



HPLC UV-VIS DETECTOR

The HPLC UV-Vis Detector's remarkable sensitivity is ensured by a high-throughput optical path, a reference subtraction algorithm, and an ultra-precise signal acquisition circuit. Moreover, the system integrates real-time liquid leak protection and intelligent monitoring of Peltier and cavity temperature. It includes over-temperature power-off protection, effectively averting accidental liquid leakage and minimizing overheating risks with its triple safety measures.

APPLICATIONS

- **Pharmaceutical Analysis:** Quantification of active pharmaceutical ingredients (APIs), impurities, and degradation products.
- **Food & Beverage Testing:** Detection of additives, dyes, preservatives, and contaminants with high sensitivity.
- **Environmental Monitoring:** Analysis of pollutants, pesticides, and organic compounds in water, soil, and air samples.
- **Clinical & Biomedical Research:** Measurement of biomolecules, metabolites, and therapeutic drugs in biological samples.
- **Chemical & Petrochemical Industry:** Monitoring reaction products, intermediates, and process control.
- **Biotechnology Applications:** Analysis of nucleic acids, proteins, and peptides with accurate UV absorbance.
- **Forensic Science:** Identification and quantification of drugs, toxins, and other trace compounds.
- **General Analytical Chemistry:** Suitable for method development, full-band spectral scanning, and wavelength programming in complex sample analysis.

FEATURES

Precision and Low LOD

The HPLC UV-Vis Detector offers outstanding sensitivity with a high-throughput optical path, reference subtraction algorithm, and ultra-precise signal acquisition circuit.

- Sample: 1.0×10^{-7} g/mL Naphthalene
- Column: C18, 4.6 × 250 mm, 5 μm
- Mobile phase: 95:5 Methanol:Water
- Flow rate: 1.0 mL/min
- Injection Volume: 20 μL
- Wavelength: 254 nm

HPLC Detector sensitivity demonstration graph
Low limit of detection test results for HPLC system

Wide Linearity

The detector integrates real-time liquid leak protection, intelligent monitoring of Peltier and cavity temperature, and over-temperature power-off protection. These triple safety measures prevent leakage and minimize overheating risks.

HPLC wide linearity performance chart

Reliability

The patented transmission-type deuterium lamp and static light path enable light source switching without moving the lamp, ensuring high stability and reliability.

Patented transmission-type deuterium lamp for HPLC system

With the innovative optical unit design and long-life light source module, the detector achieves extended operational lifespan.

Extended service life of HPLC optical unit module

Ease of Use

Full-Band Spectral Scanning

The system supports full-band spectral scanning for accurate identification of the optimal absorption wavelength of analytes.

Full-band spectral scanning feature of HPLC UV-Vis Detector

Wavelength Time Programming

Wavelengths can be programmed for different analytes at various times, enabling high-sensitivity analysis of complex samples.

Wavelength time programming process for HPLC UV-Vis Detector

Maintenance and Safety

The system is designed for easy maintenance and enhanced safety, ensuring reliable performance in laboratory environments.

HPLC system maintenance and safety features

TECHNICAL SPECIFICATIONS

Light source	Deuterium(transmission type) and Tungsten lamp
Wavelength range	190-800nm
Wavelength accuracy	+/- 1nm
Wavelength precision	+/- 0.1nm
Linearity	>2.5AU
Wavelength calibration	Mercury lamp



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