

ROLE OF MASS SPECTROMETRY IN PHARMACEUTICALS

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Mass spectrometry is an analytical technique to measure the molecular or atomic weight of samples. It is an instrument that produces charged molecular species in vacuum, separates them by means of electric and magnetic fields and measures the mass-to-charge ratios and relative abundances of the ions thus produced. It is being increasingly used for detection and analysis of proteins from complex samples. The emergence of mass spectrometry as a powerful analytical tool in the health, life sciences and pharmaceutical sector associated with drug discovery and development process is rich and varied. Many of the initial efforts were associated with online high performance liquid chromatography-mass spectrometry in drug metabolism, pharmacokinetic and pharmacodynamic studies. Pharmacokinetic studies with mass spectrometry can provide quantitative information about a compounds half life in the body and how quickly it is metabolized or excreted. the increase in sensitivity and resolution of the mass spectrometer

has opened new dimensions in analysis of pharmaceuticals and complex metabolites of biological systems. Compared to others, mass spectroscopy is only the technique for molecular weight determination, which can further help in prediction of molecular formula. It is also used as a sensitive detector for chromatographic techniques like LC-MS and GC-MS.

Biography

Rashid Mahmood has a Master's Degree in Analytical Chemistry and MS in Total Quality Management. He has 14 years of experience in pharmaceutical quality operations and has participated in many international conferences as a Keynote Speaker. He has presented various talks in USA, Canada and China on cleaning validation, cGMP guidelines and quality risk management. Currently, he is working as a Senior Executive Manager, Quality Operations for Surge Labs, Pakistan. He is engaged in the manufacturing of microencapsulated APIs, liquid and dry powder parenterals.

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