ABSTRACT

An accurate, simple and specific reverse phase HPLC analytical procedure is established and validated for simultaneous determination of piroxicam and ofloxacin in bulk materials, pharmaceutical formulations and in human plasma.Good chromatographic separations between piroxicam and ofloxacin and stress induced degradations products were accomplished within 4 minutes using C8 column with acetonitrile, 0.012M phosphate buffer and 0.008M citrate buffer (both buffers were mixed and pH adjusted to 2.8) (50:25:25 v/v/v) as mobile phase at flow rate of 1.5 mL min^{-1} with detection using UV detector at 254 nm. Developed method was validated using ICH guidelines. Linearity was from (50-120 µg mL^{-1}) for both piroxicam and ofloxacin. All the analytes including the degradation products were separated with acceptable peak tailing and resolution. The established method can successfully be used for the routine and simultaneous determination of piroxicam and ofloxacin in pharmaceutical formulations as well as for interaction studies in different buffers and in human plasma. This method was also able to separate other quinolones from piroxicam and therefore it was also applied for interaction of piroxicam with two other quinolones (moxifloxacin and sparfloxacin).

Keywords : Piroxicam, RP-HPLC, Moxifloxacin, Sparfloxacin, , Stress induced degradation, Quinolones.