Modulació de longitud d'ona

Autor:
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Real-time simulation is a wavelength modulation system, used in some atomic and molecular spectrometry applications. It measures the width of the spectrum of peaks that overlap the interference and instability of the background radiation. A modulating wavelength uses a wavelength modulator system that varies the observation wavelength periodically. It may consist of, for example, a voltage swing applied to a tunable diode laser, light source, or an oscillating refractor plate installed in the light path inside an input slot of a monochromator. When the modulation range is placed at a spectral peak, an AC component of the photo-signal is generated and is proportional to the intensity peak. The background spectrum, on the other hand, normally changes little over the modulation range and therefore produces little or no AC component. A lock amplifier is commonly used to measure the amplitude of an AC component of a photo signal. The reference signal for the lock amplifier is derived from the oscillator that drives the wavelength of the modulator. (In modern computer-based systems, the functions of the lock amplifier may be superseded by data acquisition software).