

**Development and validation of a method for simultaneous estimation of Metformin and Sitagliptin in human plasma by LCMS/MS and its application in a bioequivalence study**

Srinivasa Reddy, Imran Ahmed, Iqbal Ahmad, Arindam Mukhopadhyay and Saral Thangam

J Chromatogr Sci, 53 (9), 1549-1556, 2015. doi: 10.1093/chromsci/bmv055, First published online: May 17, 2015

**Abstract:**

A simple, sensitive, precise and accurate method for simultaneous estimation of Metformin and Sitagliptin from human plasma was developed and validated. Samples extracted from plasma using acetonitrile were separated on a SCX column and estimated in API 4000 Mass spectrometer in the positive atmospheric pressure ionization mode by following multiple reactions monitoring (MRM) transitions for both parent and daughter ions. A linear calibration plot was achieved for both the analytes in the concentration ranges of 10.045ng/ml to 2206.210ng/ml (for Metformin) and 3.013ng/ml to 800.530ng/ml (for Sitagliptin). Mean recovery for Metformin was 92.08% and for Sitagliptin was 104.50%. It is a fully validated method and successfully applied for estimation of these drug molecules during biostudies.

