatic failure, and their complications such as hepatic encephalopathy**.^[1-5]

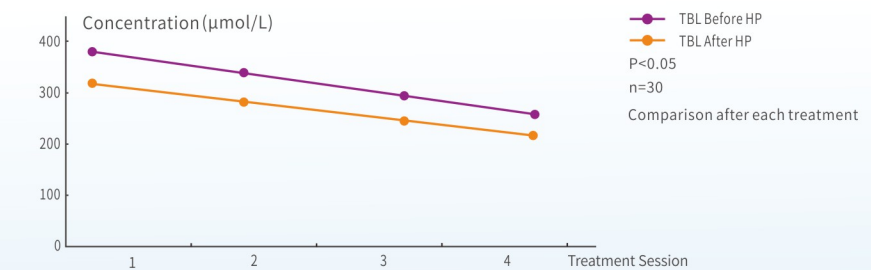
Therapy Operation Modes^A



Clinical Data of HA330-II^[1-5]



Clinical applications demonstrated that HA330-II could regulate the inflammatory mediators, ALT and AST levels, which indicated the improvement of liver function.^{[1][2][3][5]}



Results indicated that HA330-II removed Bilirubin.^{[3][4]}

^AFor detailed information, please visit www.jafron.com.

References

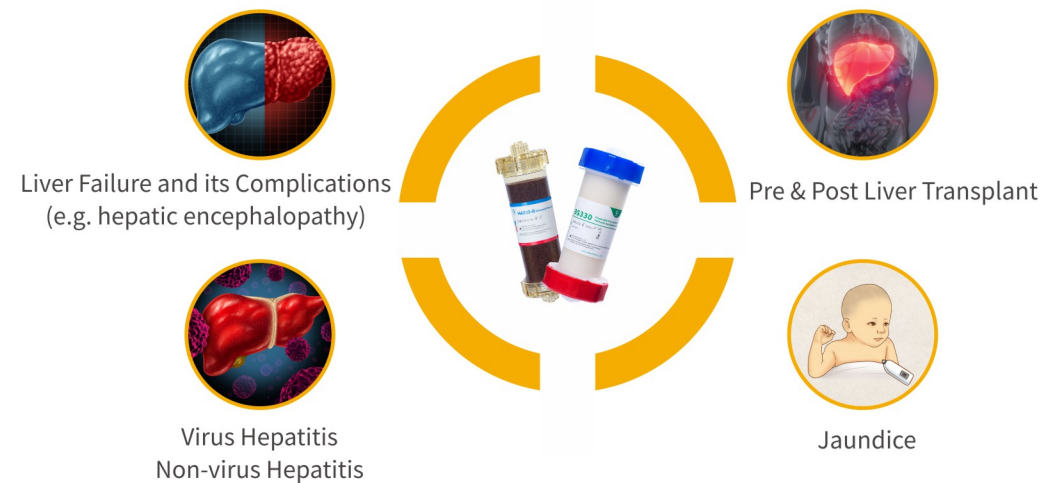
- [1] Hu, S., Gao, H., Liao, M. et al. (2008). Comparisons of effects of different types of physical artificial liver support system applied in treatment of patients with early stage of chronic severe hepatitis. Chin J TCM WM Crit Care, 15(2).
- [2] Li, M., Sun, J., Li, J., Shi, Z., Xu, J., Lu, B. et al. (2016). Clinical observation on the treatment of acute liver failure by combined non-biological artificial liver. Experimental and Therapeutic Medicine, 12(6), 3873-3876.
- [3] Luo, L., Yuan, C., Zeng, W., Zhang, D. (2008). Treatment of severe hepatitis by HA neutral macroporous resin hemoperfusion: an analysis of 40 cases. World Chinese Journal Of Digestology, 16(22), 2533.
- [4] Wang, Z., Wang, Y., Wen, H., Wang, Y. (2003). Observation in vitro for the efficiency of resin hemoperfusion on severe hepatitis. Chinese Journal of Blood Purification, 2(1).
- [5] Sharma, D., Singh, O., Juneja, D., Goel, A., Garg, SK, Shekhar, S. (2018). Hepatitis a virus-induced severe hemolysis complicated by severe Glucose-6-Phosphate Dehydrogenase deficiency. Indian J Crit Care Med.

DPMAS Double Plasma Molecular Adsorption System

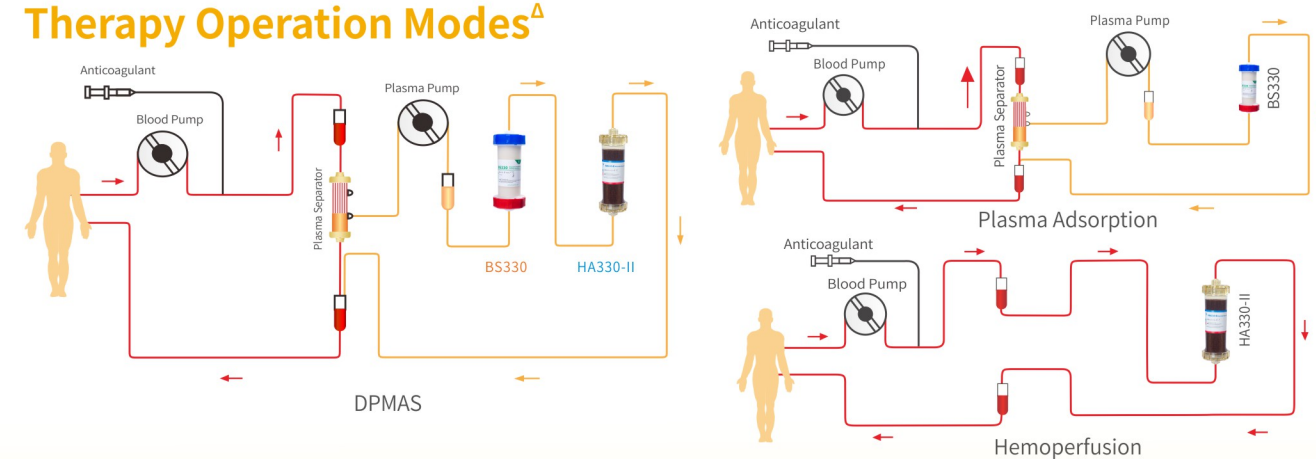
Double Plasma Molecular Adsorption System (DPMAS) provides a **new therapy for liver disease**. It adsorbs bilirubin, removes inflammatory mediators, eases inflammation and immune responses as well as considerably relieves the clinical symptoms and eventually improves the long-term prognosis of patients.

Adsorption Therapy Applications^{A[2-5]}

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



Therapy Operation Modes^A



BS330 adsorbs bilirubin and bile acid.



BS330 Disposable Plasma Bilirubin Adsorption Column

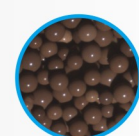


Anion-exchange Resin

HA330-II broad-spectrum adsorbs toxins such as inflammatory mediators, bilirubin, phenol mercaptan, etc.^[3]



HA330-II Disposable Hemoperfusion Cartridge

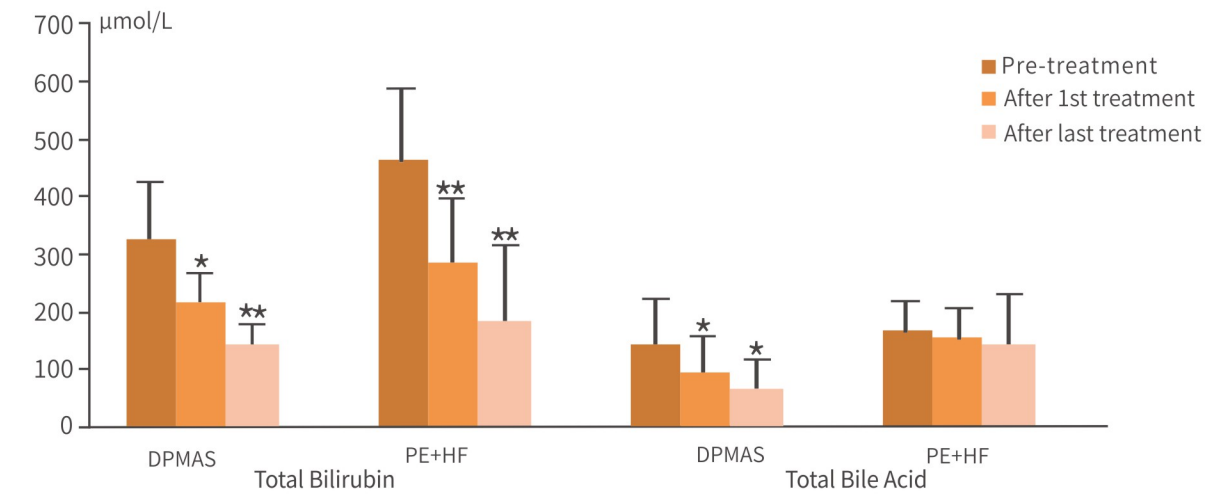


Neutral Macroporous Resin

^AFor detailed information, please visit www.jafron.com.

Clinical Data

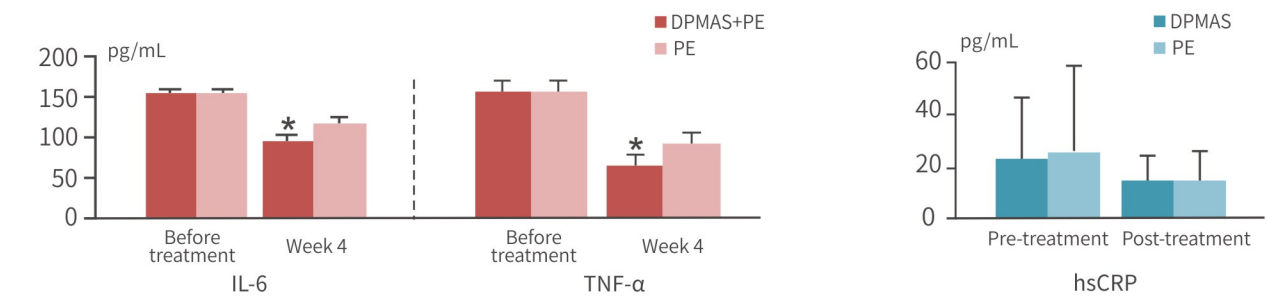
Remove Bilirubin and Bile Acid^[1-8]



PE: Plasma exchange; HF: Hemofiltration. Compared with Pre-treatment, *P<0.05, **P<0.01.

Clinical studies showed that DPMAS could remove bilirubin and bile acid, and had comparable effect as therapeutic plasma exchange.

Remove Inflammatory Mediators and Improve Hemodynamics^[3]



IL-6, Interleukin-6; TNF-α, Tumor necrosis factor-α; hsCRP, High sensitivity C reactive protein. Compared with before treatment, *P<0.05.

DPMAS could remove the inflammatory mediators such as IL-6, TNF-α, CRP and PCT, and balance the ammonia level, thus to improve the clinical symptoms.

References

- [1] Xia, Q. et al. Int. J. Artif. Organs 2014; 37, 442-454.
- [2] Yao, J. et al. J. Clin. Apher 2019; 1-7.
- [3] Wan, Y. M. et al. J. Clin. Apher 2017; 32, 453-461.
- [4] Rong, J. et al. Ther. Apher. Dial 2019.
- [5] Li, M. et al. Exp. Ther. Med 2016; 12, 2582-2584.
- [6] Ma, K. wang et al. J. Biomater. Sci. Polym. Ed 2017; 28, 2053-2065.
- [7] Ma, Y. et al. Blood Purif. 2019; 610041.
- [8] Su, R. et al. Blood Purif. 2016; 42, 104-110.

DNA230 Immunoabsorbent Column

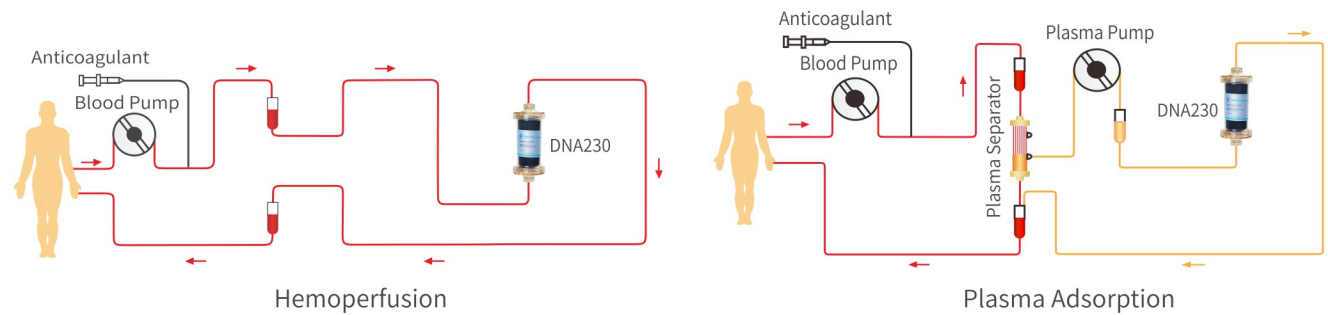
DNA230 immunoabsorption therapy is especially for **Systemic Lupus Erythematosus (SLE)** and its complications.

DNA230 immunoabsorbent Column can specifically adsorb ANA& anti-ds-DNA antibodies and clear immunologic complexes, accordingly ease SLE symptom, protect kidney function, enhance drug sensitivity, reduce the side effect of medicine treatment and improve patients' prognosis.^[2,3]



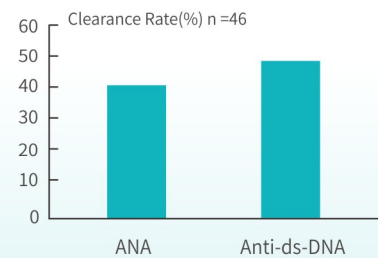
- High specificity: **immune reaction**, specifically recognize and bind anti-ds-DNA antibodies, antinuclear antibodies and their immune complexes.
- High safety: good **biocompatibility**, high mechanical strength of adsorbents and stable adsorption.
- Convenience: direct blood adsorption, suitable for most blood purification machines.

Common Treatment Modes of DNA230^Δ

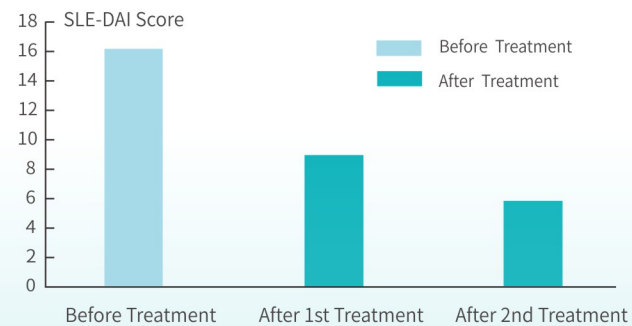


Clinical Data

Reduce anti-ds-DNA and ANA Titre^[1]



Improve Patients' Symptoms^[2,3]



SLE-DAI Score (P<0.001)
SLE-DAI: Systemic Lupus Erythematosus Disease Activity Index

^ΔFor detailed information, please visit www.jafron.com.

References

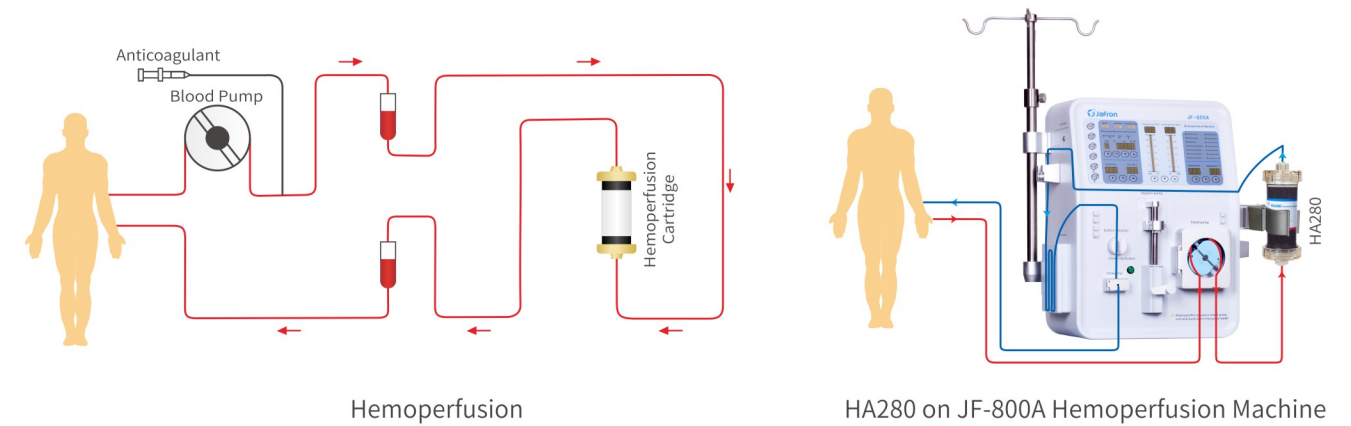
[1] Han Zhiwu, Yao Guoqian, Application of immunoabsorption therapy in autoimmune diseases [J]. Journal of Internal Intensive Medicine. 2013;19(3):141-142.
[2] Huang Danlin, Dang Xiqiang, et al. DNA immunoabsorption treatment of severely active systemic lupus erythematosus in children [J]. Medica of china family physicians. 2011; 30.
[3] Wang Mingjun, Chen Zhiwei, Wu Jian. Therapeutic effect of immunoabsorption on severe active systemic lupus erythematosus [J]. Chinese Journal of Hemorheology. 2012; 22(3).

HA280 Disposable Hemoperfusion Cartridge

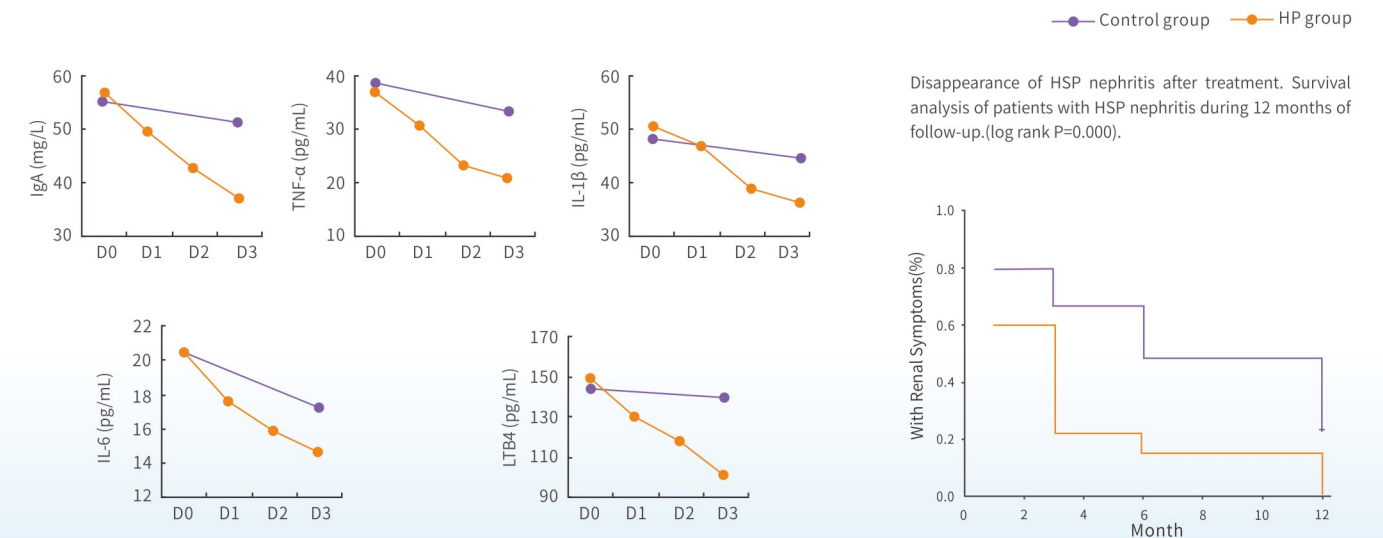
HA280 hemoperfusion therapy can be applied in **autoimmune diseases** such as allergic purpura^[1-3] to remove immune related factors and improve prognosis.

- Remove factors such as IL-1, IL-6, TNF- α , IgA, etc.

Therapy Operation Mode^Δ



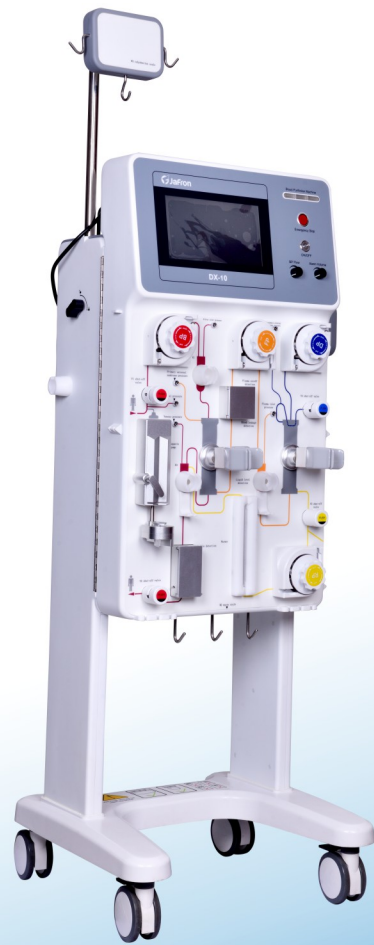
Clinical Data^[1]



^ΔFor detailed information, please visit www.jafron.com.

References

[1] Lina Chen, Zheng Wang, Songhui Zhai, et al. Effects of hemoperfusion in the treatment of childhood Henoch-Schonlein purpura nephritis. Int J Artif Organs. 2013; 36 (7):489-497.
[2] Yuhui Huang. A clinical research of hemoperfusion combined with hemodialysis for treatment of patients with severe Allergic Purpura, Chin J TCM Crit Care. 2010;17(6):349-351.
[3] Ying Zhu, Yang Dong, Lin Wu, et al. Changes of inflammatory mediators and oxidative stress indicators in Children with Henoch-Schonlein purpura in the treatment of severe Henoch-Schonlein purpura with gastrointestinal involvement in Children. BMC Pediatrics. 2019;19:409.



DX-10 Blood Purification Machine

- Multi-functional
- Smart & Safe
- Economical & Practical

JF-800A Hemoperfusion Machine

- Portable
- Safe
- Stable



DX-10 Blood Purification Machine Parameters

Summary		Monitoring System		Pump	
Size	740mm(L)×680mm(W)×1500mm(H)	Insufficient blood supply	Ultrasonic monitoring	Blood pump (BP)	15~225mL/min
Weight	70Kg	Air bubble	Ultrasonic monitoring	Filtrate pump (FP)	5~120mL/min
Mainboard	PLC	Liquid injection	Ultrasonic monitoring	Dialysate pump (DP)	2~50mL/min
Display screen	10.1 inch colored LCD touch screen	Disconnected liquid	Capacitance change testing	Replaced solution Pump (RP)	4~120mL/min
Power supply	AC 220V 50Hz	Liquid level	Capacitance change testing	Syringe pump (SP)	0.5~20mL/h, ±0.2mL/h or ±5% of the reading
Power	500VA	3 electronic scales	Fluid infusion scale (2), waste liquid scale		
		Blood leak	Optical testing		

Heater		Manometer	
Method and range	heated on either side of the plate (35~40°C)	Arterial pressure	-53.33~40kpa, ±1.33kpa (-400~300mmHg, ±10mmHg)
Protection method	temperature sensor	Pressure of filter inlet	-53.33~40kpa, ±1.33kpa (-400~300mmHg, ±10mmHg)
		Primary membrane pressure	-53.33~40kpa, ±1.33kpa (-400~300mmHg, ±10mmHg)
		Pressure of plasma inlet	-53.33~40kpa, ±1.33kpa (-400~300mmHg, ±10mmHg)
		Secondary membrane pressure	-53.33~40kpa, ±1.33kpa (-400~300mmHg, ±10mmHg)
		Venous pressure	-53.33~40kpa, ±1.33kpa (-400~300mmHg, ±10mmHg)

Cut - off valve and Clamper	
Cut - off valve	electromagnetic switch
Clamper	electric drive

Parameter Description

Size	320mm(W)×267mm(D)×450mm(H)	Setting range of target volume	1~99999ml
Weight	≈19kg	Blood pump flow rate accuracy	±10%
Size of Medical Trolley	508mm(W)×425.5mm(D)×754mm(H)	Low range of heparin pump	0~10ml/h
Weight of Medical Trolley	9kg	Heparin pump flow rate accuracy	±5% or ±0.2ml/h (take the larger absolute value)
Power supply	AC220V±10%, 50Hz±2%	Indication range of pressure before the cartridge	-20~+38kPa(±1kPa)
Power	About 200VA	Alarm setting range of pressure before the cartridge	-20~+38kPa(±2kPa)
Fuse protector	φ5×20mm, T2AL250VAC	Indication range of venous pressure	-18~+40kPa(±1kPa)
Electric shock protection grade	Class B, Type I	Alarm setting range of venous pressure	-18~+40kPa(±2kPa)
Applicable tubes	Standard tubes with inner diameter of φ8mm or φ6mm	Temperature setting range of heating medium	36~41°C(±0.1°C)
Alarm	Bubble alarm, pump cover is open, liquid level alarm, heparin obstruction, heparin has been injected completely, heparin time is up, pump preset amount is up, system time is up, upper limit of hemoperfusion front pressure, lower limit of hemoperfusion front pressure, upper limit of venous pressure, lower limit of venous pressure, heater is over-temperature, ambient temperature is low, internal temperature is high.	Flow range of blood pump	9~450ml/min(φ8mm) 6~300ml/min(φ6mm)