

International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 4, Issue 2, September 2024

## A Short Review on UV Spectroscopy

Mr. Harshal Hemant Gaikwad<sup>1</sup>, Ms. Ankita Arjun Giramkar<sup>2</sup>, Ms. Akanksha Tathe<sup>3</sup>

Student, Department of Pharmaceutical Science<sup>1</sup> Assistant Professor, Department of Pharmaceutical Science<sup>2,3</sup> Saikrupa Institute of Pharmacy, Ghargaon, Ahmednagar, Maharashtra, India

**Abstract:** One of the first instrumental techniques for analysis was UV-VIS spectroscopy. A wide variety of materials can be characterized using UV-Visspectroscopy. UV-Vis provides information about the absorption or emission of light wavelengths and the response modes of the samples. The absorption of dielectric energy by materials can be quantitatively described using a general law known as Beer's law. It is easy to use and works with UV-VIS radiation. Both qualitative and quantitative analysis can be used. Metal and metal oxide nanoparticles are identified using wavelengths between 200 and 700 nm. The complex mechanism of complex formation between samples, monomer and cross-linking during polymerization can also be better understood with the help of UV/Vis spectra. This certification process is quick, easy and free. The structure and composition of the materials can be checked using the spectrum. These products are used in universities, businesses, medical laboratories and chemical analysis of environmental samples.

Keywords: UV-Visible Spectroscopy, UV-VIS Spectrometer, UV-VIS Spectrum



