

# Download Fourier Transform Infrared Spectroscopy Industrial Chemical And Biochemical Applications

1. Introduction and Historical Overview. Near Infrared Spectroscopy (NIR) is a type of vibrational spectroscopy that employs photon energy ( $h\nu$ ) in the energy range of  $2.65 \times 10^{-19}$  to  $7.96 \times 10^{-20}$  J, which corresponds to the wavelength range of 750 to 2,500 nm (wavenumbers: 13,300 to 4,000  $\text{cm}^{-1}$ ). Spectroscopy has a wide area of application in many fields. Spectroscopy is based on the concept of Energy = frequency x Planck ( $E = h\nu$ ) constant which is used to study matter. Spectrometry is the technique which is used to analyze the concentration of elements in the sample being tested. Our products are able to analyze carbon, aluminum, sulfur ...OEM gratings design and production capabilities. HORIBA Scientific with the JobinYvon Technology designs and manufactures the world largest diffraction gratings. Specialists in Forensic chemistry identify materials in a crime scene through a wide array of methods and using instruments such as Fourier transform infrared spectroscopy, thin layer chromatography, gas chromatography-mass spectrometry, high-performance liquid chromatography and atomic absorption spectroscopy.