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| **Simultaneous Assessment of Aliskiren Hemifumarate, Amlodipine Besilate and Hydrochlorothiazide in Tablet Dosage Form by RP-HPLC**  |
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| Abstract:  | A simple, accurate, precise and sensitive RP-HPLC method was developed and validated for simultaneous assessment of aliskiren hemifumarate, amlodipine besilate and hydrochlorothiazide in combined tablet formulation. The proposed RP-HPLC method employed a reverse phase column (C18) and mobile phase with a composition of 0.2 % (v/v) triethylamine (pH 6 with orthophosphoric acid) and methanol (10:90, v/v) was utilized and a flow rate of 1 ml/min was employed. Quantification of effluents was monitored at 237 nm. Four symmetrical, well resolved peaks of aliskiren, amlodipine, hydrochlorothiazide and fumaric acid (fumaric acid was separated from aliskiren hemifumarate) were obtained with retention time of 5.520 ± 0.0229, 6.952 ± 0.0539, 2.794 ± 0.0071 & 1.942 ± 0.0024 min, respectively. Aliskiren, amlodipine and hydrochlorothiazide showed excellent linearity over the concentration range of 7.5-300, 0.25-10 and 0.625-25 µg/ml, respectively. The developed method was then validated in accordance with ICH guidelines and applied in the determination of aliskiren hemifumarate, amlodipine besilate and hydrochlorothiazide in the combined tablet dosage form. The formulation analysis revealed good agreement (97 - 101 % w/w) with the label claim for all the analytes by RP-HPLC method. Developed method was simple, sensitive and accurate, thus can be utilized for simultaneous determination of all the three drugs in combined tablet dosage form.  |
| Keyword:  | Simultaneous assessment, Aliskiren Hemifumarate, Amlodipine Besilate, Hydrochlorothiazide, Tablet Formulation, RP-HPLC  |
| DOI:  | <https://doi.org/10.31838/ijpr/2020.SP1.105> |

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FULL TEXT: <http://www.ijpronline.com/ViewSpecialArticleDetail.aspx?ID=184>