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Shimadzu 20A UV-VIS detector



SPD-20A/20AV Series Liquid Chromatographs

Part of the SPD-20 Series, which also includes the [SPD-M20A Photo Diode Array Detector](#), the SPD-20A/20AV UV-Vis detectors offer an exceptional level of sensitivity and stability. Taking sensitivity to the limit, the SPD-20A/20AV has a noise level of 0.5×10^{-5} AU max., making it the world's most sensitive UV-Vis detector (ASTM Standards). One mode of the SPD-20AV allows both the deuterium and tungsten lamps to be lit simultaneously, enabling high-sensitivity wavelength-programming detection for ultraviolet light and the entire visible-light range.

Features

Greater Baseline Stability

Supplied as standard, a temperature-controlled flow cell eliminates inconsistencies caused by changes in absorbance due to shifts in room temperature. This helps increase the baseline stability and the analysis reliability.

Superior Linearity - 2.5AU

Using newly developed signal processing technology, the stray-light correction function has been enhanced, and the linearity has been improved. This expanded linearity combines with various noise-reduction technologies to provide users with a wide dynamic range and allow for the analysis of your target compound and minor impurities in a single run.

Internal Validation Protocol

The incorporation of a low-pressure mercury lamp for wavelength calibration ensures simple calibration in the ultraviolet region.

Dual-Wavelength Measurement

Monitor two components in the UV or VIS range simultaneously

Simultaneous D2 and W lamp Illumination

Available with the SPD-20AV, users can eliminate warm-up time and baseline disturbances during wavelength programming between the UV and Visible range. With both lamps lit, high-sensitivity analysis throughout the full wavelength spectrum is ensured.

Specifications

	SPD-20A	SPD-20AV
Light source	Deuterium (D2) lamp	Deuterium (D2) lamp, tungsten (W) lamp
Number of diode elements	None	
Wavelength range	190 to 700 nm	190 to 900 nm
Bandwidth, slit width	8 nm	
Wavelength accuracy	1 nm max.	
Wavelength precision	0.1 nm max	
Noise	0.5 X 10 ⁻⁵ AU (under specified conditions)	
Drift	1 X 10 ⁻⁴ AU/h (under specified conditions)	
Linearity	2.5 AU (ASTM standard)	
Functions	Dual-wavelength detection in the range 190 to 370 nm and upwards of 371, ratio-chromatogram output, wavelength scanning	
Cell	Optical wavelength: 10 mm, capacity: 12µL, withstand pressure: 12 MPa	
Cell temperature-control range	5°C above room temperature to 50°C	
Web control	Parameter setting, log management, monitor detector output, management of consumable parts, etc. Parameter setting, log management, management of consumable parts, etc.	
Buffer memory	Refer to CBM-20A/Alite	
Operating temperature range	4°C to 35°C	
Dimensions, weight	260 (W) x 140 (H) x 420 (D) mm, 13 kg	
Power requirements	100 VAC, 160 VA, 50/60 Hz	



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