



Determination of Troxerutin in Rabbit Plasma by LC-ESI-MS and its Application to a Pharmacokinetic Study

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SUMMARY. A sensitive and selective liquid chromatography/electrospray mass spectrometry (LC-ESI-MS) method for determination of troxerutin in rabbit plasma was developed. After addition of paeoniflorin as internal standard (IS), protein precipitation by methanol: acetonitrile (3:1, v/v) was used as sample preparation. Chromatographic separation was achieved on an Allure (TM) PFP Propyl (2.1 mm × 100 mm, 5 μm) column with methanol-water as mobile phase with gradient elution. Electrospray ionization (ESI) source was applied and operated in positive ion mode; selected ion monitoring (SIM) mode was used to quantification using target fragment ions *m/z* 765 for troxerutin and *m/z* 503 for the IS. Calibration plots were linear over the range of 10-5000 ng/mL for troxerutin in rabbit plasma. Lower limit of quantitation (LLOQ) for troxerutin was 10 ng/mL. Mean recovery of troxerutin from plasma was in the range 92.6-98.1 %. RSD of intra-day and inter-day precision were both less than 11 %. This method is simple and sensitive enough to be used in pharmacokinetic research for determination of troxerutin in rabbit plasma.

KEY WORDS: LC-ESI-MS, Rabbit plasma, Troxerutin.

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