

Ultra High Performance /High Performance Liquid Chromatography System BK-1800UHPLC



Details defne quality from visible to invisible

Designed by an Internationally awarded Companies

With full functional cnfiguration to meet various application needs of industries

The infusion unit is driven by a linear motor with leading technology, which significantly improves theaccuracy and precision

Easily deal with complex samples by the strong separation performance of two-dimensional separationssystem

Professional workstation software, are complies with GMP, FDA 21 CFR, 30 and other regulatory certificationrequirements



EX1800 UHP/UBP

Infusion System: Linear motor digital-driven pump

Flow range: 0.001-5mL/min,n0.001mL/min increments

Maximum operating pressure: 120MPa(corresponding 17000psi)

Flow precision: ≤0.06%RSD

Flow accuracy: ≤±0.3%

compression compensation: Automatic,continuous, selectable solvent type

Post-column cleaning: Automatic post-column cleaning function, which can control the cleaning fow rate

Gradient setting range: 0-100%

Extended application: Record number of times the plunger rod seal is used

Binary Pump

Configuration: Ultra-high-performance binary Infusion System (120MPa), Ultra-high-performance binary InfusionSystem (62MPa, 90MPa)

Ultra-high-performance binary infusion system can be equipped with two types of infusion deviceType I: Reciprocating infusion pumps, High flow accuracy, Low pressure pulsationType II: Linear motor digital-driven pump, Infusion stability,

Mixing accuracySolvent type selection according to the mobile phase, and automatic adjustment of liquid compression compensation

Automatic post-column rinsing, the cleaning flow rate can be controlled according to actual needs

EX1800 UHP/UBP

Infusion System: Type I Reciprocating infusion pumps

Type II Linear motor digital-driven pump

Flow range: 62MPa 0.001-10 mL/min,n0.001mL/min increments

90MPa0.001-5mL/min,n0.001mL/min increments

Maximum operating pressure: 62MPa(corresponding 9000psi),90MPa(corresponding 13000psi)

Flow precision: ≤0.06%RSD

Flow accuracy: ≤±0.3%

Compression compensation: Automatic, continuous, selectable solvent type

Post-column cleaning: Automatic post-column cleaning function, which can control the cleaning flow rate

Gradient setting range: 0-100%

Extended application: Record the number of times the plunger rod seal is used



Quaternary Pump

1.Maximum pressure ofthe quaternary pump can reach to 70MPa

2.Solvent type selection according to the mobile phase, and automatic adjust-ment of liquid compression compensation

3Automatic post-column rinsing, the cleaning flow rate controlled according to actual needs.

Infusion System: Linear motor digital-driven pump

Flow range: 0.001-10mL/min,n0.001mL/min increments

Maximum operating pressure:70MPa(corresponding 10150psi)

Flow precision:≤0.06%RSD

Flow accuracy:≤±0.3%

Compression compensation:Automatic, continuous, selectable solvent type

Post-column cleaning:Automatic post-column cleaning function, which can control the cleaning fow rate

Gradient setting range:0-100%

Online degassing:Degassing channel Systec AF®

Extended application:Record the number of times the plunger rod seal is used

UV Detector

1.The newly designed circuit system and light path structure greatly improve the sensitivity of the detector

2.Optional: UV detector and ultra-efficient UV detector

3.Usage of 2000 hours of high-performance deuterium lampFront-loader flow cell and light path structure design,easy to maintain and replace

4.Continuously perform spectral scanning or absorbance measurement under2 wavelengths(EX1800 UV D)

EX1800 SUV High-efficiency Ultraviolet Light Detector

Flow cell:volume 1.0uL; adopts cone structure /With optional temperature control module

Light source:Deuterium lamp

Wavelength range: 190-700nm

Spectral bandwidth: 4nm

Wavelength accuracy: ±1nm

Wavelength precision: <0.1nm

Noise:≤0.25*10sAU (static)/≤4*10^AU (dynamic, under specifed test conditions)

Drift:≤0.4*10*AU/h (static)/≤5*10^AU/h (dynamic, under specified test conditions)

Sampling frequency: Up to 100HZ

EX1800 UV/UV D Ultraviolet Light [UV] Detector

Flow cell:Volume 10.0uL; adopts cone structure /With optional temperature control module

Light source:Deuterium lamp

Wavelength range:190-700nm

Spectral bandwidth:8nm

Wavelength accuracy:±1nm

Wavelength precision:<0.1nm

Noise:≤0.25*10'AU (static)/≤4*10'AU (dynamic, under specified test conditions)

Drift:≤0.4*10-*AU/h (static)/≤5*10*AU/h (dynamic, under specified test conditions)

Sampling frequency:up to 100HZ



PDA Detector

1.Spectral scanning or absorbance measurement can beperformed continuously at a frequency of 100 Hz under 8 wavelengths

2.The wavelength range is 200nm to 800nm, adjusted in 1nmincrements

3.Both deuterium lamp and tungsten lamp use built-in counter tocalculate working time

4.Support 3D spectrogram

EX1800 POA

Number of diode arrays: 1024

Light source: deuteriumlamp+tungsten lamp

Wavelength range: 200-800nm

Wavelength accuracy:±1nm

Wavelength precision:+0.5nm

Noise: +5*10-6AU,under specified conditions

Drift: 1*10-4AU/h, under specified conditions

Sampling frequency: up to 100HZ

Spectral bandwidth:10nm

Flow cell path length:5mm(10mm is optional) Up to 8 channels of digital signal output



FL Detector

1.Use high-performance flash xenon light source

2.With the newly designed optical system,achieved highsensitivity and fast analysis capabilities

EX1800 FL D

Light source: Xenon lamp

Wavelength range: 190-890nm

Spectral bandwidth: 6nm,8nm,18nm,40nm

Wavelength accuracy: ±2nm

Wavelength reproducibility:±0.2nm

Flow cell path length: Standard flow cell 12uL



ELS Detector

1.Super long life laser light source

2.Special designed constant temperature device to ensure the Stability ofthe evaporation temperature

3.Built-in gas mass flow control system, not affected by pressure changes Special designed temperature-controlled atomizer to prevent instability

4.caused by the atomization process

EX1800 ELSD

Light source: 650nm laser,maximum output 30mW

Atomizer(nozzle)temperature control range:3°C-80°C above room temperature, with 1°C step

Drift tube temperature control range:3°C-130°C above room temperature, with 1°C step

Drift tube temperature stability:+0.03°C

Gas flow setting range:0.0-5.0 L/min

Noise:≤0.015mV

Drift:≤0.025mV/30min



RI Detector

1.The dual temperature control system shortens the time from turning on the power switch to the stabili.Zation of the instrument, and ensures good baseline stability

2.Have a leak sensor

EX1800 RI

Refractive index range: 1.00-1.75RIU

Detection range:0.25-512μRIU

Noise:≤2.5nRIU (pure water response time: 1.5 seconds)

Temperature control:Off, 30°C-50°C,with 1'c step

Flow cell volume:8μL



Column Organizer

1.Column Compartment Thermostatting and Preheating for Temperature to reduce temperature changes so that the chromatographic peak shape can be more symmetrical

2.Large-capacity structure, convenient to place 4 x 30cm chromatographiccolumns or 8x5cm,10cm ultra-efficient columns

3.With multi-channel switching valve, can achieve chromatographic column switching or multi-dimensional liquid phase applications

EX1800 CD

Temperature control range:5°C-80°C above room temperature

Ceramic heating module±0.1°C

Temperature stability:Temperature accuracy:±0.5°C

Up to two pre-post preheaters

Column capacity: up to 4x 30cm columns (ultra-efcient columns 8x5cm,10cm),

Optional: column switching valve

Temperature control method: microcomputer controlled active air circulation EX1800 CD II

15°C-80°C at room temperature (minimum setting temperature 4°C)Semiconductor refrigeration module

Solvent Organizer

1.Equipped with online vacuum deaerator

2.Basically provides 4 degassing channels to achieve 4 mobile phase degassing

3.Two-way mobile phase switching valve can be confgured, to expandthe original two-way mobile phase input of the binary high-pressure gradient to two sets of two (4 in total)mobile phase input

4.Degassing channel Systec AFe -degassing channel volume is 380μL/channel



Autosampler

1.Self-protection function, misoperation preventing.effectively reduce serious damage to equipmentcaused by misoperation

2.The injection range is 0.1~120μL,ensuring high-pre-cision injection of both large and small-volumesamples

3.Various optimization measures are adopted toreduce cross-contamination of samplesUp to 330(1mL) can be placed;

4.Provides two options: standard and ultra-efficient

5.Quadruple protection device,with optional: refrigerationfunction

6.Programmable sampling

program, sample pretreatment,automatic dilution, automaticpre-column derivatization andother functions

EX1800 UAS U/AS

Type I: The number of samples: With total two side, eachside can choose one type oftray. The system automaticallyrecognizes the tray specifications.

Maximum number: 1mLx192; 2mLx108 (standardconfiguration); 4mLx70; 10mLx30;

Type II: The number of samples: With total two side, eachside can choose one type oftray.The system automaticallyrecognizes the tray specifications.Maximum number:1mLx330; 2mLx192 (standardconfiguration);

4mLx108; 10mLx48;

Cross contamination: s0.005% (specified cleaningprocedure)

Injection volume: 0.1-120ul (determined based on thesample loop)

Injection accuracy: Full sample loop, RSD6s0.25%; partialquantitative loop, RSD6s0.596

Automatic protection function: Alarm for lack of bottle.thimble alarm, pipeline blockage alarm, leakage alarmRefrigeration function: Optional refrigeration module