

Chromatography

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Performance Comparison Between Monolithic Column And Silica Based C-18 Particle Packed Column For The Determination Of Three Anti-diabetics In Pharmaceuticals

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The performance of monolithic column was compared with C-18 particle packed column for the analysis of anti-diabetic combination. Three drugs, Metformin, Glimepiride, and Pioglitazone was quantified by both monolithic and reversed phase C-18 column. The mobile phase used for monolithic column was consisting of potassium dihydrogen phosphate buffer adjusted to pH 3 by o-phosphoric acid / acetonitrile (55/45 v/v) and the run time of the method was 6 minutes. While for C-18 particle packed column the mobile phase was consisting of potassium dihydrogen phosphate buffer adjusted to pH 3.5 by o-phosphoric acid / acetonitrile (40/60 v/v) and the run time of the method was 9 minutes. The flow rate was 1.5 mL/min for both methods. The HPLC methods using both columns were utilized for determination of the anti-diabetic drugs in bulk powder and marketed pharmaceutical formulation. Monolithic column showed superior results in terms of resolution, run time, peak symmetry, time and solvent saving, and finally back pressure stability.

Biography

Dr. A. Hemdan has completed his Ph.D at the age of 31 years from Ain Shams University. He is working as an Associate professor at Faculty of Pharmacy-Ahrum Canadian University. He has published more than 10 papers in reputed journals.

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