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Development and validation of LC-MS/MS method for the estimation of Droxidopa in Human Plasma

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Abstract : A high performance liquid chromatography mass spectrometric method for the estimation of droxidopa in human plasma in positive ion mode was developed and validated using levodopa as internal standard (IS). Sample preparation was accomplished by solid-phase extraction technique. The eluted samples were chromatographed on Hypurity advance, 4.6*50mm, 5µm (Thermo Scientific) column using a mobile phase consisting of 0.1% formic acid and methanol (80:20, v/v).The method was validated over a concentration range of 5.009 ng/mL to 3020.500 ng/mL for droxidopa. This validation report provides the results of analyte matrix, selectivity, matrix effect, sensitivity determinations, calibration standards and quality control samples data, precision and accuracy data, the results of recovery, various stabilities, run size evaluation, concomitant drug effect and dilution integrity.
Key Words: Droxidopa, Solid Phase Extraction (SPE),Method Validation,LC-MS/MS.

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