

“ Bioanalytical Method Development and Validation of Metaxalone in Human Plasma by LC-MS/MS”

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Abstract:- A simple, rapid, sensitive, and selective liquid chromatography-tandem mass spectrometry (MS) method was developed and validated for the quantification of Metaxalone, a skeletal muscle relaxant, in human plasma using Metaxalone –D6 as Internal Standard (IS). Following Liquid-Liquid Extraction (LLE) , the analytes were separated using an isocratic mobile phase on a reverse phase C18 column (Chromatopak peerless basic 50× 4.6mm× 3.0µm) and analyzed by MS in the multiple reaction monitoring mode using the respective [M+H]⁺ ions, m/z 222.14 / 160.98 for Metaxalone and m/z 228.25 /167.02 for the IS. The assay exhibited a linear dynamic range of 25.19-2521.313 ng/mL for metaxalone in human plasma. The goodness of fit was consistently greater than 0.98 during the course of validation. The range of accuracy and precision of the back-calculated concentrations of the standard curve points was from 94.1 % to 104.4 % and 0.3 % to 5.6 % for metaxalone A run time of 2.0 min for each sample and injection volume is 5 µl . The validated method has been successfully used to analyze human plasma samples for application in pharmacokinetic, bioavailability, or bioequivalence studies.

BIOGRAPHY



Nirav has completed his **M.Pharm** from Gujarat Technological University (GTU) and he has taken **Post-Graduate Diploma Intellectual Property Rights (PGDIPR)**. He got **“Best Teaching Award”** and he has achieved award of **“Best-Student of the year”** for the year **2013**. Recently, He got "National Award"- PEARL Foundation **“Best Assistant Professor Award in Pharmacy”** for the year **2016**. Also, **“International Young Leadership Awards-2016”** - TIME CyberMedia Pvt. Ltd. **“Best Upcoming Young Researcher in Ahmedabad”** for the year 2016. He cracked **GPAT (Graduate Pharmacy Aptitude Test-2013, AICTE)** and got stipend from the Indian government. Research Experience in Bioanalytical department and published thesis. Also, He has published **Books** with ISBN. He has published research, review articles and letter to the editors in reputed **International journals**. He has been serving as an editorial board member as well as reviewers of reputes.