Answer on Question #75096 - Chemistry - Inorganic Chemistry

Question:

uv-vis absorption spectra are broad band spectra explain

Solution:

Each molecule has some absorption for UV rays. And at a certain wavelength of ultraviolet rays, maximum absorption occurs. This is called λ_{max}. This λ_{max} is characteristic (specific) for each molecule. When scanning a sample using UV rays (usually between 200 nm and 400 nm), the sample absorbs UV rays accordingly and gives a wide spectrum. This means that the sample absorbs all the different wavelengths of UV rays and gives an absorbance value for each absorbed wavelength along with the wavelength at which the maximum absorption occurs, ie, λ_{max}. Thus, we get an intense peak for λ_{max} and this peak indicates the λ_{max} of the sample.