

Alliance iS Bio HPLC TUV Detector

The Alliance™ iS Bio HPLC TUV Detector is a tunable, dual-wavelength UV/Visible (UV/Vis) detector specifically designed and optimized for the most challenging biopharmaceutical applications. The Alliance iS Bio HPLC TUV Detector's innovative TaperSlit™ Flow Cell and high brightness lamp are each equipped with Intelligent Chip Technology, allowing for the electronic recording of pertinent component information flow, which is then viewable within the Empower™ Chromatography Data System (CDS) and available for inclusion in a comprehensive status report. Additionally, the design of the Alliance iS Bio HPLC TUV Detector allows for reduced sensitivity to laboratory environmental fluctuations, such as temperature and humidity changes. The Alliance iS Bio HPLC TUV Detector maintains its low-noise electronics and support for sampling rates up to 160 Hz.

OPERATING SPECIFICATIONS¹

Wavelength range	190 to 700 nm
Bandwidth range	<5 nm
Wavelength accuracy	±1.0 nm (via patented ² Erbium filter)
Wavelength repeatability	±0.1 nm
Linearity and dynamic range	$r^2 \geq 0.999$ from 0.0001 to 2 AU, ≤5% deviation up to 2.5 AU
Baseline noise ³ (dry), single wavelength	<5 µAU
Baseline noise ³ (dry), dual wavelength	≤35 µAU
Drift ³	≤100 AU/hour
Sampling rate	1, 2, 5, 10, 40, 80, 160 Hz (single channel) 1, 2 Hz (dual channel)
Unattended operation	Leak sensors, full diagnostic data captured through console software

OPTICAL COMPONENT SPECIFICATIONS

Light source	Deuterium arc lamp, warranty 2000 hours or one year (whichever comes first)
Flow cell design	TaperSlit Flow Cell
Path length	10 mm (analytical cell)
Cell volume	16.3 µL (analytical cell)
Pressure limit	1000 psi (analytical cell)
Wetted materials	Fluoropolymer, fused silica, PEEK
Optical bandwidth	5 nm

PHYSICAL SPECIFICATIONS

Width	≤41.28 cm (≤16.25 in.)
Height	≤17.78 cm (≤7 in.)
Depth	≤66.04 cm (≤26 in.)
Weight	≤18.14 kg (≤40 lbs.)

ENVIRONMENTAL SPECIFICATIONS

Operating temperature range	4.0 to 40.0 °C (39 to 104 °F)
Operating humidity range	20% to 80%, non-condensing
Audible noise	≤55 dBA

ELECTRICAL SPECIFICATIONS

Power requirements	100 to 240 VAC
Line frequency	50 to 60 Hz
Power consumption	140 VA (nominal)

References

1. All specifications derive from instrument performance after a 1-hour warm-up time
2. U.S. Patent Numbers: 6,423,249 and 6,783,705
3. ASTM E1657

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