



Determination of Emodin in Rat Plasma by Gradient Elution LC-ESI-MS and its Application to Pharmacokinetics

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SUMMARY. A liquid chromatography tandem mass spectrometry (LC-MS) method employing negative electrospray ionization (ESI-) has been developed for the determination of emodin in rat plasma using tolbutamide as the internal standard (IS). Selected ion monitoring (SIM) mode was used to quantification using target fragment ions m/z 268.7 for emodin and m/z 268.8 for the IS. Liquid-liquid extraction (LLE) was used for sample preparation and the analysis was achieved on SB-C18 (2.1 mm \times 50 mm, 3.5 μ m) reversed phase column. The method was validated over the concentration range 10–5000 ng/mL in rat plasma. The intra- and inter-day precision of emodin expressed as RSD < 20 % and the relative error (RE) did not exceed 15 %. This validated method was successfully applied to pharmacokinetic studies of emodin in rats following single oral administration dose of 20 mg/kg.

KEY WORDS: Emodin, LC-MS, Rat plasma.

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