The Leader Of China's Blood Purification Industry

SWS Medical Group focuses on blood purification field for more than 20 years. Through technological innovation and continuous improvement, it has become the only company in China's blood purification industry with a full dialysis industrial chain.SWS Medical has three business segments: blood purification equipments, blood purification consumables and chain dialysis centers, which are dedicated to providing comprehensive medical solutions for CKD patients.

As a leading manufacturer of blood purification industry in China, SWS Medical Group has innovative platforms such as state-level enterprise technology centers, national and local joint engineering research centers, national postdoctoral research stations and academician expert workstations. Globally, 143 patent applications have been filed and 109 patents have been granted. It has drafted and formulated two national standards and five industry standards in the field of blood purification in China. SWS Medical is a national innovative enterprise and a national technological innovation demonstration enterprise.

SWS Medical Group has three wholly-owned subsidiaries and a Sino-US joint venture, Products cover all areas of blood purification.

※ SWS Hemodialysis Care Co., Ltd. produces blood purification equipments.
※ TWT Medical Equipment Company produces blood purification consumables.
※ KMJ Dialysis Company runs chain dialysis centers.
※ DIA-SWS(Chongqing)Medical Equipment Company produces high quality dialyzers.

It is our unique responsibility and mission to always put patients at first place and provide patients with safe and efficient products and services.

SWS Medical,escorting critical life!

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Ver1.2

SWS MEDICAL
Science · Wellness · Safety ·

SWS-5000
SWS-5000A
SWS-5000B

Blood Purification Equipment

SWS-5000

Blood Purification Equipment

Caring for life

The blood purification equipment with full functions

Full support for topical citrate anticoagulation

Support replacement fluid dual channel input

continuous venous venous hemodiafiltration(CVVHDF)

Plasma filtration adsorption(CPFA)

Double filtration plasmapheresis(DFPP)

Molecular adsorption recycling system(MARS)

Fractionated Plasma Separation Adsorption System(FPSA)

Hemoperfusion(HP)

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SWS-5000

Full Range Of Blood Purification Equipments

SWS-5000B
Blood Purification Equipment

SWS-5000
Professional Blood Purification Equipment

SWS-5000
Full Functionl Blood Purification Equipment

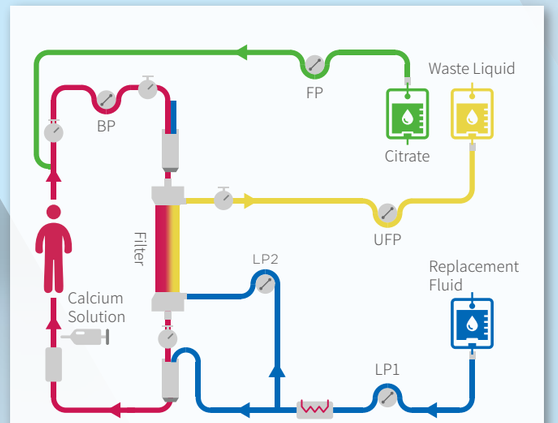
SWS-5000A
Blood Purification Equipment

Full Support For Topical Citrate Anticoagulation And Replacement Fluid Dual Channel Input

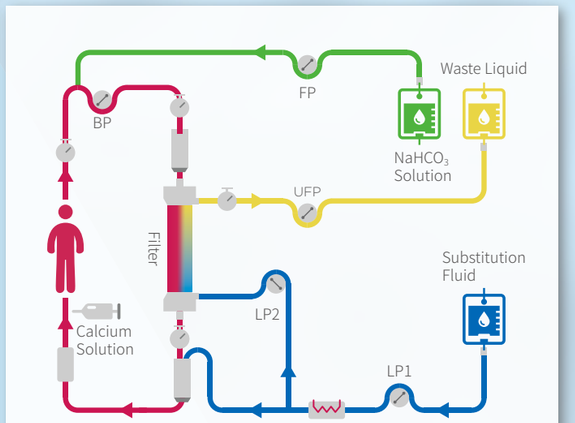
KDIGO Guide Recommendation:

Full support for topical citrate anticoagulation and replacement fluid dual channel input. For patients who do not have contraindications to citrate, it is recommended to use topical citrate anticoagulation for CRRT.

From KDIGO, <International Kidney>, March 2012



CVVHDF+Citrate Anticoagulation



CVVHDF+Replacement Fluid Dual Channel input

Clinical advantages of citrate anticoagulation:

- All treatment modes can adopt the Citrate anti-coagulation
- seperate Citrate syringe pump and weighing scale
- Control the Citrate flow accurately
- Automatic injection by proportion ,achieve the safe topical citrate anticoagulation.

Advantages of dual channel input of replacement fluid:

- Avoid Calcium ion precipitation, ensure the treatment result
- Automatic injection by proportion ,achieve the safety supplement of the substitution fluid
- No external infusion pump required, simpler operation and safer treatment

Flexibility To Deal With All Kinds Of Critical Moments

Convenient one-button prime

One button mode switch and one button prime , more convenient for clinical treatment.

Multiple dilution modes of substitution fluid

Adopt various methods for substitution fluid such as the pre-dilution ,post- dilution ,pre -post mix dilution.One button switch dilution method , do not need to change the connection of tubing manually.

Can set the flow of pre -post -dilution substitution fluid.

Multi-function syringe pump for a variety of anticoagulation needs

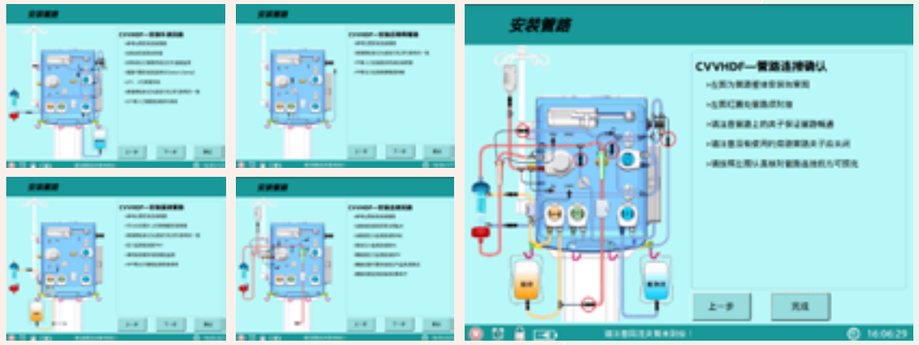
The multi-function syringe pump can be used for bolus injection of heparin, calcium chloride, etc., and automatically recognizes syringe models, such as 10ml, 20ml, 30ml, 50ml etc. various syringes.

safety movement

Small blind field of vision to ensure safety of equipment movement.

0 parts failure for 120KM movement test.

Guided pipe installation



Each step of the pipeline installation, the system will be guided by the combination of pictures and text, making the pipeline installation more convenient.

Ergonomic design, make the machines serve people

Rotatable big touch screen operation system , to observe and operate from different angles, to meet the requirement for rapid response under different scenarios

Reliable fluid change management of substitution fluid and waste fluid

The maximum range of weighing scale is 30kg , and can hang different fluid bags with higher accuracy of fluid meter , which can decrease the workload of medical care.

Unique design for foolproof fluid change , easy operation , high safety .

Precise, Only Be Benefit For The Patients

SWS-5000 precisely controls of the flow and temperature to ensure that the patient's treatment process is more efficient, safe and comfortable

The liquid temperature is detected and feedback control precisely

- The liquid temperature is detected and feedback control precisel.Different from the control gear mode of other equipment.
- Adopt the infrared focus to detect the temperature of substitution fluid,Control accuracy ± 1 ° C
- Large volume double-side heating device can be used to adapt to large flow substitution fluid Heating
- The patient's blood pressure is more stable and safe, which ensures the treatment process is more comfortable

Precise control of fluid balance

- The scale system accuracy can be ±5g
- The fluid balance error can not be more than ±20mL/h, the Cumulative error can not be more than±100mL
- Satisfy the clinical requirement for the fluid accuracy（1mL/min~250mL/min）

More Accurate Liquid Flow

- Five high-precision peristaltic pumps
- Wide flow range for meet more clinical needs
- Stable operation and more comfortable treatment

Reliable parts

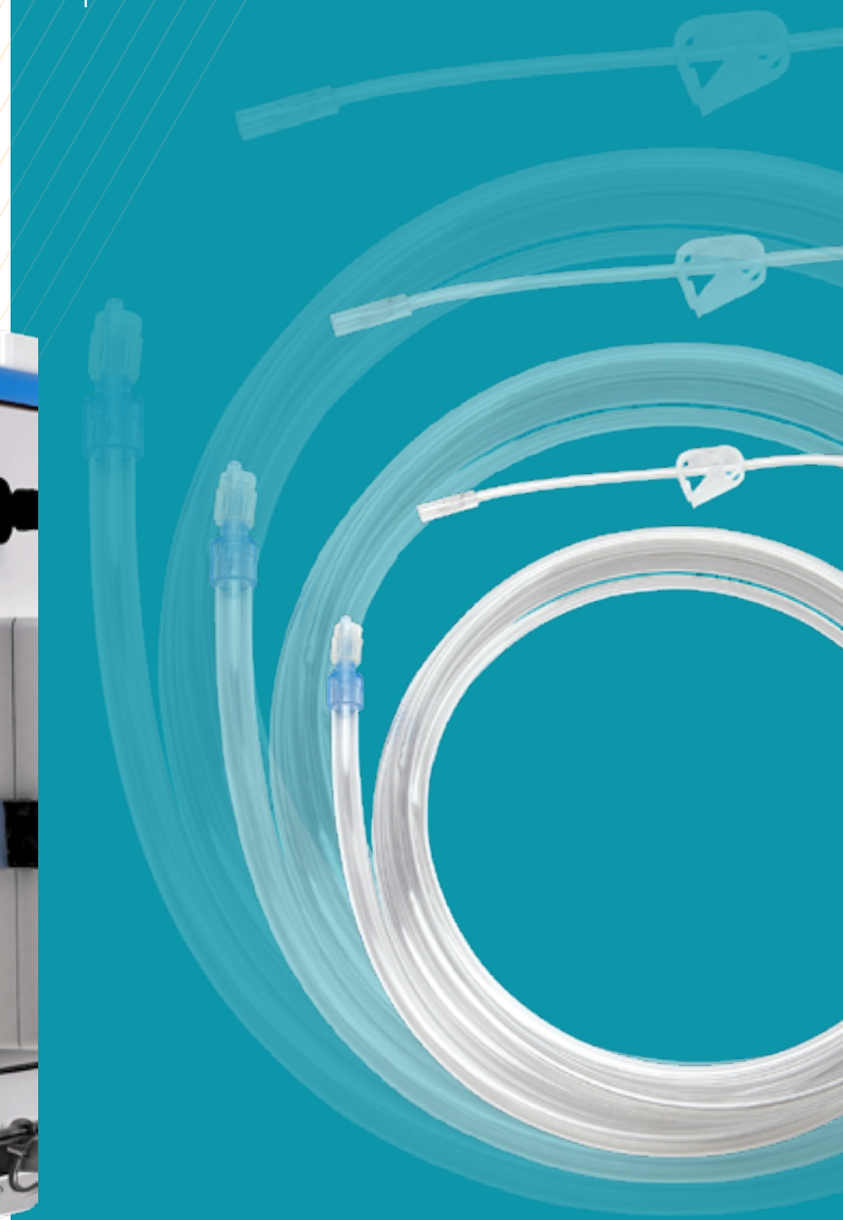
- Motors ,weighing sensors and pressure sensors have been purchased globally , ensure the quality of the products .
- The peristaltic pump is executed according to the strict quality standards and have been passed the trouble-free test of continuous operation for 90 million revolutions.

More clinical option

More universal consumables choices

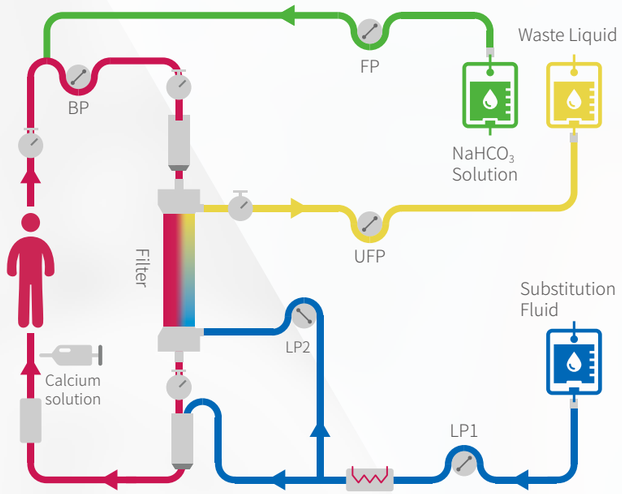
provide more affordable treatments to patients

provide more choices to clinical doctors



Rich and comprehensive treatment mode

SWS-5000 has fourteen blood purification treatment modes and it is more comprehensive blood purification device on the market. The device is suitable for continuous blood purification treatment (CBP), plasma adsorption therapy, albumin adsorption therapy and blood perfusion to meet various clinical treatment needs.



CVVHDF

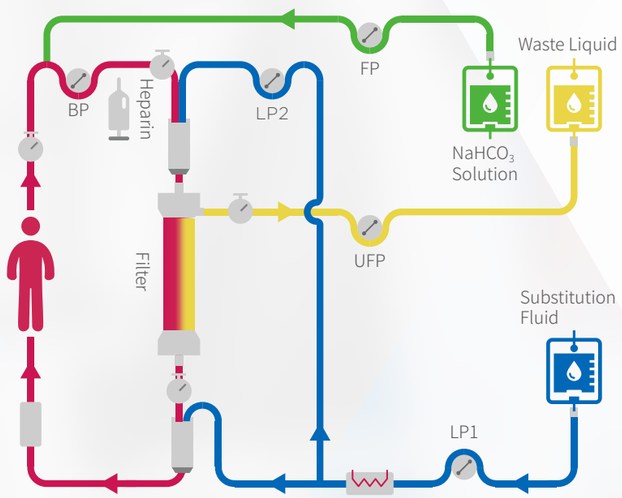
Continuous Venous Venous Hemodiafiltration

substitution fluid double channel input

Clinical application:

Severe Acute Kidney Injury (Aki), instability and continuously remove excess water or toxic substances, such as AKI with severe electrolyte imbalance, acid-base metabolic imbalance, heart failure, pulmonary edema, brain edema, acute respiratory distress syndrome (ARDS), severe infection after postoperative surgery, etc.

Chronic renal failure (CRF), combined with acute pulmonary edema, uremia encephalopathy, heart failure, hemodynamic instability, etc.



CVVH

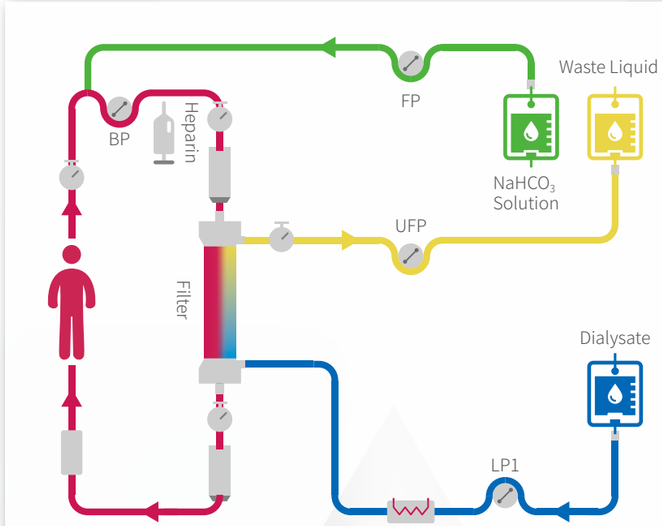
Continuous Venovenous Hemofiltration

Front and back end simultaneously dilution and exchange fluid dual-channel input

Clinical application:

Severe Acute Kidney Injury (Aki), instability and continuously remove excess water or toxic substances, such as AKI with severe electrolyte imbalance, acid-base metabolic imbalance, heart failure, pulmonary edema, brain edema, acute respiratory distress syndrome (ARDS), severe infection after postoperative surgery, etc.

Chronic renal failure (CRF), combined with acute pulmonary edema, uremia encephalopathy, heart failure, hemodynamic instability, etc.



CVVHD

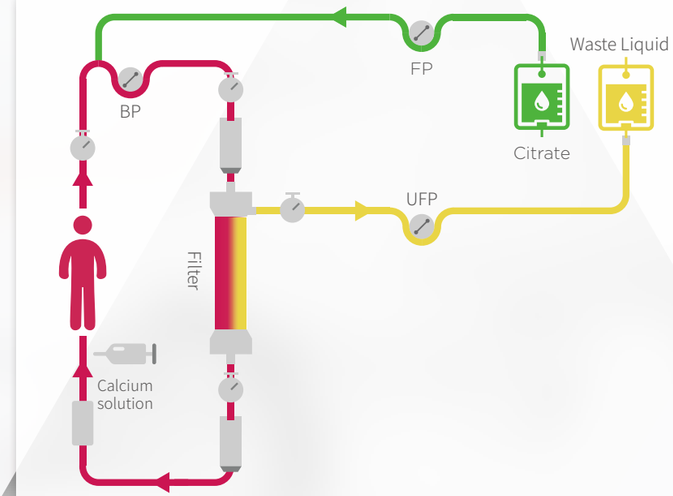
Continuous Venous Hemodialysis

Exchange Fluid Dual-Channel Input

Clinical application:

Severe Acute Kidney Injury (Aki), instability and continuously remove excess water or toxic substances, such as AKI with severe electrolyte imbalance, acid-base metabolic imbalance, heart failure, pulmonary edema, brain edema, acute respiratory distress syndrome (ARDS), severe infection after postoperative surgery, etc.

Chronic renal failure (CRF), combined with acute pulmonary edema, uremia encephalopathy, heart failure, hemodynamic instability, etc.



SCUF

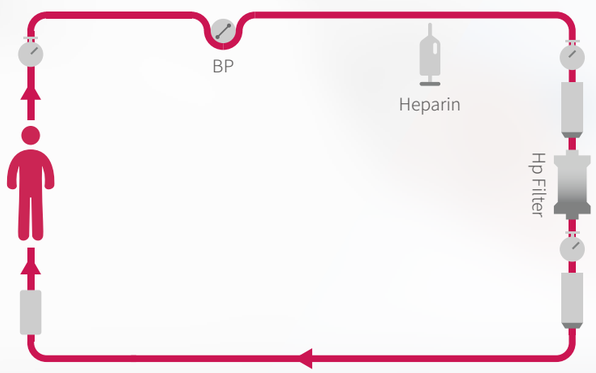
Slow Continuous Ultrafiltration

Clinical application:

Caused by various resons of poor effects on drug treatment Severe edema

Refractory heart failure

Acute and chronic pulmonary edema



HP

Hemopurfusion

Clinical application:

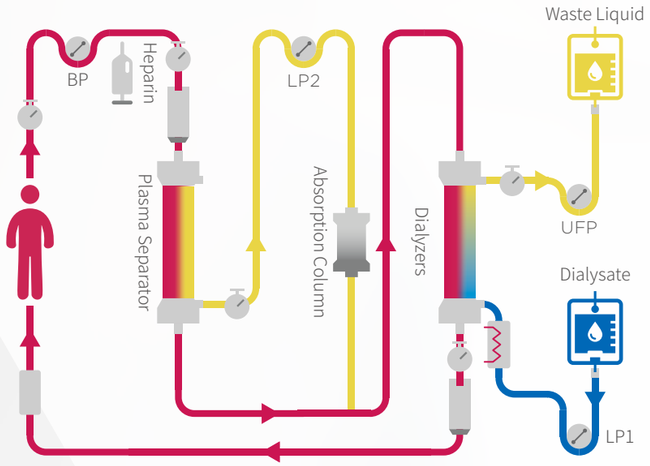
Acute drug poisoning or other toxicosis.

Uremia, especially refractory itching, refractory hypertension.

Severe hepatitis, especially hepatic encephalopathy caused by fulminant hepatic failure, hyperbilirubinemia, sepsis or systemic inflammation syndrome.

Psoriasis or other autoimmune diseases.

Other diseases such as schizophrenia, thyroid crisis, tumor chemotherapy, etc.

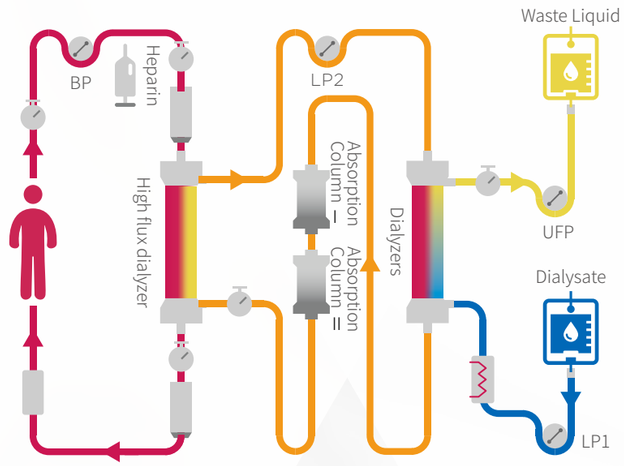


CPFA

Continuous Plasmafiltration Adsorption

Clinical application:

It is mainly used to remove medium and macromolecular toxins such as inflammatory mediators and cytokines.

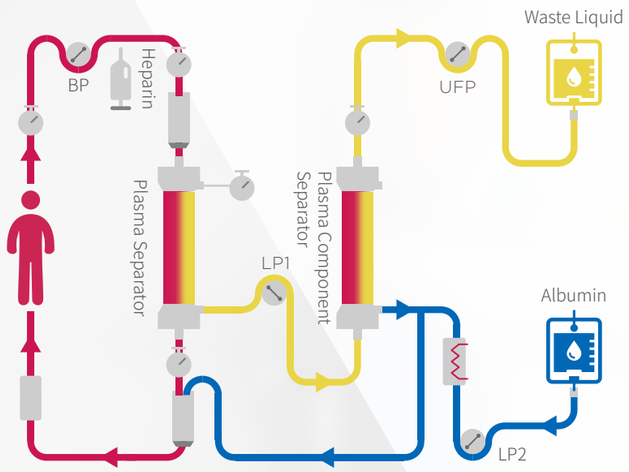


MARS

Molecular Adsorbent Recirculating System

Clinical application:

Clinical application: Hyperbilirubinemia (such as siltation / refractory itching) Acute exacerbation of chronic liver disease, acute / fulminant hepatic failure.



DFPP

Double Filtration Plasmapheresis

Clinical Application:

Clinical Application: Rheumatic Immune Disease

Immun Nervous System Disease

Digestive System Disease

Hematological Disease

Renal Disease

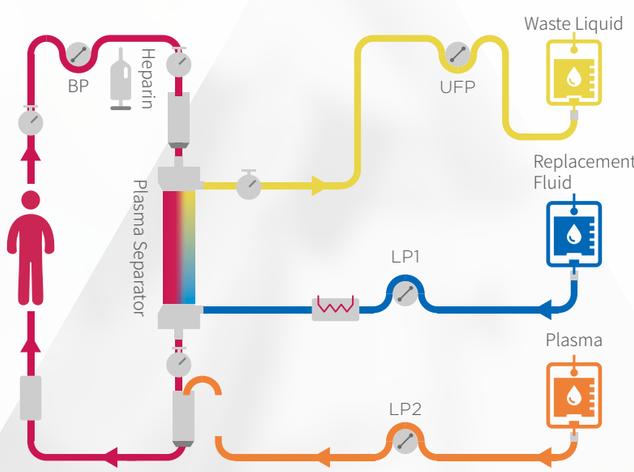
Rejection After Organ Transplantation

Autoimmune Skin Disease

Hypercholesterolemia

Hyperlipoproteinemia

Drug poisoning, etc.

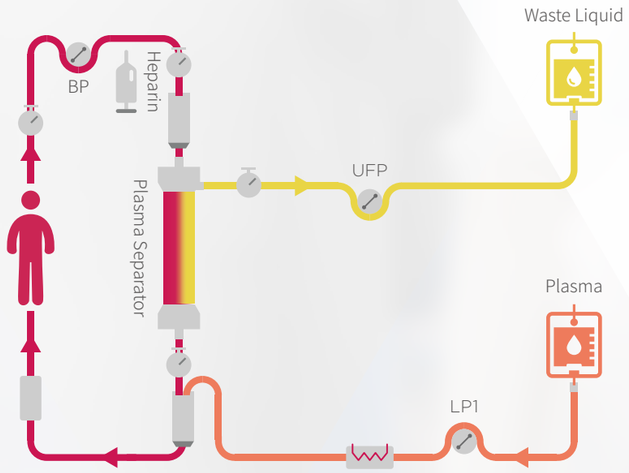


PDF

Plasma Diafiltration

Clinical Application:

Abiotic artificial liver blood purification treatment, suitable for patients with liver failure and renal failure, electrolyte imbalance.



PE

Plasma Exchange

Clinical Application:

Clinical Application: Rheumatic Immune Disease

Immun Nervous System Disease

Digestive System Disease

Hematological Disease

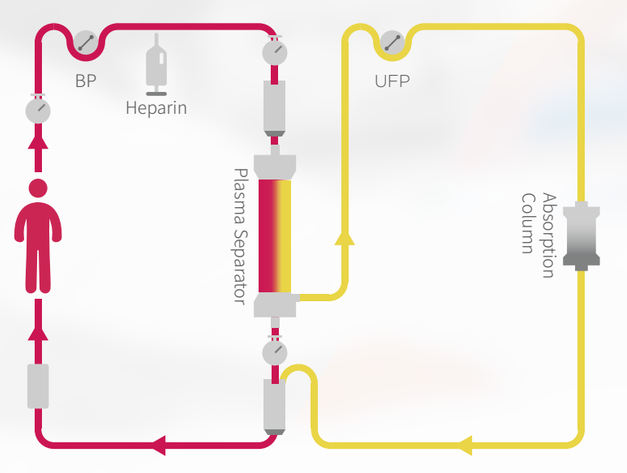
Renal Disease

Rejection After Organ Transplantation

Autoimmune Skin Disease

Metabolic Disease

Drug Poisoning,Etc



PA

Plasma Adsorption

Clinical application:

immune system disease of kidney and rheumatism

nervous system disease

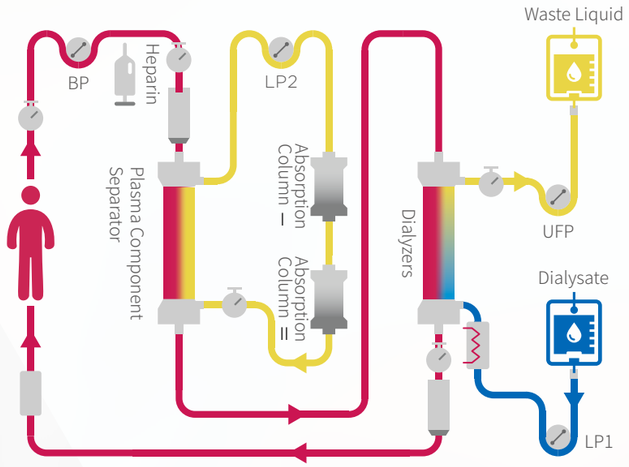
hematological Disease

hepatic failure

graft-versus-host disease

severe drug or toxin poisoning

other diseases: DCM(dilated cardiomyopathy)、β2-microglobulin

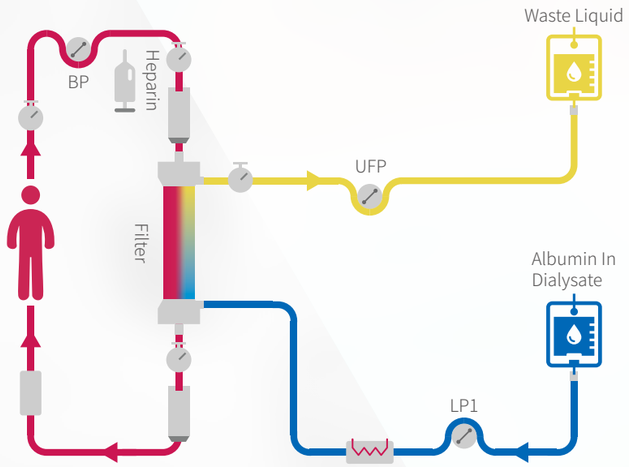


FPSA

Fractionated Plasma Separation Adsorption System

Clinical application:

Hyperbilirubinemia (such as siltation / refractory itching) Acute exacerbation of chronic liver disease, acute / fulminant hepatic failure.

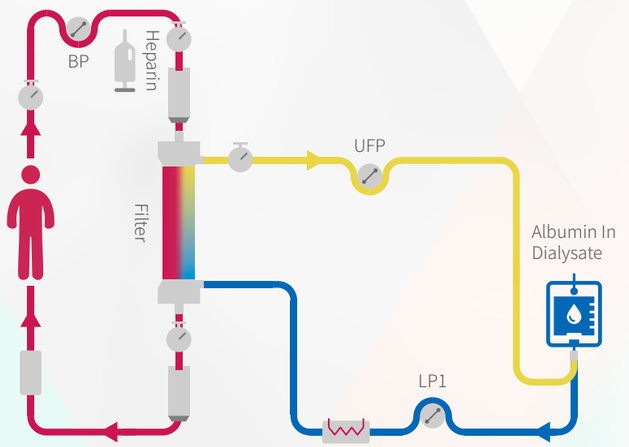


SPAD

Single-Pass Albumin Dialysis

Clinical application:

Hyperbilirubinemia (such as siltation / refractory itching) Acute exacerbation of chronic liver disease, acute / fulminant hepatic failure.



RAD

Repeated Albumin Dialysis

Clinical application:

Hyperbilirubinemia (such as siltation / refractory itching) Acute exacerbation of chronic liver disease, acute / fulminant hepatic failure.

Technical Parameter

Basic Information

Dimension	Height 1720 mm/Width 635 mm/Thickness 578 mm
Weight	About 75Kg
Electrical Parameters	
Voltage	~110/220V
Frequency	50/60Hz
Power	500VA
Backup Battery Capacity	2×12V/4Ah

Pressure Monitoring

Venous Pressure Monitoring(Vp)	-500mmHg ～ +700mmHg	Accuracy:±5mmHg
Arterial Pressure Monitoring(Ap)	-500mmHg ～ +700mmHg	Accuracy:±5mmHg
Transmembrane Pressure Monitoring(Tmp)	-500mmHg ～ +700mmHg	Accuracy:±5mmHg
Primary Membrane External Pressure Monitoring (Pm1)	-500mmHg ～ +700mmHg	Accuracy:±5mmHg
Secondary Membrane Pressure Monitoring(Pm2)	-500mmHg ～ +700mmHg	Accuracy:±5mmHg

Liquid Balance Control

Scale Number	4	
Rehydration Scale	0kg ～ 30kg	Accuracy: ±5g or ±0.1%
Waste Liquid Scale	0kg ～ 30kg	Accuracy: ±5g or ±0.1%
Auxiliary Rehydration Scale I	0kg ～ 12kg	Accuracy: ±5g or ±0.1%
Auxiliary Rehydration Scale I	0kg ～ 12kg	Accuracy: ±5g or ±0.1%

Flow Monitoring

Blood pump flow(BP)	0mL/min，30mL/min ～ 600mL/min Accuracy: set value±10%
LP1	0mL/min，1mL/min ～250mL/min Accuracy: ±0.1mL/min or ±5% of set value
Waste Liquid Pump Flow(UFP)	0mL/min，1mL/min ～250mL/min Accuracy: ±0.1mL/min or ±5% of set value
LP2	0mL/min，1mL/min ～250mL/min Accuracy: ±0.1mL/min or ±5% of set value
Function Pump Flow(FP)	0mL/min，1mL/min ～250mL/min Accuracy: ±0.1mL/min or ±5% of set value
Injection Pump Flow	
Flow Adjustable Range	0mL/h ～ 10 mL/h
Error Range	±0.2mL /h 或读数的 ±5%
Rapid Injection Flow	10mL/h ～ 2000mL/h
Syringe Specification	10mL / 20mL / 30mL / 50mL
Dehydration Error	⩽ ±20mL/h
Liquid Balance Control	⩽ 100mL

Substitution Temperature Control

Control Range	33°C～ 40°C
Accuracy	Control error ±1° C

Safety Monitoring

Blood Leakage Monitoring	⩽ 0.35mL/min (HCT 32%)
Air Monitoring	>0.02mL bubbles

Note: The above parameters are SWS-5000 series,Specific parameters are subject to the operating manual.

Each Model Treatment Mode Contrast

Treatment Mode	SWS-5000 (full function)	SWS-5000 (professional)	SWS-5000A	SWS-5000B
Citriate anticoagulation	✓	✓	✓	×
Substitution ouble channel input	✓	✓	✓	×
CVVH - Continuous Veno-Venous Hemofiltration	✓	✓	✓	✓
CVVHD - Continuous Veno-Venous Hemodialysis	✓	✓	✓	✓
CVVHDF - Continuous Veno-Venous Hemodiafiltration	✓	✓	✓	×
SCUF -Slow Continuous Ultrafiltration	✓	✓	✓	✓
HP - Hemoperfusion	✓	✓	✓	✓
PE - Plasma Exchange	✓	✓	✓	✓
PA - Plasma Adsorption	✓	✓	✓	✓
CPFA - Continuous Plasma Filtration And Adsorption	✓	✓	○	×
FPSA - Fractional Plasma Separation And Absorption	✓	○	○	×
MARS - Molecular Absorbent Recycling System	✓	○	○	×
SPAD - Single Pass Albumin Dialysis	✓	○	○	×
DFPP - Double Filtration Plasmapheresis	✓	○	○	×
RAD - Repeated Pass Albumin Dialysis	✓	○	○	×
PDF - Plasmadiafiltration	✓	○	○	×

Note: Ois optional