International Journal of ChemTech Research
CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.11 No.03, pp 303-311, 2018

A Novel LC-MS/MS Method for the Determination of Celecoxib in Human Plasma

Surya Prakasarao Kovvasu[1]*, Vinayender Adireddy[2,3], Kalyan Chakravarthy Janjanam[4]

[1]University College of Pharmaceutical Sciences, Andhra University, Visakhapatnam-530 003, Andhra Pradesh, India.
[2]Research Studies, Rayalaseema University, Kurnool-518 002, Andhra Pradesh, India.
[3]PCR Laboratories, Ramanthapur, Hyderabad–500 013, Telangana, India
[4]University College of Pharmaceutical Sciences, Jawaharlal Nehru Technological University, Kukatpally, Hyderabad–500 085, Telangana, India.

Abstract : This paper describes a simple and rapid liquid chromatography–tandem mass spectrometry (LC–MS/MS) for the quantification of celecoxib in human plasma using celecoxib-d7 as an internal standard (IS). A C18 column with isocratic mobile phase of 5 mM ammonium acetate – acetonitrile (20:80, v/v) used for the separation of extracted analyte. The flow rate was 0.75 mL/min. The proposed linearity for celecoxib was 5.05–2519 ng/mL. A total of five linearity curves were generated with quality control samples to calculate the precision and accuracy. Also, the stability of analyte was extensively evaluated in plasma as well in extracted samples and results were met the acceptance criteria defined in US FDA guidelines. The chromatographic run time was set at 2.5 min, which makes the proposed method is high through put.
Keywords : Celecoxib; Solid–phase extraction (SPE); LC–MS/MS; Method validation.

International Journal of ChemTech Research, 2018,11(03): 303-311

DOI : http://dx.doi.org/10.20902/IJCTR.2018.110334

*****