Electronic Circular Dichroism

Electronic circular dichroism (ECD) is the traditional circular dichroism. The wavelength of plane-polarized light used in ECD is generally ranged 200-400 nm, which belongs to the ultraviolet region. The absorption spectrum is caused by molecular electronic energy level transitions.

Far-Ultraviolet CD (Far-UVC) is mainly used in the analysis of protein secondary structure. Near-ultraviolet CD mainly reveals the tertiary structure information of proteins. UV-Visible CD is mainly used for coupling analysis of prosthetic groups.

Vibrating Circular Dichroism

Vibrating circular dichroism is a method for measuring the circular dichroism of molecules in the infrared wavelength region. Compared with ECD, the advantage of VCD is that it does not need to contain chromophore (UV absorption) in the molecule. Almost all chiral molecules have absorption in the infrared region and can produce VCD spectra.