

## **multiplex spectrometer**

A spectrometer in which a single photodetector simultaneously receives signals from different spectral bands which are specifically encoded. In the case of frequency multiplexing, each spectral band is modulated at a specific frequency. Decoding is achieved by filtering out, by electronic means, the corresponding signals. Frequency multiplexing may be realized by changing the path difference between the two interfering beams at a uniform rate. Fourier transform of the interferogram so obtained yields the spectrum. This method is called Fourier transform spectrometry (FTS).

**Source:**

PAC, 1995, 67, 1725 (*Nomenclature, symbols, units and their usage in spectrochemical analysis-IX. Instrumentation for the spectral dispersion and isolation of optical radiation (IUPAC Recommendations 1995)*) on page 1729