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Sitagliptin and Simvastatin Simultaneous Estimation using RP-HPLC Method

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Abstract: *A simple, specific, accurate, rapid, inexpensive isocratic Reversed Phase-High Performance Liquid Chromatography (RP-HPLC) method was developed and validated for the quantitative determination of Sitagliptin and Simvastatin pharmaceutical tablet dosage forms. RP-HPLC method was developed by using BDS C 18 (150 mm*4.6 mm) column. The mobile phase composed of Buffer: Acetonitrile: Methanol 20:70:10. The flow rate was set to 1.0 mL.min with the responses measured at 215 nm. Retention time of simvastatin and sitagliptin were found to be 4.7 min and 3.1 minutes. Sitagliptin showed linearity between 25 - 150 microgm/ml & Simvastatin showed linearity between 2.5-15 microgm/ml. with correlation coefficient. The validation of the developed method was carried out for specificity, linearity, precision, accuracy, robustness, limit of detection, limit of quantitation. The developed method can be used for routine quality control analysis of in simvastatin and sitagliptin pharmaceutical tablet dosage form.*

Keywords: Simvastatin and Sitagliptin, UV-Vis detector, Method Development & Validation

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