|  |
| --- |
| **Simultaneous Assessment of Aliskiren Hemifumarate and Valsartan from it’s Pharmaceutical Dosage Form by three simple UV Spectrophotometric Methods**  |
|  |
|

|  |  |
| --- | --- |
| Author:  | Ashim K.Sen, Dhanya B.Sen, Aarti S.Zanwar, Rajesh A.Maheshwari, R.Balaraman  |
| Abstract:  | Three new UV spectrophotometric methods namely simultaneous equation, absorbance ratio and first derivative (zero crossing) spectroscopic methods were developed and validated for simultaneous estimation of aliskiren hemifumarate and valsartan in tablet formulation which were simple, sensitive, precise and accurate. In simultaneous equation method, absorbance was measured at 250 and 280 nm for both the drugs. Aliskiren hemiumarate and valsartan was estimated using 250 and 282 nm in absorbance ratio method. First derivative (zero crossing) method was based on the transformation of UV spectra in to first derivative spectra followed by measurement of first derivative signal at 244 and 280.30 nm for aliskiren hemifumarate and valsartan, respectively using 2 nm as wavelength interval (??) and 1 as scaling factor. Developed methods were validated according to ICH guidelines including parameters viz., specificity, linearity and range, precision, accuracy, limit of detection and quantification. All the three methods showed linear response in the concentration range of 1-30 µg/ml for aliskiren hemifumarate and 1.067-32 µg/ml for valsartan. Results of method validation parameters follows ICH guideline acceptable limits. Based on the assay results obtained, methods were compared using Student’s analysis of variance (ANOVA) test (single factor) at 95% confidence level. Outcome of the statistical analysis proved that there was no considerable dissimilarity between all the developed methods. Methods werefound to be simple, fast, highly sensitive, cost effective and hence can be useful for simultaneous estimation of aliskiren hemifumarate and valsartan in commercial tablet formulation for routine quality control analysis.  |
| Keyword:  | Aliskiren hemifumarate, valsartan, simultaneous equation, absorbance ratio, first derivative (zero crossing) spectroscopic methods, tablet formulation  |
| DOI:  | <https://doi.org/10.31838/ijpr/2020.12.04.496> |

 |

FULL TEXT : <http://www.ijpronline.com/ViewArticleDetail.aspx?ID=18453>