Simultaneous Determination of Sumatriptan and Naproxen in Dosage Forms and Human Plasma Using LC/MS

Hayam Lotfy ,Mostafa A. Shehata Â Hayam M. Lotfy Â Mamdouh R. Reda Â Karim Michail Â Vishwa Somayaji Â Adel M.Michael Â

Abstract

This work describes a simple and sensitive method for the concurrent determination of sumatriptan (SUM) and naproxen (NAP) in dosage forms and human plasma using LC/MS and internal standardization. The drugs were separated isocratically on a C 18 column using a binary mobile phase composed of water and acetonitrile at 0.05 % acetic acid. The method was validated over a linearity range of 10-900 ng/mL and 0.1-10 εg/mL for SUM and NAP, respectively. The LOQ for SUM and NAP were 10 and 100 ng/mL, respectively. The proposed method was successfully used for the determination of SUM and NAP in plasma after a double liquid liquid extraction (LLE). The assay was successfully applied to the determination of both drugs in pharmaceutical dosage forms without interference from tablet excipients. Results obtained by the proposed method were statistically compared to those of a reported method, and no significant difference was observed

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