PN3242 UV-Vis/DAD

4-Channel UV-Vis/DAD Detector

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Features

The PN3242 4-channel UV-Vis/DAD detector is designed for use with a Field-Flow Fractionation (FFF) system or any other liquid chromatography system, and was developed to satisfy demands for greater accuracy and sensitivity in analysis.

- **High Sensitivity Measurement can be Obtained Over the Entire Wavelength Range**
  A photodiode array continuously monitors spectra over the entire wavelength range. The instrument uses a D2 and a tungsten lamp as light sources, which enables obtaining chromatograms and absorbance spectra with high sensitivity over the wide measurement wave-length range.

- **Wide Linearity Range can Reduce the Time for Analysis Preparation**
  Improved optical system has accomplished both wide linearity range and superb signal-to-noise ratio performance at the same time. The wide linearity range makes it possible to measure main components and trace components simultaneously, thereby allowing for reducing the time to dilute thick samples. Use of variable slits allows for achieving higher sensitivity in accordance with the analysis objective.

- **Improved Stability in Analysis Through Flow Cell / Polychromator / Lamp Compartment Temperature Control**
  Mobile phases have higher absorbances in shorter wavelengths than in longer ones, which allows variation in the ambient temperature to affect the absorbance of the mobile phase in the cell and leads to change in the baseline or peak areas. The instrument stabilizes analysis by controlling the temperature of the flow cell, polychromator, and the lamp compartment.

- **Decomposition of Samples Due to UV Light can be Prevented for Improving Data Reliability**
  The UV light cut-off filter can prevent samples from being decomposed by UV light. This can suppress the variations in absorbance due to the decompostion of samples to improve data reliability.

- **Easy Maintenance and Part Replacement**
  When replacing the lamp, troublesome optical axis adjustment is unnecessary. Futhermore, the total lamp usage time is monitored, so a quick glance lets you know when to replace the lamp. The photodiode array exposure time setting can be automatically optimized for easy maintenance. Wavelength accuracy is checked automatically from the UV to visible wavelength range using the built-in holmium oxide filter absorbance spectrum and deuterium emission line spectrum, providing easy performace verification.

- **Cell Memory And Lamp Memory Functions**
  A cell memory in which the type of cell is stored is embedded in the flow cell for automatic recording the type of the cell used for analysis in the analysis data, achieving improved trace-ability of analysis. Likewise, the memory embedded in the lamp can control the lighting time properly. The lighting time and serial number of the lamp used for analysis are automatically recorded in the analysis data, improving the traceability of analysis.

Ordering Information

S-DET-3242-001	PN3242 UV-Vis/DAD Detector

Flow Cells

Z-DET-3242-001	Analytical, Peek
Z-DET-3242-002	Analytical, Stainless Steel
Z-DET-3242-003	Preparative, Stainless Steel

Detector Lamps

Z-DL-PN3242	D2-Lamp, Pre-aligned, Longlife
Z-DL-PN3242vis	Vis-Lamp

DAD Software

P-DL-SHI-002	LC Workstation Single PDA

Technical specifications are subject to change without further notice.

Specifications

- Light Source:
  Deuterium lamp, Tungsten lamp
- Wavelength Range:
  190 – 800 nm
- Wavelength Accuracy:
  ± 1 nm
- Element Resolution:
  0.6 nm / element
- Spectral Resolution:
  1.4 nm (using 253.7 nm Hg emission line, 1.2 nm slit width)
- Noise Level:
  $< 4.5 \times 10^{-6}$ AU
- Drift:
  $< 0.4 \times 10^{-3}$ AU/h
- Linearity:
  2.5 AU (Caffeine, 273 nm, 1.2 nm slit))
- Operating Temperature:
  4 – 35°C
- Optical Path Length:
  10 mm (analytical flow cell)
- Cell Volume:
  12 µL (analytical flow cell)
- Pressure Resistance:
  12 MPa (analytical flow cell)
- Wetted Surface Materials:
  SUS316L, quartz glass, PFA, PEEK
- Cell Temperature Control:
  19°C to 50°C (in 1°C steps)
- Dimensions (WxHxD)/
  260 x 140 x 500 mm
- Weight:
  10 kg
- Power Requirements:
  100/120/220-240 V, 50/60Hz

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