

Series 200a Fluorescence Detector

The sensitivity you need from a name you respect



Combining sensitivity AND specificity

For years, high performance liquid chromatography (HPLC) has been the method of choice for separation and quantitation of polar and nonvolatile compounds. Although retention time is the main tool for identification of analytes, the complexity of real-world samples requires the confirmation of peak identity through additional qualitative information. When applicable, fluorescence detection has proven itself a valuable solution. The major benefit afforded by fluorescence detection is the inherent high sensitivity of the technique coupled with outstanding specificity – given that relatively few molecules natively fluoresce.

Therefore, the specific excitation and emission wavelength profile aids in the characterization of individual components. The Series 200a Fluorescence Detector delivers the outstanding performance and reliability you've come to expect from PerkinElmer – backed by our unrivaled global support network.

Advanced features set for any application

Standard fluorescence detection is ideal for many diverse applications, such as the analysis of serum and plasma in pharmaceutical research, environmental analysis of toxins and pollutants, vitamin analysis, and even the analysis of food mycotoxins and beverage degradation products.

Key Benefits

- ▶ Outstanding sensitivity for trace analysis
- ▶ Fully time programmable – up to 100 wavelength steps per method for complex samples
- ▶ Built-in Hg source for quick wavelength calibration check
- ▶ Front-panel access for easy lamp change and adjustment
- ▶ Stackable, ergonomic design saves valuable bench space
- ▶ Part of PerkinElmer's Series 200 HPLC family – renowned for quality and support network

The Series 200a Fluorescence Detector includes an advanced set of features to optimize your analyses no matter the application:

- **Time programmable** selection of both Excitation, Emission wavelengths and autozero give this detector all the versatility you will need. By choosing the correct wavelengths, measurements are taken at the maximum level and both linearity and sensitivity

improve. You can also time program the selective detection of individual components, thereby minimizing background effects.

- **Spectrum memory** allows you to print up to 4 spectra which have been stored in nonvolatile memory.
- **Innovative flow cell** (made of Quartz and a Fluoro resin) prevents interaction between hardware and analytes.

- **Stackable design** – the design of the Series 200a Fluorescence Detector is fully consistent with the rest of the PerkinElmer® Series 200 HPLC family – allowing for space-saving, unified systems stacking. A bright, easy-to-read display makes user interaction simple.

Specifications

| | |
|-----------------------------|---|
| Measurement methods | Ratio photometry using transmitted light monitor |
| Light source | Xenon lamp |
| Excitation wavelength range | 200 to 850 nm and zero order |
| Emission wavelength range | 250 to 900 nm and zero order |
| Bandwidth | Ex: 15 nm; Em: 15 or 30 nm |
| Wavelength accuracy | ± 4 nm |
| Wavelength reproducibility | ± 0.5 nm |
| Response | 7 selectable settings |
| Sensitivity | S/N ratio 525:1 (tangent method), 700:1 (baseline method) |
| Time programmable | Up to 100 steps total for 9 programs. All time programs are battery backed up even with power off. |
| Spectrum memory | Up to 4 spectra may be stored, excitation or emission. Background spectra can also be subtracted. |
| Integrator output | 1 V |
| Recorder output | 10 mV |
| Autozero range | 0 to 1000 |
| Offset range | 0 to 1000 |
| Flow-cell volume | 12 µL (with standard cell) |
| Flow-cell pressure limit | 150 psi |
| Flow-cell materials | Quartz, Fluoro resin |
| Display | 2 lines by 40 characters backlit with LCD |
| External control | External inputs/outputs: data processor output (1 V/AU), recorder output (10 mV/AU), autozero input, marker input, lamp-off input |
| Maintenance logbook | Lamp energy, excitation wavelength accuracy, fluorescence wavelength accuracy, xenon lamp (hours on), number of lamp ignitions and date of last lamp replacement are stored and reported in firmware logbook. |
| Operating temperature range | 4 °C to 35 °C |
| Dimensions (H x W x D) | 300 x 340 x 430 mm |
| Weight | Approx. 25 kg |

Ordering Information

| Part Number | Description |
|-------------|--|
| N2920221 | Series 200a Fluorescence Detector, 100/120/220/240 VAC, 50/60 Hz |

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