UV-VIS Detector

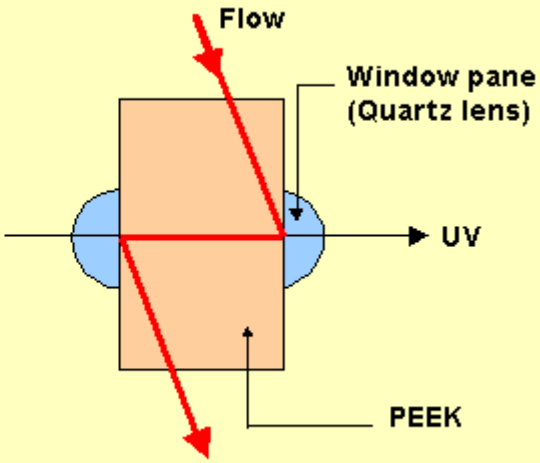
Minimizing sample diffusion - Optimum for semi-microcolumn HPLC!

High-precision Analysis at High Sensitivity

3-µL Flow Cell for Semi-microcolumn LC

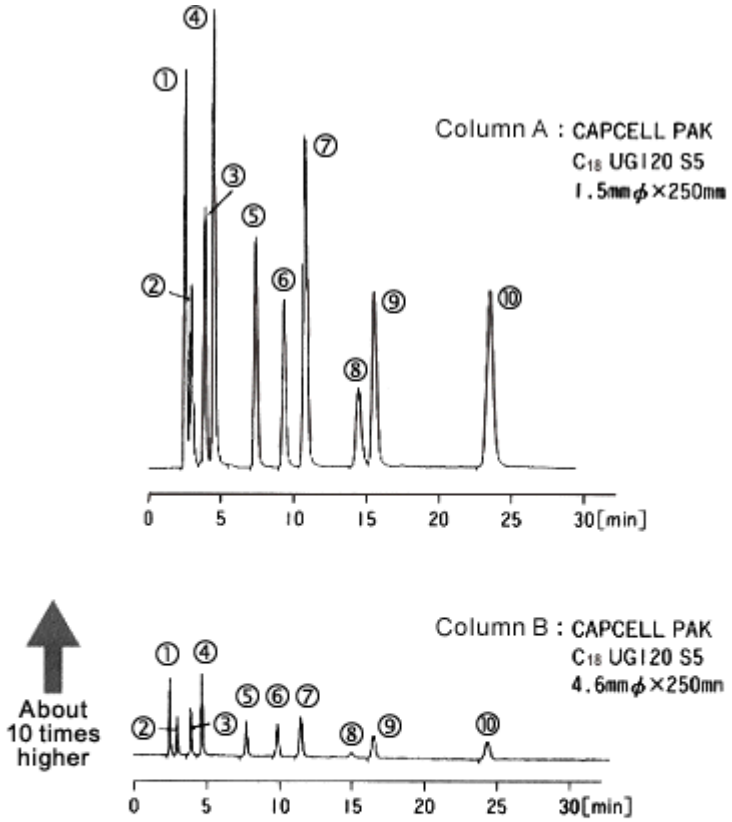
A 3-µL flow cell for semi-microcolumn is used for reducing diffusion, while keeping an adequate light path length. The polyetheretherketone (PEEK) cell surfaces are mirror-polished for tight lens contact. The lens itself is small and durable, designed for semi-microcolumn applications.

Cell volume	Light path
3 µL	7mm
13 µL	10mm



Small-diameter Columns (Semi-microcolumn) for Dramatically Improved Sensitivity

Comparison of sensitivity between Semi-micro and conventional columns

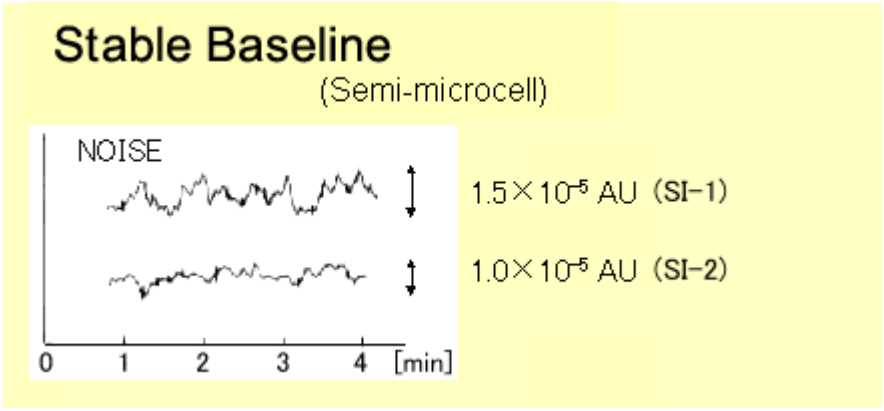


Instrument	: NANOSPACE SI-2
Mobile phase	: Methanol/H2O = 60/40
Flow rate	: (A) 100 µL/min (B) 1.0 ml/min
Temperature	: 35°C
Detection	: UV 254 nm
Injection volume	: 1.0 µL

Sample :
① Uracil
② Caffeine
③ Phenol
④ 2-Ethylpyridine
⑤ Methyl benzoate
⑥ Benzene
⑦ Dimethylaniline
⑧ Phenylacetylacetone
⑨ Toluene
⑩ Naphthalene

Stable Baseline (Semi-microcell)

The newly-designed double-beam single-cell system ensures a stable baseline. At the measuring range of 0.001 to 2.0 AUFS, the noise level is below 1.0 x 10-5 AU (254 nm).



Networked System Control

Remote operation from a WindowsTM PC is possible by using Syscon-21 software.

Doubled Lamp Life

The original circuitry was redesigned to double the lamp life. The wavelength range of the deuterium lamp is 195 to 700 nm.

Time Program Function

An optimum wavelength and time constant can be set for each peak on the LCD display.

The optical system was redesigned to improve the sensitivity (1.5 times greater than the conventional model).

Specifications

Product No.	3002
Product Name	UV-VIS detector
System	Double-beam single-cell
Wavelength Range	195 to 700 nm (Visible/ultraviolet automatic slit switching)
Bandwidth	5.6 nm
Wavelength Accuracy	±1 nm
Measuring Range	0.001 to 2.0 AUFS
Noise Level	Under 1.0 x 10^{-5} AU max. (Air)
Drift	Under 3 x 10^{-4} AU/hr max. (Air)
Auto-zero	Zero calibration range: 0 to 2.0 AU
Display	LCD: 16 characters x 2 rows
Dispersion Element	1,200/mm planar diffraction grating
Light Source	Deuterium discharge tube: 195 to 700 nm
Transducer	Silicon photodiode
Flow Cell	Standard: Capacity/Path length: 3 µL/7 mm Option: Capacity/Path length: 13 µL/10 mm, 18 µL/0.5 mm
Time Constant	RAPID: 0.1 s FAST: 0.2 s STD: 0.5 s SLOW: 2 s
Program	50-step wavelength and time constant setting
External I/O Signal	Start, error, recorder (10 mV), integrator, auto-zero, and program start
Power	AC 100 V ±10%, 50/60 Hz, 100 W
Dimensions	120(W) x 230(H) x 479(D) mm
Weight	About 12 kg