



ChemTech

International Journal of ChemTech Research

CODEN(USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555

Vol.11 No.05, pp11-21,2018

Quantitative Nuclear Magnetic Resonance Spectroscopic Method Development and Validation of Sumatriptan Succinate in Pharmaceutical Tablet Dosage form

MangaraoNakka*,SrinivasNakka

Organic and Bimolecular Chemistry Division, CSIR-Indian Institute of Chemical Technology, Hyderabad-500007,India.

Abstract:A new, simple and accurate quantitative proton nuclear magnetic resonance(qNMR) spectroscopic method was developed to determine the sumatriptan succinate in pharmaceutical tablet formulation. In this developed quantitative nuclear magnetic resonance spectroscopy method, Maleic acid was used as internal standard(IS) due to there was no overlapping of the peak to analyte peaks and deuterium oxide(D₂O) was used as diluent. For the quantification of the sumatriptan succinate 4.43 ppm and 6.20ppm peaks were used as quantitative monitoring purpose to correspond to analytesumatriptan succinate and Maleic acid internal standard(IS) respectively. The final optimized method was validated as per International Conference on Harmonisation (ICH) guidelines in terms of Specificity, Limit of detection (LOD), Limit of Quantitation (LOQ), Precision, Linearity, Accuracy, Solution stability and Robustness. This method could be used to determination of sumatriptansuccinate in bulk and pharmaceutical tablet dosage forms.

Keywords:Sumatriptan succinate, Quantitative nuclear magnetic resonance(qNMR), Internal standard, Method Validation.

International Journal of ChemTech Research, 2018,11(05): 11-21.

DOI= <http://dx.doi.org/10.20902/IJCTR.2018.110502>
