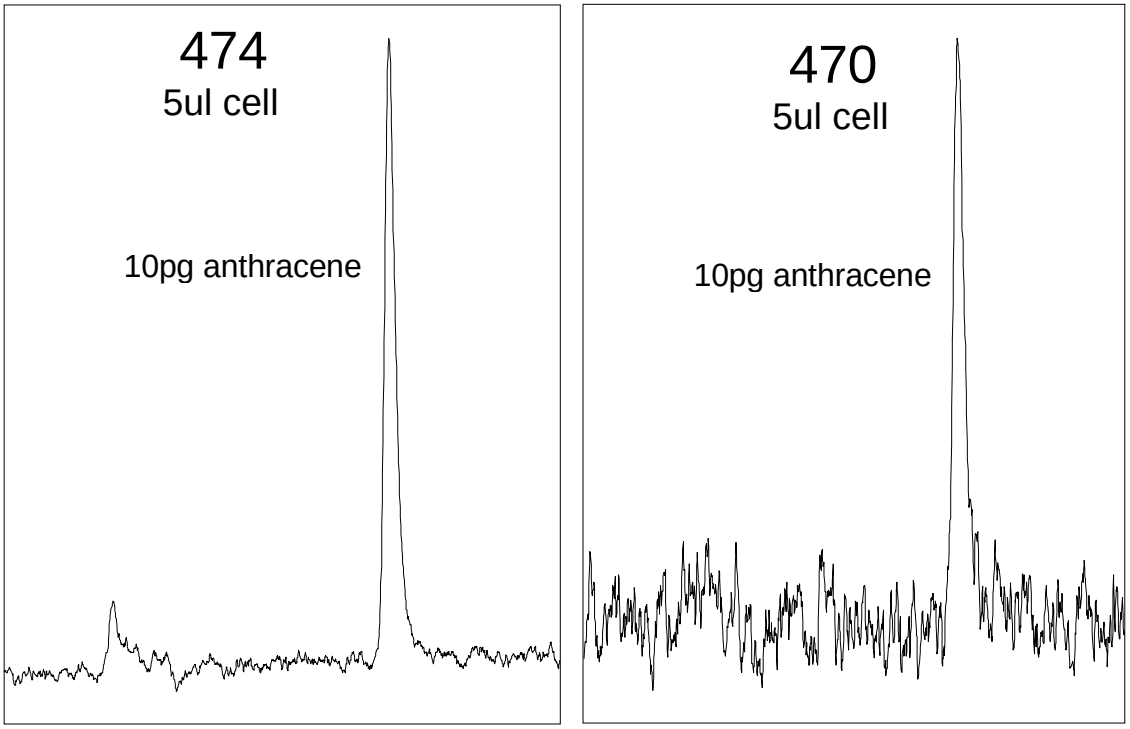
Performance PerSPECtives

474 Fluorescence Detector for Improved Sensitivity

The Waters 474 Scanning Fluorescence Detector enhances sensitivity in HPLC fluorescence detection.



Waters 474 Scanning Fluorescence Detector brings a new, higher level of sensitivity to HPLC fluorescence detection. When Waters introduced the 470 Scanning Fluorescence Detector, quantitation of naturally fluorescing and derivatized compounds was achieved at levels lower than previously possible by HPLC. That high sensitivity has been surpassed by the Waters 474 Scanning Fluorescence Detector.

System:	510 Pump, 717 Autosampler, 474 Fluorescence
Detector.	Ex. 251nm Em 406nm Gain 1000
Column:	Nova-Pak C18 3.9 X 150mm
Mobile phase:	Acetonitrile/water 80/20 1ml/min.
Sample:	Anthracene 1pg/ul

Waters

Waters Corporation 34 Maple Street Milford, MA 01757 508 478-2000

Fluorescence Detection

High levels of sensitivity and specificity make fluorescence an increasingly favorable mode of detection for HPLC. In addition to naturally fluorescing compounds, there are many fluorescent derivatives that can be formed to visualize lower levels of various non-fluorescing analytes. Fluorescence detection enables environmental analysis of trace levels of pesticides such as n-methyl carbamates or glyphosate in drinking water or soil. The high specificity is especially well suited to measurements in complex matrices, such as foods, where coextractives can often cause interferences. Derivatized amino acids can be measured at femtomole levels for characterization of proteins, even in cases where sample amount is limited.

Waters 474 Fluorescence Detector

Waters 474 Detector optimizes the utility of fluorescence detection with advanced programming and scanning capabilities. Up to 10 programmed methods of 64 program steps each can be stored and automatically executed to change excitation and/or emission wavelengths, detector output gain, or attenuation. This allows optimum detection of multiple analytes in a single run. Excitation and emission spectra can be scanned in a stopped flow mode or on the fly, and the data reviewed post run. The 474 Detector will store up to 10 excitation and emission spectra. The improved electronics in the optics bench minimize baseline noise, which improves sensitivity.

For maximum sensitivity, the 474 Detector comes standard with a 16uL flow cell.