



Lamp Profiles

1.2.2 Monochromator

A monochromator is the device that resolves radiation into its component wavelengths and permits the isolation of any desired portion of the spectrum.

Monochromators usually consist of an entrance slit to confine the source radiation to a useable area and mirrors to pass the light through the system. A dispersing element is then used to spread the source radiation into its component wavelengths and an exit slit to select the wavelength with which it is desired to illuminate the sample.

The heart of the monochromator is the dispersing element, i.e. diffraction grating, which separates the radiation according to wavelength. In addition, mirrors are used to direct the radiation from point to point and to provide focusing and collimating capabilities. The slits are the openings through which the radiation enters and leaves the monochromator housing.

The most common scanning monochromator is the Czerny-Turner monochromator. The Czerny-Turner mounting consists of an entrance slit, collimating mirror, a plane grating, a focusing mirror and an exit slit. Wavelength scanning is achieved by rotation of the grating.

Czerny - Turner Monochromator

