Vaters

Waters[®] Absorbance, PDA, Fluorescence Detectors Cuvette capability for bench-top use

HPLC AND BENCH-TOP DETECTOR

The Waters Dual λ Absorbance Detector, 996 Photodiode Array Detector and the 474 Fluorescence Detector can now be equipped to use a standard 10 mm pathlength cuvette. This converts them from HPLC detectors to bench-top detectors with scanning capabilities, increasing their versatility.



APPLICATIONS AND BENEFITS OF USING A CUVETTE

1. The absorbance or fluorescence of a solution can be checked easily and quickly. This detector feature may eliminate the need to go to an expensive bench-top spectrophotometer or fluorometer to make the measurement.

2. Spectral scanning of solutions can be done to determine the absorbance lambda maxima, or excitation and emission wavelengths. This is convenient for rapid methods development.

3. The cuvette option provides easier and faster way to verify wavelength accuracy and linearity using reference standards in cuvettes. With the Waters Qualification Workbooks and cuvette kits the time consuming process of detector qualification is made faster and easier.

USE OF THE CUVETTE OPTION

The figures on page 2 diagram the path of the light from the lamp to either the detector photodiode, diode array or photomultiplier tube. In the HPLC detector mode, the solvent and sample move through the flow cell and are detected continuously. In the cuvette, static mode, a single point observation is made.

The Waters 2487 Dual λ Absorbance Detector has the cuvette holder permanently in place. When the cuvette is used, both the cuvette and the flow cell are in the light path.

The Waters 996 Photodiode Array Detector and the Waters 474 Fluorescence Detector require a separate cuvette holder to replace the flow cell. The cell holders are at the front of each instrument for easy access.

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Flow Cell and Cuvette Positions

Below are diagrams illustrating the light path from the lamp, through the flow cell and / or cuvette to the diodes or photomultiplier tube. The upper panels is the standard HPLC detector mode with solvent flowing through the cell. The lower panel is the static mode with the cuvette in place. This dual capability increases the versatility of the family of Waters UV/Vis detectors.

Flow Cell - HPLC Detector Mode

