IJARSCT



International Journal of Advanced Research in Science, Communication and Technology

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

Volume 5, Issue 1, June 2025



The Role of Nanotechnology in Nuntaceuticals and Advance Techniqus Used in Nanontchnology

Prof. Munde Sir, Shaikh Furquan Abdul Razzaqu, Pathan Sameerkhan Taherkhan Khan Fardeenuddin Ziyauddin, Sayyed Muzammil Sayyed Ahemad Aditya Pharmacy College, Beed

Abstract: The use of nanotechnology in nutraceuticals is rapidly growing due to their ability to improve active ingredient solubility, stability and bioavailability. Their unique properties are mainly conferred by small sizeand high surface-to-volume ratio. However, these physico-chemical properties are also responsible for potential adverse effects of nanomaterials on human health. In order to develop new marketable nutraceutical formulations, the evaluation of their efficacy and safety is required. In this work, we present an in vitro-based approach to simultaneously evaluate efficacy and safety of newformulations in agreement with European Food Safety Authority recommendations and in high-throughput screening fashion. This approach is time and costs effectiveness, providing a useful support to Companies since it well fits with the safe-by-design concept that is currently under development in Europe.

Keywords: nanotechnology



