

A novel HPLC-DAD method for simultaneous determination of febuxostat and diclofenac in biological samples: Pharmacokinetic outcomes

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Abstract:

Aim: To develop a simple HPLC-DAD method for simultaneous determination of febuxostat (FEB) and diclofenac (DIC) in biological samples to assess pharmacokinetic outcomes of their coadministration. **Methodology & results:** Sample preparation was performed by liquid-liquid extraction. Drugs analysis was done on C18 column using methanol-formic acid pH 2.1 (76:24, v/v) as mobile phase and time-programmed UV detection. Lower limits of quantitation for FEB and DIC were 10 and 20 ng/ml, respectively. Baseline pharmacokinetics were similar to published data on either drug alone. Coadministration led to more than twofold increase in FEB C max and AUC together with a reduced hepatic uptake in rats. **Conclusion:** DIC interfered with initial distribution and terminal clearance of FEB potentially due to reduced FEB hepatic uptake. © 2018 Newlands Press.

Reference:

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