ABSTRACT

A simple, precise, sensitive and validated reverse-phase high performance liquid chromatographic (RP-HPLC) method was developed for the simultaneous estimation of Paracetamol and Piroxicam in human blood plasma. After protein precipitation and extraction with acetonitrile, the drugs were reconstituted in mobile phase and were separated on a C-18 column. Analytes were monitored at a wavelength of 230 nm with a mobile phase consisting of a mixture of Acetonitrile , methanol , 0.05M phosphate buffer pH 3.5 in the ratio of (40:30:30, v/v). The linearity was observed in the concentration range of 1.6μg/ml – 6.4 μg/ml for piroxicam and 26μg/ml - 104 μg/ml for paracetamol. Limit of detection and quantification for piroxicam was 0.005μg/ml and 0.16 μg/ml and for paracetamol, it was found to be 0.1μg/ml and 2.80 μg /ml respectively. Recovery was greater than 95.0 % for paracetamol and 80.0 % for piroxicam with RSD less than 1.5 %. The proposed method was validated by testing its linearity, recovery, specificity, repeatability, LOD/LOQ values and it was successfully employed for the determination of paracetamol and piroxicam in human plasma.