



adhyascientific



NILAI TKDN
40,36%

KC-140 Series

Your Reliable and Trusted Performance
in Every Run, Every Day

KC-140 Series

HPLC System



Specifications

Quaternary pump

Product Description	adhya scientific High Performance Liquid Chromatography (HPLC) Pump
Type	KC-140 Series – Quaternary pump
Material	-
Voltage	100 - 240 VAC , 100W
Frecuency	50 Hz
Operational Temperature/Humidity	4°C - 35 °C / 45% - 85%
Storage Temperature/Humidity	4°C - 55°C / < 93%
Dimensions (h x w x d)	470mm x 325mm x 150mm
Minimum Flow Resolution	0,0001 mL/min
Flow Range	0,0000 ~ 10,0000 mL/min
Flow Precisiçion	RSD ≤0,08% (1mL/min, Ultrapure water, 10MPa, Room temperature)
Flow Accuracy	±0,2% (1mL/min, Ultrapure water, 10MPa, Room temperature)
Pressure Range	45MPa (0,0001 ~ 2.0000 mL/min) 30MPa (2,0001 ~ Max mL/min)
Gradient Accuracy	± 1% (National Standard Method, 5 ~ 95%, 0,2~2,0 mL/min)



Specifications

Autosampler

Product Description	adhya scientific High Performance Liquid Chromatography (HPLC) Autosampler
Type	KC-140 Series - Autosampler
Material	-
Voltage	100 - 240 VAC
Frequency	50 Hz
Operational Temperature/Humidity	4°C - 35 °C / 45% - 85%
Storage Temperature/Humidity	4°C - 55°C / < 93%
Dimensions (L x W x H)	495mm x 360mm x 370 mm
Reproducibility	<1.0 %RSD (0,5uL ~ 1,9uL) <0,3 %RSD (2,0uL ~ Max)
Linearity	≥ 0,9999
Cross Contamination	≤ 0,006%
Sample Capacity	120 vial (2 x 60, vial 2mL)
Maximum Working Pressure	45 MPa
Sample Temperature (Optional)	Minimum temperature : 4°C
Temperature Range Control	-20°C ~ 5°C (room temperature)



Specifications

Column Compartment

Product Description	adhya scientific High Performance Liquid Chromatography (HPLC) Column Compartment
Type	KC-140 Series - Column Compartment
Material	-
Voltage	100 - 240 VAC
Frequency	50 Hz
Operational Temperature/Humidity	4°C - 35 °C / 45% - 85%
Storage Temperature/Humidity	4°C - 55°C / < 93%
Dimensions (L x W x H)	360mm x 155mm x 560mm
Temperature Range Setting	4°C~ 80°C (Room Temperature)
Temperature Range Control	+5°C~ +60°C (Full-temperature)
Stability Temperature	±0,04°C
Accuracy Temperature	±0,01°C
Safety Precautions	Door switch sensor: Optoelectronic Switch



Specifications

UV Detector

Product Description	adhya scientific High Performance Liquid Chromatography (HPLC) Detector UV-Vis (UV)
Type	KC-140 Series - UV Detector
Material	-
Voltage	100 - 240 VAC , 100W
Frequency	50 Hz
Operational Temperature/Humidity	4°C - 35 °C / 45% - 85%
Storage Temperature/Humidity	4°C - 55°C / < 93%
Dimensions (L x W x H)	487mm x 360mm x 165mm
Weight	10kg
Light Source	Deuterium Light
Wavelength	188 ~ 740nm
Noise	1,0x10 ⁻⁵ Au (1mL/min, Metanol, Kolom C18)
Drift	1,0x10 ⁻⁴ Au/h (1mL/min, Metanol, Kolom C18)
Wavelength Accuracy	≤ ±1nm (Potassium Perchlorate) ≤ ±2nm (Potassium Dichromate)
Wavelength Repeatability	≤ ±0,1nm
Detection Range	2,5 Au
Constant Time	0,1; 0,2; 0,5; 1,0; 2,0; 5,0
Flow Cell Volume	10 µL
Flow Cell Resistance	8 MPa
Appearance	Red and Green LED Indicators
Control	RS232 serial port communication, Ethernet communication, Panel buttons
Audit Trail	automatically records system operating time and lamp operating time.



Specifications

DAD Detector

Product Description	adhya scientific High Performance Liquid Chromatography (HPLC) Diode Array Detector (DAD)
Type	KC-140 Series - DAD Detector
Material	-
Baseline Noise	$\leq 4 \times 10^{-5}$ Au
Baseline Drift	$\leq 3 \times 10^{-5}$ Au/h
Min Detection Concentration	$\leq 2 \times 10^{-8}$ g/mL
Linearity Range	$\geq 10^4$
Spectral Range	190-800 nm
Wavelength Error	$\leq \pm 0.1$ nm
Wavelength Repeatability	$\leq \pm 0.1$ nm
Leak Detection	Standard leak Detection Module



Specifications

FLD Detector

Product Description	adhya scientific High Performance Liquid Chromatography (HPLC) Fluorescence Detector (FLD)
Type	KC-140 Series - FLD Detector
Material	-
Baseline Noise	$\leq 5 \times 10^{-6}$ FU
Baseline Drift	$\leq 2 \times 10^{-5}$ FU/30min
Spectral Range	(200 - 650) nm
Wavelength Error	± 0.1 nm
Wavelength Repeatability	± 0.1 nm
Linearity Range	$\geq 10^4$
Min Detection Concentration	$\leq 3 \times 10^{-10}$ g/mL (naphthalene / methanol)



Specifications

RID Detector

Product Description	adhya scientific High Performance Liquid Chromatography (HPLC) Refractive Index Detector (RID)
Type	KC-140 Series - RID Detector
Refractive Index Range	1.00 1.75
Detection Range	0.25 512 μ RIU
Drift	0.2 μ RIU /h
Linearity Range	≥ 600 μ RIU
Noise	≤ 2.5 nRIU
Response Time	0.1s, 0.25s, 0.5s, 1s, 1.5s, 2s, 3s, 6s
Deviation Adjustment Range	10 μ RIU
Bias Resolution Capability	50nRIU
Integrator Output (sensitivity)	DC 0 1V (4mV/ μ RIU, 16mV/ μ RIU)
Cell Volume	8 μ L
Flow Rate	0.2 3.0mL/min(max) 10mL/min
Max Back Pressure	50kPA

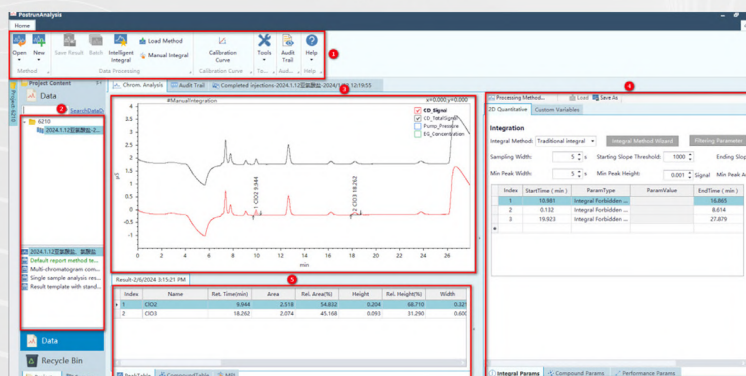
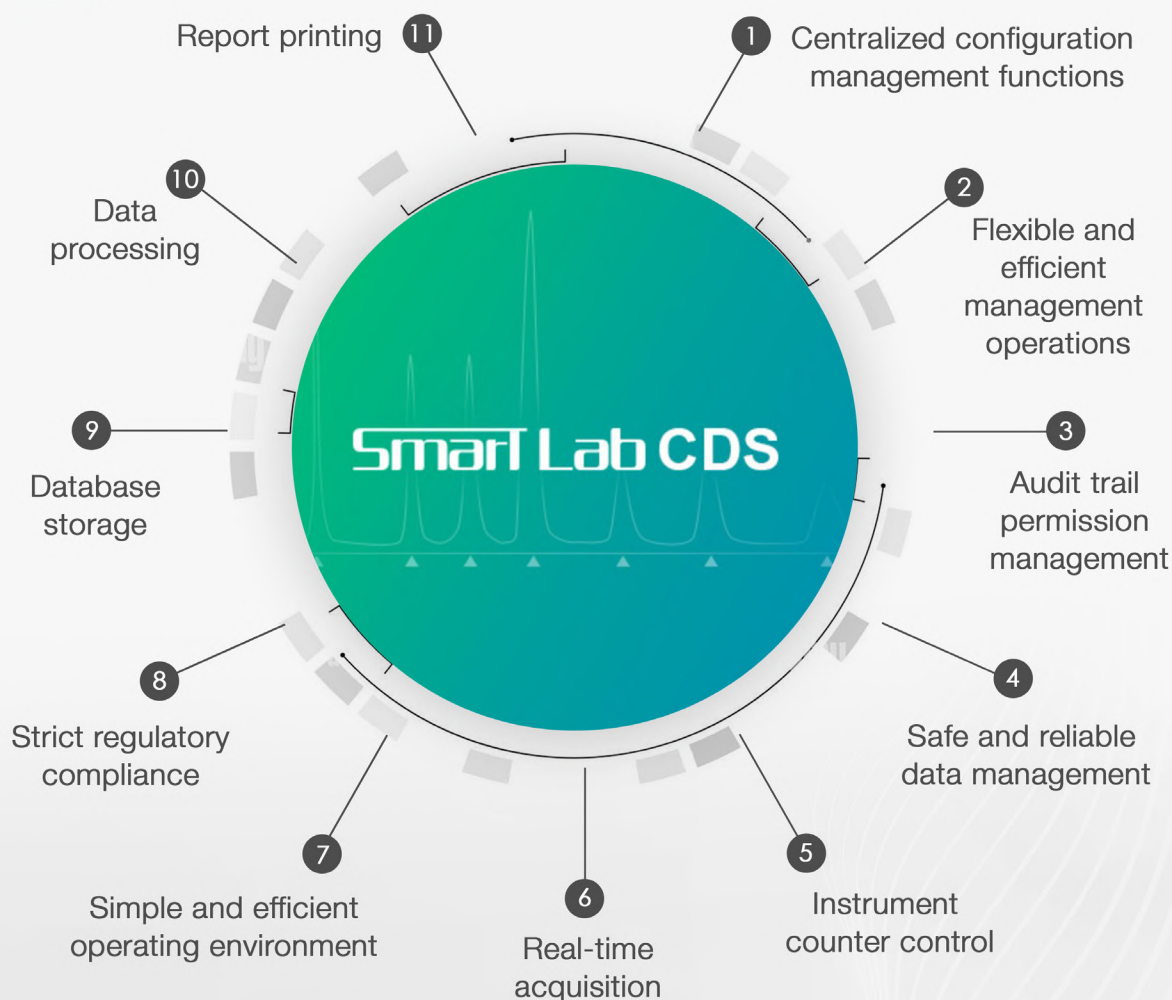


Smartlab Workstation

Workstation

All-digital signal : All-digital signal acquisition, avoiding the error of acquisition card sampling. User-friendly operation. Intuitive data processing methods and operating procedures for easy operation. Multi-channel design : multiple detector signals can be detected simultaneously. Graphical counter-control interface : Visual inspection of the operation of the lower unit.

Features



Application Industry

CDC Industry



Drinking Water :

Organic substances, polycyclic aromatic hydrocarbons, benzo(a) pyrene, etc



Animal Fluids :

Nitro phenols, creatinine, hippuric acid, methyl hip-puric acid, etc.



Occupational Health Workplace :

Hydroquinone, p-nitroaniline, trichloroacetaldehyde, etc.

Biomedical Industry



Chinese Medicine :

Chinese herbal medicine and formula granules



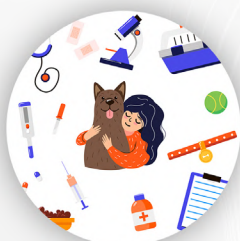
Western Medicine :

Antibiotics, pharmacopoeia requirements



Life Sciences :

Amino acids, organic acids/amines, proteins, steroids, peptides, sugars, etc



Veterinary Medicine:

Broad-spectrum antibiotics, such as penicillin



Pesticides :

Glyphosate, paraquat, etc.

Application Industry

Food Industry



Nutrients :

Proteins, amino acids, sugars, pigments, vitamins, organic acids, organic



Contaminants :

Mycotoxins (aflatoxins, E.coli toxins, etc.), trace elements, polycyclic aromatic hydrocarbons, etc.



Additives :

Sweeteners, preservatives, coloring agents (synthetic colors) such as lemon yellow, amaranthine

Environmental Industry



Gas :

Aldehydes and ketones, polycyclic aromatic hydrocarbons, bezo(a)pyrene, etc



Soil :

10 kinds of carbamate pesticides, 11 kinds of triazine pesticides



Water:

Phenols, benzidine, dimethyl (dibutyl, dioctyl) phthalate, pesticides, etc.

Chemical Industry



Petrochemical :

Petroleum composition analysis, such as polycyclic aromatic hydrocarbons, heavy hydrocarbons, etc.



Polymers and Additives:

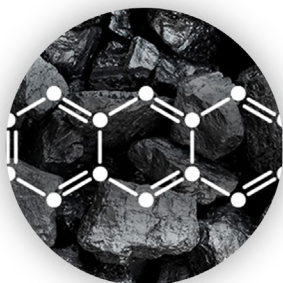
Monomers, oligomers (polyethylene, polyamides), alkyd gums, polystyrene.

Feed Industry



Vitamins (B1, B2, D3, B6, B12), 18 amino acids (pre-column derived, manual + in-line derived), adenosine aflatoxin and other toxins.

Application Case



Polycyclic Aromatic Hydrocarbons PAHs

Polycyclic Aromatic Hydrocarbons (PAHs) are volatile hydrocarbons produced during the incomplete combustion of organic materials such as coal, oil, wood, tobacco, and organic polymers, and are important environmental and food contaminants.



Chinese Medicine Formulation Granules

Panax notoginseng, the name of Chinese medicine, It has the effect of resolving blood stasis and stopping bleeding, activating blood circulation and fixing pain. It is mainly used for treating bleeding disorders, bruises and injuries, stasis and swelling pain.



Food Additives

Benzoic acid, sorbic acid is an organic chemical preservative, can prevent food spoilage, extend the shelf life of food, inhibit microbial reproduction in food. Sodium saccharin is a synthetic sweetener, its sugar level is 500 times that of sucrose, and the price is low.



Toxins

Aflatoxin (AFT) is a bifuranocyclic toxin produced by certain strains of *Aspergillus flavus* and *Aspergillus parasiticus*. There are about 20 kinds of derivatives, named B1, B2, G1, G2, M1, M2, GM, P1, Q1, toxic alcohol, etc. These fungi are mainly parasitic on peanuts, corn, rice, wheat and other grains and oil seeds.



Clonidine Hydrochloride

Clonidine hydrochloride is white crystalline powder, odorless. It is soluble in water or ethanol, very slightly soluble in chloroform and almost insoluble in ether.



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