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## Bioanalytical method development and validation of metaxalone in human plasma by LC-MS/MS

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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]<sup>+</sup> 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 and bioequivalence (BA-BE) studies.

### Biography

Nirav has completed his M.Pharm at the age of 23 years from Gujarat Technological University (GTU) and he has taken Post-Graduate Diploma Intellectual Property Rights (PGDIPR). He is the Ass.professor in A-One Pharmacy College, India. He got "Best Teaching Award" and he has achieved award of "Best-Student of the year" for the year 2013. He has published research, review articles and letter to the editors in reputed journals. He has been serving as an editorial board member as well as reviewers of repute. Recently, He got "National Award"- PEARL Foundation "Best Assistant Professor Award in Pharmacy" for the year 2016. He cracked GPAT (Graduate Pharmacy Aptitude Test-2013, AICTE) and got 12,400 INR stipends per month up to two years during post-graduate course from the Indian government. Research Experience in Bioanalytical department and published thesis. Also, He has published Books with ISBN.

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