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Simultaneous Estimation Of Formoterol Fumarate Dihydrate and Fluticasone Propionatein Dry Powder Inhalation Formulation By RP-HPLC

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Abstract: A simple isocratic reversed phase high performance liquid chromatographic (HPLC) method has been developed for the simultaneous determination of Formoterol fumarate dehydrate and Fluticasone propionate in dry powder inhalation formulation. The separation was achieved by HiQSil C18HS, 250×4.6mm i.d., 5µmcolumn, acetonitrile: 0.01 M ammonium dihydrogenphosphate bufferpH 3.5 adjusted with *o*-phosphoric acid (80: 20 v/v) as mobile phase, at a flow rate of 1mL/min. The detection was carried out at 215 nm. Retention time of Formoterol fumarate dihydrate and Fluticasone propionate was found to be 4.892 and 9.183min, respectively. The method has been validated for linearity, accuracy and precision. Linearity for Formoterol fumarate dehydrate and Fluticasone propionate were in the range of 2.4-7.8µg/mLand 10-90µg/mL, respectively. The mean recoveries obtained for Formoterol fumarate dehydrate and Fluticasone propionate were found to 99.48% and 99.54 %, respectively. Developed method was found to be accurate, precise, selective and rapid for simultaneous determination of Formoterol fumarate dihydrate and Fluticasone propionate in dry powder inhalation formulation.

Keywords : Formoterol fumarate dihydrate, Fluticasone propionate, HPLC, Validation.

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